Bridgeton Sanitary Landfill Groundwater Investigation Report

St. Louis County, Missouri
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MISSOURI
NATURAL RESOURCES
Missouri Geological Survey
Geological Survey Program
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Bridgeton Sanitary Landfill
Groundwater Investigation Report
St. Louis County, Missouri

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1.0 INTRODUCTION

1.1 Purpose

The Missouri Geological Survey (MGS) was requested to review existing groundwater data pertinent to the Bridgeton Sanitary Landfill (BSLF) and to conduct investigations to determine if groundwater near the landfill has been impacted by the landfill operations. The investigations undertaken by the MGS focused on the BSLF south quarry area. This report summarizes the conduct and findings of the investigation.

1.2 Site Location and Background

The approximate 52-acre BSLF site is located on the eastern edge of the Missouri River floodplain in northwestern St. Louis County, Missouri. The BSLF site is encompassed within Operable Unit 2, an area incorporated within the 212-acre West Lake Landfill Superfund site (fig. 1). The BSLF ceased accepting waste in 2004.

The BSLF site was used agriculturally until 1939 when a limestone quarry operation began in what is the north pit quarry area and then moved to the adjacent south pit quarry location. According to Golder and Associates (1995) the two pits had rock quarried to a depth of 240 feet below the ground surface (bgs), or bottom elevation of 240 feet above mean sea level (amsl). Rock was quarried at an elevation below the Missouri River alluvial aquifer. The north pit quarry area began receiving household, commercial, and industrial solid waste in 1979 and ceased accepting waste in approximately 1985. The total waste thickness was estimated to be 260 feet. In 1985 the south pit quarry area began accepting solid waste and ceased taking waste in 2004. The total waste thickness in the south pit quarry was estimated to be 340 feet. Because the BSLF is located within a pit quarry, the departments Solid Waste Management Program requires the landfill to maintain an inward hydraulic gradient.

On December 23, 2010, BSLF reported to Missouri Department of Natural Resources Solid Waste Management Program that some of the gas extraction wells in the south pit quarry area had elevated temperatures. Since that time, the SSE has intensified.

1.3 Geology

1.3.1 Structural Setting

The BSLF site is located in the northeast fringe of the Ozark Plateau physiographic region which is bound to the east by the Illinois basin and to the north along the Missouri River. The Ozark Plateau is the largest uplifted or dome-like structure in the state. Additionally, several geologic structures are in the area, of which, the most prominent is the Cheltenham syncline located approximately 7 miles east of the BSLF site. Northeast of the landfill site,

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this geologic structure turns or arcs in a northwest direction. The Cheltenham structure contains Pennsylvanian-age bedrock and fire clay was extensively mined in the St. Louis area from this structure (McCracken, 1971).

The uppermost bedrock at the BSLF site and in the local area, in increasing age, is the St. Louis Limestone, Salem Formation, Warsaw Formation and the Burlington-Keokuk Limestone. Figure 2 is a generalized stratigraphic column identifying the bedrock units in the BSLF area. The St. Louis Limestone and Salem Formation were extensively quarried in the area, as was the case at the BSLF site and the IESI MO Champ Landfill south pit located approximately 1.5 miles south of the BSLF site (fig. 1).

1.3.2 Unconsolidated Materials

The predominant surficial materials in the BSLF area are Missouri River floodplain deposits composed of alternating layers of organic materials, clay, silt, sand, and gravel with thicknesses greater than 100 feet close to the Missouri River. Because the BSLF site is in a transitional area between the Missouri River floodplain and the uplands, the thickness of the alluvial materials varies, with the thickest deposits being on the western side of the BSLF site. Recent drilling by the State of Missouri southeast and southwest of, and adjacent to the BSLF south pit quarry area indicates up to 10 feet of loess derived from the Missouri River floodplain during Pleistocene time (Lutzen and Rockaway, 1987) overlies approximately 10 to 30 feet of alternating sand, silt and clay, and residuum derived from in-place weathering of the underlying limestone bedrock.

1.3.3 Bedrock

The BSLF north and south pits were extensively quarried for limestone bedrock. The two bedrock units quarried are the Mississippian-age St. Louis Limestone and underlying Salem Formation (fig 2). The St. Louis Limestone is the uppermost bedrock unit quarried, and therefore, the uppermost bedrock unit that landfill waste has been placed into. This bedrock unit is described as a light gray to light tan arenaceous, argillaceous limestone and dolomite with occasional shale partings. Previous drilling in the St. Louis Limestone on the southeastern and southwestern sides of the south pit quarry identified occasional infilled collapse features, voids or cavities, bedrock joints, and numerous seeps were observed emitting groundwater from the quarry walls throughout the year (Golder Associates, 1995). Recent drilling by the State of Missouri indicate the depth to the top of the St. Louis Limestone on the southeastern and southwestern sides of the BSLF site varies from approximately 10 to 40 feet bgs, or at an approximate elevation between 437 to 451 feet amsl. The thickness varied from 90 to 140 feet.

Underlying the St. Louis Limestone is the Salem Formation. This bedrock unit is composed of an argillaceous and arenaceous, light to dark gray and tan limestone and dolomite. Overall, the Salem Formation is typically darker than the overlying St. Louis

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Limestone. The contact between the base of the St. Louis Limestone and the top of the Salem Formation is not easily discernable because of their similar lithologies. Recent drilling by the State of Missouri indicates the depth to the top of the Salem Formation on the southeastern and southwestern sides of the BSLF site varies from 150 to 177 feet bgs, corresponding to approximate elevations of 311 to 325 feet amsl. The thickness of the Salem Formation in the BSLF area is approximately 70 feet.

The Warsaw Formation underlies the Salem Formation, and was not extensively quarried in the area because of its lithologic properties. The Warsaw Formation is composed of interbeds of shale and argillaceous limestone and, according to Missouri Geological Survey logs of wells in the BSLF area, the bedrock unit ranges from 80 to 120 feet thick. Figure 3, reproduced from Golder Associates Inc., (1995, Figure 4-19), shows the base of the quarry and the BSLF waste in the upper portion of the Warsaw Formation.

Underlying the Warsaw Formation is the Burlington-Keokuk Limestone, which is a medium to coarse-grained, light gray, fossiliferous limestone. This bedrock unit is greater than 100 feet thick in the BSLF area.

1.4 Hydrology

1.4.1 General

Groundwater is found in two principal aquifers in the BSLF area. The Missouri River alluvial aquifer is found within the river's floodplain where potable water is present in large quantities. The uppermost bedrock aquifer in the BSLF area is found within the St. Louis Limestone, Salem Formation and the Burlington-Keokuk Limestone, collectively known as the post-Maquoketa aquifer. Figure 2 identifies the bedrock units and corresponding aquifers in the BSLF area. The post-Maquoketa aquifer can yield usable qualities of water in the central, eastern and northern parts of St. Louis County (Miller & Vandike, 1997). The availability of groundwater in the St. Louis Limestone and Salem Formation is dependent on secondary permeability, fractures and bedding planes, and their interconnectedness within the bedrock units. Therefore, the availability of water in appreciable amounts is highly variable in the BSLF area. Water from the post-Maquoketa aquifer is predominantly calcium-magnesium-bicarbonate type and high concentrations of iron were found in water from this bedrock aquifer in the St. Louis County area (Miller and others, 1974).

1.4.2 Groundwater Monitoring Zones

1.4.2.1 Alluvium

Northwest of the former quarry pits the uppermost groundwater is found within the Missouri River alluvial aquifer. The thickness of the alluvium and the aquifer varies from 0 feet near the former quarry to greater than 100 feet to the northwest. The direction of

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groundwater flow within this aquifer is generally west-northwest at the BSLF site. However, the flow direction can change depending on Missouri River stage. During high river stage, the alluvial groundwater elevation will rise and groundwater gradients can temporarily reverse or change directions. One shallow alluvial well (114-AS) is included in the BSLF detection monitoring network (fig. 4). Many other wells that monitor the alluvium exist to the northwest of the BSLF that were not used for this investigation.

1.4.2.2 Deep St. Louis Limestone-Shallow Salem Formation

No effective and continuous confining layers have been identified in the St. Louis Limestone or the Salem Formation. Therefore, the units are hydraulically connected and comprise a single hydrostratigraphic unit. Because of the total thickness of this hydrostratigraphic unit, both the shallow and deep portions of the St. Louis Limestone and Salem Formation are monitored. Figure 2 identifies the bedrock units and monitoring well designations for BSLF groundwater wells. Generally in the area, groundwater within this bedrock unit naturally flows in a west-northwest direction toward the Missouri River alluvial aquifer. However, because of the presence of the quarry operation and landfill, groundwater flow direction in this hydrostratigraphic unit has been locally altered.

The deep St. Louis Limestone-shallow Salem Formation BSLF detection monitoring network includes nine wells; PZ-100-SS, PZ-104-SS, PZ-105-SS, PZ-106-SS, PZ-109-SS, PZ-110-SS, PZ-115-SS, PZ-201A-SS and PZ-205-SS (fig. 4). Other wells exist around the BSLF that monitor the deep St. Louis Limestone-shallow Salem Formation zone (designated as SS wells), but were not used for this investigation.

1.4.2.3 Deep Salem Formation

In addition to the deep St. Louis Limestone and shallow Salem Formation, groundwater in the deep Salem Formation also generally flows in a west-northwest direction to the Missouri River alluvial aquifer. However, because of the presence of the quarry operation and landfill, groundwater flow direction in the lower portion of this hydrostratigraphic unit has also been locally altered.

The deep Salem Formation BSLF detection monitoring network includes four wells; PZ-100-SD, PZ-104-SD, PZ-106-SD and PZ-111-SD (fig. 4). One other well (MW-1204) exists at the southern corner of the BSLF that monitors the deep St. Louis Limestone-shallow Salem Formation zone.

Due to its lithology, the Warsaw Formation in the St. Louis County area acts as a confining unit (hydraulic barrier) between the Salem Formation and the Burlington-Keokuk Limestone. Water levels in groundwater monitoring wells placed in the Burlington-Keokuk Limestone have higher piezometric heads than water levels in wells within the Salem and

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St. Louis formations, indicating an upward vertical groundwater gradient with respect to the shallower hydrostratigraphic zones. Additional information on the hydrologic characteristics of the Burlington-Keokuk Limestone can be found in Golder Associates (1995).

2.0 METHOD OF STUDY

2.1 Investigation Overview

The focus of this investigation is on groundwater data collected at or near the south quarry area of the BSLF. Historic groundwater water-quality data for the BSLF was reviewed for trends. Monitoring wells were installed on private property adjacent to the BSLF to determine if off-site groundwater has been impacted. Historic water level data from detection monitoring wells was reviewed for trends. In addition, water level data was reviewed for the IESI MO Champ Landfill south pit. The IESI MO Champ Landfill south pit is located approximately 1.3 miles south-southwest of the BSLF and has very similar geologic and hydrologic characteristics and operational controls; both are located in former limestone quarries at the eastern edge of the Missouri River floodplain; both were quarried well below the elevation of the Missouri River alluvial aquifer; the bottom elevation of both landfill quarries is within the base of the Salem Formation-top of Warsaw Formation; both monitor groundwater in the St. Louis Limestone and Salem Formation; both south quarry pits of the landfills have no base liner; both landfills are required to have an effective leachate control system to maintain an inward hydraulic gradient. Because of these similarities, historical IESI MO Champ Landfill data applicable to this report was reviewed.

A grab sample of the leachate produced by the Bridgeton Landfill was collected on April 9, 2015 and submitted to PDC Laboratories, Inc., for chemical analysis.

2.2 State of Missouri Monitoring Well Installation

In August 2015, five groundwater monitoring wells were installed by the State of Missouri on private properties immediately adjacent to the BSLF site. Three wells were constructed adjacent to the southeast side of the landfill (MO-1-SS, MO-1-SDR and MO-2-SD) and two were constructed adjacent to the southwest side of the landfill (MO-3-SS and MO-3-SDR). Figure 4 shows the locations of the wells. Care was taken during planning and installation of these monitoring wells to ensure that the screened intervals of the State of Missouri wells were comparable to existing groundwater monitoring wells on the BSLF site. As with BSLF wells, the SS suffix indicates the screened interval is the deep St. Louis-shallow Salem hydrostratigraphic zone and the SD or SDR suffix indicates the deep Salem hydrostratigraphic zone. Table 1 summarizes the construction data of these monitoring wells. Appendix A includes the State of Missouri monitoring well boring logs.

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2.3 Groundwater Levels

Groundwater elevation data from detection monitoring wells at the BSLF and the IESI MO Champ Landfill for the period 2005 to present were reviewed. Missouri River elevation was determined by collecting gage height data obtained from nearby USGS gaging station 06935965 (St. Charles) and adding the NAVD 88 datum to determine water levels in feet amsl. In addition, precipitation data collected from nearby Lambert-St. Louis International Airport were also reviewed. Graphs depicting Missouri River elevation and precipitation are included as figures 5 and 6, respectively, and the data for Missouri River elevation and precipitation are found in Appendixes B and C, respectively.

Currently, the IESI MO Champ Landfill has sixteen groundwater wells in the St. Louis Limestone and fifteen groundwater wells in the Salem Formation within its detection monitoring program. In addition to the thirty-one monitoring wells, eighteen additional groundwater wells for the landfill site are utilized for measurement of water levels. Figures 7 and 8 of this report show the well locations and the May 2015 potentiometric surface of the St. Louis Limestone and Salem Formation, respectively, at the IESI MO Champ Landfill (Environmental Operations, Inc., 2015b).

BSLF south pit leachate sump levels reported for January 2010 to February 2015 were also reviewed.

2.3.1 Bridgeton Sanitary Landfill

On August 17, 2015, groundwater levels were measured in twenty-three monitoring wells located on the BSLF site and summarized in Table 2. Of the twenty-three wells, seventeen are completed in the deep St. Louis-shallow Salem (SS) hydrostratigraphic zone and six wells are completed in the deep Salem (SD) hydrostratigraphic zone. The deep Salem zone wells are completed at depths very near the base of the landfill. The locations of the groundwater monitoring wells where water levels were measured are depicted on Figure 4.

2.3.2 State of Missouri Groundwater Monitoring Wells

In August 2015, the State of Missouri drilled and installed five groundwater monitoring wells on private properties adjacent to the BSLF site (fig. 4). Of the five wells, two are screened in the deep St. Louis-shallow Salem (SS) hydrostratigraphic zone and three are screened in the deep Salem (SD) hydrostratigraphic zone. Groundwater levels were measured in the five wells on August 20, August 25, and August 28, 2015, and are listed in Table 2.

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2.4 Water Quality Sampling

Groundwater sampling activities were performed the week of August 17-21, 2015, from monitoring wells located on the BSLF site and also from the State of Missouri monitoring wells. Due to safety concerns at the landfill, Republic Services personnel purged and sampled the BSLF monitoring wells. State of Missouri wells were purged and sampled by Geotechnology, Inc. Both the State of Missouri and Republic Services collected duplicate samples at selected wells. In total, groundwater samples were collected from eighteen BSLF monitoring wells and five State of Missouri monitoring wells. Representatives for the State of Missouri and Republic Services observed sampling activities at most wells. Included within Appendix D is a Missouri Department of Natural Resources-Environmental Services Program report detailing the procedures used to sample the BSLF groundwater wells. Wells included in this sampling event are identified in Table 2.

Two separate analytical laboratories were utilized for the August 2015 sampling of eighteen BSLF monitoring wells and five State of Missouri monitoring wells: TestAmerica, Inc. located in Earth City, MO and Teklab, Inc. located in Collinsville, IL. Eight sample sets were submitted to Teklab, Inc. and twenty-three sample sets were submitted to TestAmerica, Inc. Of the sample sets submitted to TestAmerica, Inc. thirteen were analyzed for all the constituents listed on Missouri's Solid Waste Management Program's Appendix II, plus 2,3,7,8-TCDD, and ten were analyzed for metals and volatile organic compounds (VOCs). The analytical laboratory reports from TestAmerica, Inc. and Teklab, Inc. are included in Appendix E and F, respectively.

2.5 Groundwater Geochemistry

BSLF is required by their operating permit to conduct semi-annual groundwater sampling of the monitoring wells included in their detection monitoring network. Professor David Wronkiewicz, PhD. was consulted and asked to review the monitoring data to determine if any trends were present or significant. Dr. Wronkiewicz's report is included as Appendix G.

2.6 Monitoring Well Survey

On August 17 and 18, 2015, the Missouri State Land Survey office surveyed twenty-seven groundwater monitoring wells (well measuring points) located at the BSLF site and five State of Missouri groundwater monitoring wells located adjacent to the BSLF site. Five existing site control stations on the BSLF were also surveyed. A copy of the surveyor's report is included in Appendix H. Monitoring well measuring point elevations determined by this survey were used throughout this investigation.

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3.0 RESULTS OF INVESTIGATION

3.1 Groundwater

3.1.1 Groundwater Elevation Trend Analysis

The historic groundwater elevation data for both the deep St. Louis-Shallow Salem (SS) and deep Salem (SD) monitoring wells for BSLF and the comparable zones of the IESO MO Champ Landfill was graphed for trend analysis over the a 10-year period from 2005 to 2015. These graphs are included as figures 9 through 12. The data used to graph the water levels for the BSLF groundwater wells was taken from the semi-annual detection monitoring reports submitted to the Missouri Department of Natural Resources Solid Waste Management Program and is summarized on Table 3 (Herst & Associates, Inc., 2006 – 2012, 2013a, 2013b, 2014b, 2014c, 2014d, 2015a, 2015c). The data used to graph the water levels at the IESI MO Champ Landfill was taken from quarterly and semi-annual groundwater monitoring reports (Burns & McDonnell Engineering Company, Inc., 2005 – 2009; Environmental Operations Inc., 2009 – 2015).

Between 2005 and approximately 2010 the water levels in the BSLF wells ranged in elevation from approximately 360 to 450 feet amsl for both the SS and SD monitoring wells. From approximately 2010 to the present groundwater levels have increased in elevation in all but five of the BSLF wells, including the period of 2012 and into 2013 when Missouri experienced a severe drought. The groundwater elevations in several of the SS and SD wells, particularly those on the east side of the landfill, are currently at elevations 10 to 15 feet higher than groundwater elevations prior to 2010.

In contrast, water levels graphed over the same 10-year time period in the monitoring wells at the IESO MO Champ Landfill have remained relatively unchanged or have receded. Water levels in many of the monitoring wells near the south pit quarry area of IESI MO Champ Landfill are at elevations lower than they have been for several years.

3.1.2 Groundwater Flow Direction

According to Solid Waste Disposal Area Operating Permit #118912 (MDNR, 1985), BSLF is required to maintain an inward hydraulic gradient and maintain a liquid leachate level within 30 feet of the base of the landfill. Therefore, leachate levels within the landfill waste mass should remain at elevations lower than the groundwater levels in the surrounding monitoring wells at the BSLF site.

Groundwater levels were measured in monitoring wells around the south quarry during the August 2015 sampling event and the groundwater elevation data is presented in Table 2. Water levels for the BSLF wells were measured on August 17, prior to groundwater

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sampling on August 19 and 20. Water levels were measured in the State of Missouri wells on August 25 and 28, following sampling on August 20 and 21. Groundwater elevations were contoured for selected areas along the southeast and southwest sides of the south quarry in the vicinity of wells MO-1-SDR and MO-3-SDR. Figures 13 through 16 illustrate the projected potentiometric contours.

The potentiometric contours in the vicinity of MO-3-SS were constructed using water level measurements from MO-3-SS, PZ-106-SS and PZ-116-SS. Although well PZ-204-SS is located in the same area, its static water level was not used because the well is significantly shallower than the others. The potentiometric contours indicate that groundwater flows in a westerly direction, angling away from the landfill (fig. 13).

The potentiometric contours in the vicinity of MO-3-SDR were constructed using water level measurements from MO-3-SDR, MW-1204 and PZ-106-SD. The potentiometric contours indicate that groundwater flows in a westerly direction, angling away from the landfill (fig. 14).

The potentiometric contours in the vicinity of MO-1-SDR were constructed using water levels measured in MO-1-SDR on August 25 (458.51 ft amsl) and August 28 (460.79 ft amsl). The rise in water level between the two dates indicates that the water level measured on August 25 was still recovering from sampling the well on August 21. Water levels in wells PZ-104-SD, PZ-209-SD, PZ-210-SD and PZ-211-SD were measured on August 17 and are assumed to be representative of static conditions through the period of August 28. The potentiometric contours for both data sets indicate that groundwater flows in a southwest direction subparallel to the quarry wall (figs. 15 and 16).

3.2 Analytical Laboratory Results

3.2.1 Leachate

As stated previously, a sample of the leachate was collected and submitted for chemical analysis. Seven volatile organic compounds (VOCs) were detected: 1,2,4, trimethylbenzene, 1,4-dichlorobenzene, 2-hexanone, 4-methyl-2-pentanone (MIBK), benzene, 2-butanone (MEK), and acetone, the latter three in high concentrations. The analytical report for the leachate sample collected on April 9, 2015, is presented in Appendix I.

3.2.2 Groundwater

Groundwater samples from ten monitoring wells around the BSLF south quarry indicated impacts by VOCs that were also detected in the leachate sample: BSLF wells MW-1204, PZ-106-SD, PZ-104-SS, PZ-104-SD, PZ-202-SS and PZ-103-SS and State of Missouri wells MO-1-SS, MO-2-SD, MO-3-SS and MO-3-SDR. A summary of the VOC concentrations in

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the BSLF and State of Missouri monitoring wells, as well as for the leachate sample, is included as Table 4.

Three VOCs, benzene, acetone and 2-butanone (MEK), are indicated in the majority of the ten wells with detected VOCs. The monitoring wells exhibiting the most elevated concentrations of benzene, acetone and 2-butanone (MEK) were BSLF well MW-1204 and State of Missouri well MO-3-SDR, exceeding the groundwater protection standards established for monitoring well PZ-104-SD (Herst & Associates, Inc., 2013c), and to a lesser extent BSLF well PZ-106-SD and State of Missouri well MO-3-SS, all located along the southwest side of the BSLF south quarry. Figure 17 illustrates the concentrations of benzene, acetone and 2-butanone (MEK) detected in the deep St. Louis-shallow Salem (SS) BSLF and State of Missouri monitoring wells. Figure 18 illustrates the concentrations of benzene, acetone and 2-butanone (MEK) detected in the deep Salem (SD) BSLF and State of Missouri monitoring wells.

4.0 CONCLUSIONS

It is the professional opinion of this investigator that an inward hydraulic gradient has not been consistently maintained at the Bridgeton Sanitary Landfill as evidenced by detections of volatile organic compounds, representative of leachate from the landfill, in high concentrations in monitoring wells on the southwest side of the south quarry area and nearby monitoring wells on adjacent property, and by water levels in those wells that is consistent with a groundwater flow direction outward from the landfill.

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TABLES

Table 1
State of Missouri Monitoring Well Information

Well Identification	Feet Below Top of Casing	Feet of Screen	Feet Above Mean Sea Level	
	Total Depth		Screen Elevation	TOC Elevation
MO-1-SS	153.37	20.00	354.08-334.08	487.45
MO-1-SDR	254.82	20.00	252.77-232.77	487.59
MO-2-SD	251.54	20.00	261.69-241.69	493.23
MO-3-SS	169.80	20.00	311.49-291.49	461.69
MO-3-SDR	209.80	20.00	271.05-251.05	460.85

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Table 2
August 2015 Groundwater Elevations

Well ID	TOC	17-Aug-15		25-Aug-15		28-Aug-15		Sampled (Y/N)
BSLF Monitoring Wells	Elevation	SWL	Elevation	SWL	Elevation	SWL	Elevation	Aug. 17-21, 2015
PZ-103-SS	483.30	9.48	473.82					Y
PZ-201A-SS	479.90	7.89	472.01					N
PZ-202-SS	480.70	11.22	469.48					Y
PZ-104-SS	483.24	18.51	464.73					Y
PZ-104-SD	483.27	21.27	462.00					Y
PZ-203-SS	486.01	25.99	460.02					Y
PZ-105-SS	483.17	25.44	457.73					Y
PZ-116-SS	484.55	17.65	466.90					Y
MW-1204	485.44	16.48	468.96					Y
PZ-106-SS	462.44	10.85	451.59					Y
PZ-106-SD	463.15	11.63	451.52					Y
PZ-107-SS	464.34	29.98	434.36					Y
PZ-206-SS	463.15	25.85	437.30					N
PZ-109-SS	459.92	20.64	439.28					N
PZ-110-SS	460.81	26.24	434.57					N
PZ-209-SS	489.31	21.16	468.15					Y
PZ-209-SD	489.23	23.45	465.78					Y
PZ-210-SS	486.63	25.97	460.66					Y
PZ-210-SD	486.67	27.25	459.42					Y
PZ-211-SS	487.07	19.60	467.47					Y
PZ-211-SD	487.13	22.16	464.97					Y
PZ-212-SS	482.40	11.22	471.18					N
PZ-204-SS	464.41	10.27	454.14					Y
State of Missouri Monitoring Wells								
MO-1-SS	487.45			97.80	389.65	77.18	410.27	Y
MO-1-SDR	487.59			29.08	458.51	26.80	460.79	Y
MO-2-SD	493.23			35.52	457.71	35.47	457.76	Y
MO-3-SS	461.69			8.47	453.22	8.43	453.26	Y
MO-3-SDR	460.85			7.83	453.02	7.73	453.12	Y

TOC Elevation - top of casing elevation in feet above mean sea level.

SWL - static water level in feet below top of casing (TOC).

Elevation - groundwater elevation in feet above mean sea level.

SWL not measured.

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Table 3
Bridgeton Landfill, LLC
Groundwater Elevations

Well ID	2005		2006		2007		2008		2009	
	May	Nov	May	Nov	May	Nov	May	Nov	May	Nov
100-SD	428.22	447.61	426.62	440.62	428.37	414.52	436.92	425.62	417.14	405.33
100-SS	429.84	449.77	432.84	442.14	431.15	424.33	443.14	433.06	424.64	424.33
104-SD	447.39	450.64	418.09	437.93	421.39	417.74	425.13	429.33	369.07	430.62
104-SS	448.44	449.33	414.03	429.31	415.13	414.88	420.41	426.74	419.78	425.52
105-SS	445.66	450.18	433.01	435.81	436.86	429.91	439.29	442.26	439.31	441.13
106-SD	430.93	441.77	420.10	432.92	423.02	416.31	424.76	426.93	421.07	422.03
106-SS	431.90	441.88	421.48	395.41	423.30	417.23	426.15	428.11	422.30	423.32
109-SS	395.10	435.80	387.09	419.70	397.10	360.90	399.20	376.69	369.88	367.71
110-SS	427.31	427.40	423.46	424.16	426.86	424.44	429.57	428.61	430.29	430.59
111-SD	425.16	424.06	420.91	420.66	422.93	423.92	427.15	428.14	426.35	427.77
114-AS	430.01	428.60	426.12	425.41	428.21	429.00	433.46	433.26	432.29	435.38
115-SS	429.30	435.10	418.69	428.71	413.89	390.67	431.69	409.65	415.70	431.59
201A-SS	437.64	452.27	434.54	443.65	438.05	426.56	440.89	436.11	430.66	429.64
205-SS	425.13	430.23	426.52	419.83	425.48	421.73	428.10	428.38	426.38	427.09

Well ID	2010		2011		2012		2013		2014		2015
	May	Nov	May	Nov	May	Nov	April	Oct	Sept	Nov	Feb
100-SD	401.12	401.60	420.42	411.22	445.80	439.36	450.09	450.11	451.33	451.97	452.29
100-SS	419.64	415.94	426.44	418.24	446.35	445.59	450.84	451.81	454.45	454.89	455.35
104-SD	430.58	434.99	447.27	454.56	458.68	458.44	461.46	460.51	460.91	461.31	461.95
104-SS	424.35	429.79	447.97	451.08	458.81	460.44	462.52	463.45	463.20	463.12	463.57
105-SS	440.22	437.65	449.67	450.80	456.46	455.05	459.38	458.59	457.64	458.11	458.97
106-SD	418.89	420.80	434.42	434.88	446.65	445.26	448.62	450.83	450.34	450.59	451.84
106-SS	420.18	421.78	435.35	435.70	447.03	445.85	449.16	451.29	450.39	450.52	450.78
109-SS	360.47	363.84	390.20	375.66	431.41	403.35	429.32	429.08	433.29	433.56	427.74
110-SS	431.26	429.58	431.74	429.76	432.99	426.49	428.07	430.09	430.67	431.05	429.82
111-SD	428.97	427.71	428.90	428.15	427.77	422.98	427.53	431.14	425.86	426.63	425.48
114-AS	435.41	432.61	434.96	432.51	433.79	427.80	427.93	430.36	430.83	431.17	430.19
115-SS	413.27	395.71	434.30	405.44	436.82	420.29	435.77	434.64	435.36	435.70	435.75
201A-SS	429.51	426.83	434.06	432.45	456.33	456.70	467.97	467.95	470.35	469.65	469.67
205-SS	426.46	425.55	430.53	428.26	434.33	428.98	430.98	434.60	440.06	437.07	435.08

* Groundwater elevations were compiled from semi-annual detection monitoring event reports submitted to Missouri's Solid Waste Management Program.

* Elevations are feet above mean sea level.

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Table 4
Detected Volatile Organic Compounds (VOCs)
In Wells Sampled August 17-21, 2015

Detected VOC	Leachate Sample *	MW-1204	PZ-106-SD	PZ-103-SS	PZ-104-SS	PZ-104-SD	PZ-202-SS	MO-1-SS	MO-2-SD	MO-3-SS	MO-3-SDR
1,2,4 Trimethylbenzene	**410**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4 Dichlorobenzene	**510**	ND	ND	**7.3**	ND	**2.5 J**	ND	ND	ND	ND	ND
2-Hexanone	**1700**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**20/ND**
4-Methyl-2-Pentanone (MIBK)	**2100**	**7.9 J/19 J**	ND	ND	ND	ND	ND	ND	ND	ND	**37/ND**
Benzene	**910**	**6.4/9.9**	**6**	**240**	**680**	**580**	**110**	ND	ND	**33/8.1**	**32/24.1**
Acetone	**140000**	**1200/1800**	**21**	ND	ND	ND	ND	**7.4 J/10 J**	**ND/ 12 J**	**39/27.4**	**1900 DL/1380**
2-Butanone (MEK)	**87000**	**160/790 F1**	ND	**3.1 J**	ND	ND	ND	**16 J/ND**	ND	**19 J/15 J**	**1000 DL/907**
Chlorobenzene	ND	**0.88 J/1.3 J**	ND	**1.2 J**	**2.6 J**	ND	ND	ND	ND	**1.6 J/ND**	ND
Ethylbenzene	ND	ND	ND	**6.8**	**20**	**5.1**	ND	ND	ND	**1.5J/1.5 J**	**0.54 J/ND**
Toluene	ND	**71/140**	ND	**19**	**39**	**15**	**3.7 J**	ND	ND	**9.0/7.1**	**2.7 J/1.7 J**
Xylenes	ND	ND	ND	**12**	**28**	**18**	ND	ND	ND	**2.5 J/1.3 J**	**2.1 J/ND**
Carbondisulfide	ND	**0.79 J/0.96 J**	ND	ND	ND	ND	ND	ND	ND	**0.74 J/ND**	**0.83 J/ND**
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	**3.5 J/3 J**	ND	ND	**0.97 J/1.0 J**

J - Result is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.

DL - Indicates sample was diluted for chemical analysis by the analytical laboratory.

F1 - Matrix spike and/or matrix spike duplicate recovery is outside acceptance limit.

All duplicate samples were analyzed at Teklab. The duplicate sample from MW-1204 was analyzed by Test America, Inc.

BSLF Monitoring wells : MW-1204, PZ-106-SD, PZ-103-SS, PZ-202-SS, PZ-104-SS, and PZ-104-SD

State of Missouri Monitoring wells: MO-1-SS, MO-2-SD, MO-3-SS, MO-3-SDR

* - Leachate sample collected April 9, 2015

All values in micrograms per liter (µg/L)

Bold indicates a detected VOC.

1200/1800 - second result is a duplicate sample

FIGURES



MISSOURI DEPARTMENT OF NATURAL RESOURCES
Missouri Geological Survey

Figure 1
Site Location Map
Bridgeton Landfill
St. Louis County, Missouri

08/2015

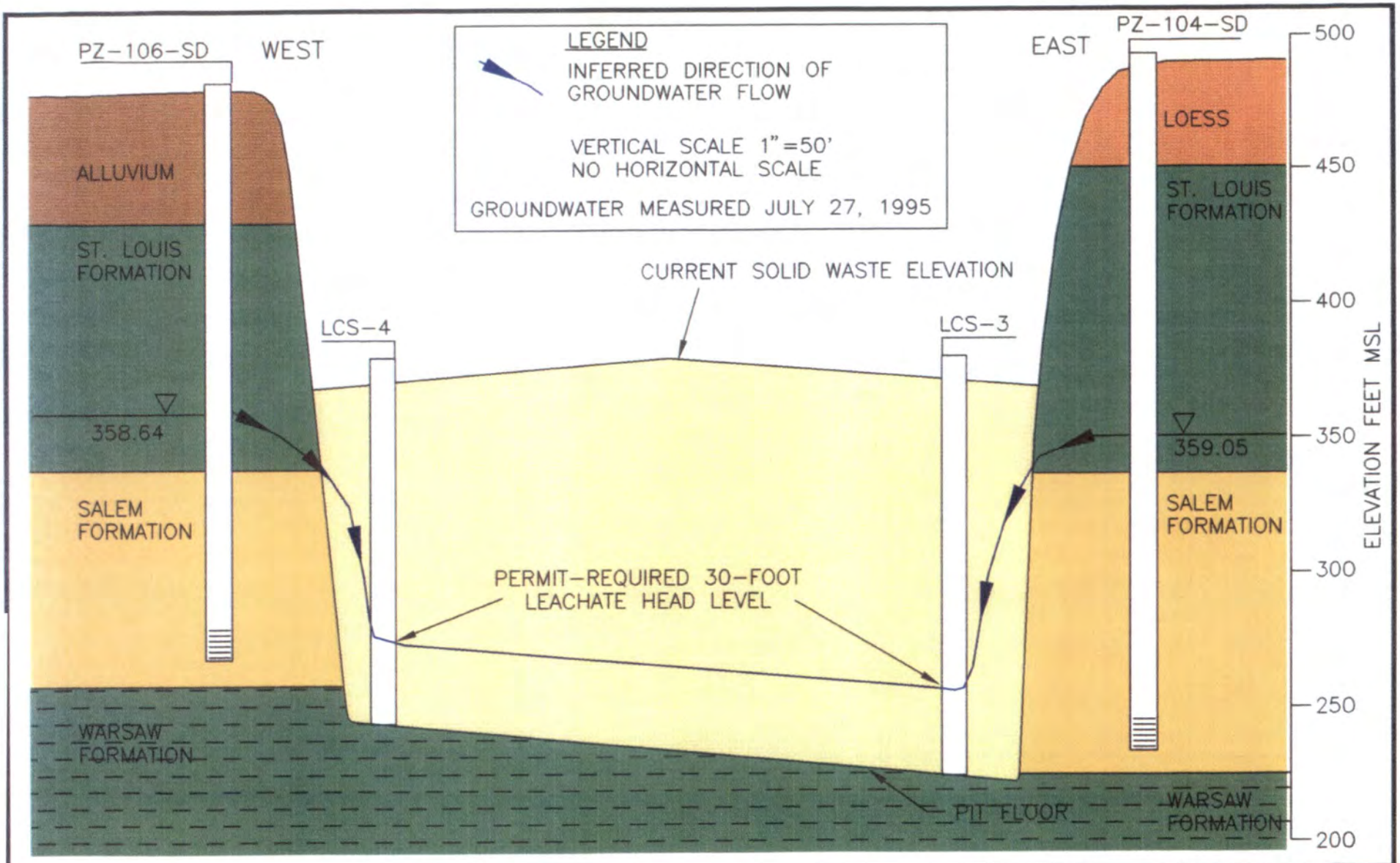
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Generalized stratigraphic succession, bedrock aquifer names, and monitoring well designations.

System	Series	Formation Name	Bridgeton Sanitary Landfill and State of Missouri Well Designation	Bedrock Aquifer
Mississippian	Chesterian	Ste. Genevieve Limestone		Post-Maquoketa aquifer
	Meramecian	St. Louis Limestone	SS	
		Salem Formation	SD	
		Warsaw Formation		
	Osagean	Burlington-Keokuk Limestone		
		Fern Glen Formation		
	Kinderhookian	Chouteau Group		
Devonian	Upper Devonian	Grassy Creek Shale		
Silurian	Wenlockian-Ludlovian	Bainbridge Formation		
Ordovician	Cincinnatian	Maquoketa Shale		Ozark aquifer
	Mohawkian	Kimmswick Limestone		
		Decorah Group		
		Plattin Group		
		Joachim Dolomite		
		St. Peter Sandstone		
	Ibexian	Powell Dolomite		
		Cotter-Jeff. City Dolomite		
		Roubidoux Formation		
		Gasconade Dolomite		
Cambrian	Upper Cambrian	Eminence Dolomite		
		Potosi Dolomite		
		Derby-Doerun Dolomite		St. Francois aquifer
		Davis Formation		
	Middle Cambrian	Bonneterre Formation		
		Lamotte Sandstone		

Figure 2

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CLIENT/PROJECT: LAIDLAW WASTE SYSTEMS INC. — BRIDGETON ACTIVE SANITARY LANDFILL			Golder Associates — Denver, Colorado			TITLE: INWARD GRADIENT FROM THE DEEP SALEM FORMATION TO THE QUARRY	
DRAWN: RLB	CHECKED: CER	REVIEWED: WEH	DATE: SEPT.1995	SCALE: AS SHOWN	FILE NO.: 2848A093	JOB NO.: 943-2848	DWG NO./REV.NO.: A093 — FIGURE: 4-19

DRAFT

Figure 3



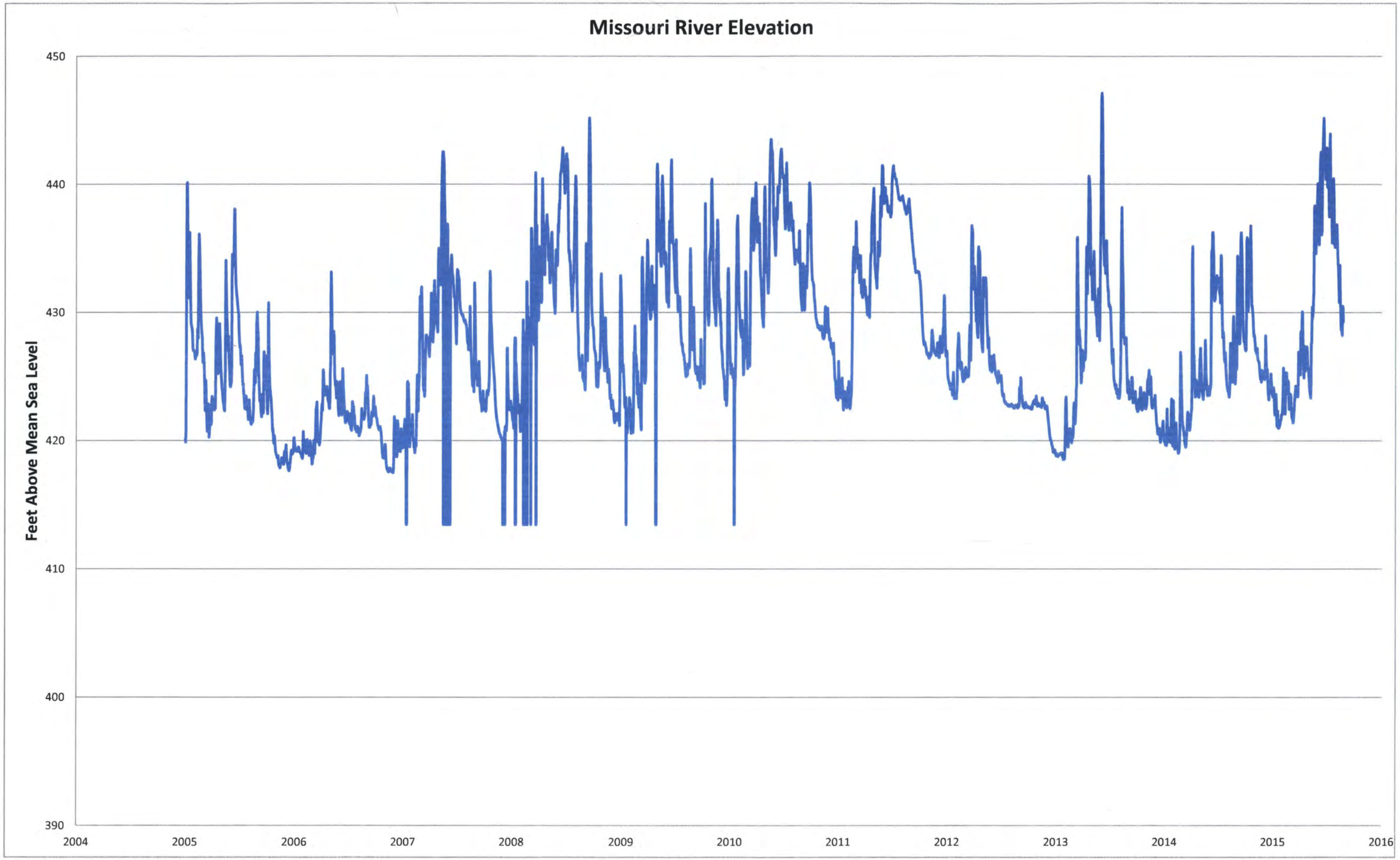
MISSOURI DEPARTMENT OF NATURAL RESOURCES
Missouri Geological Survey

Figure 4

Well Location Map

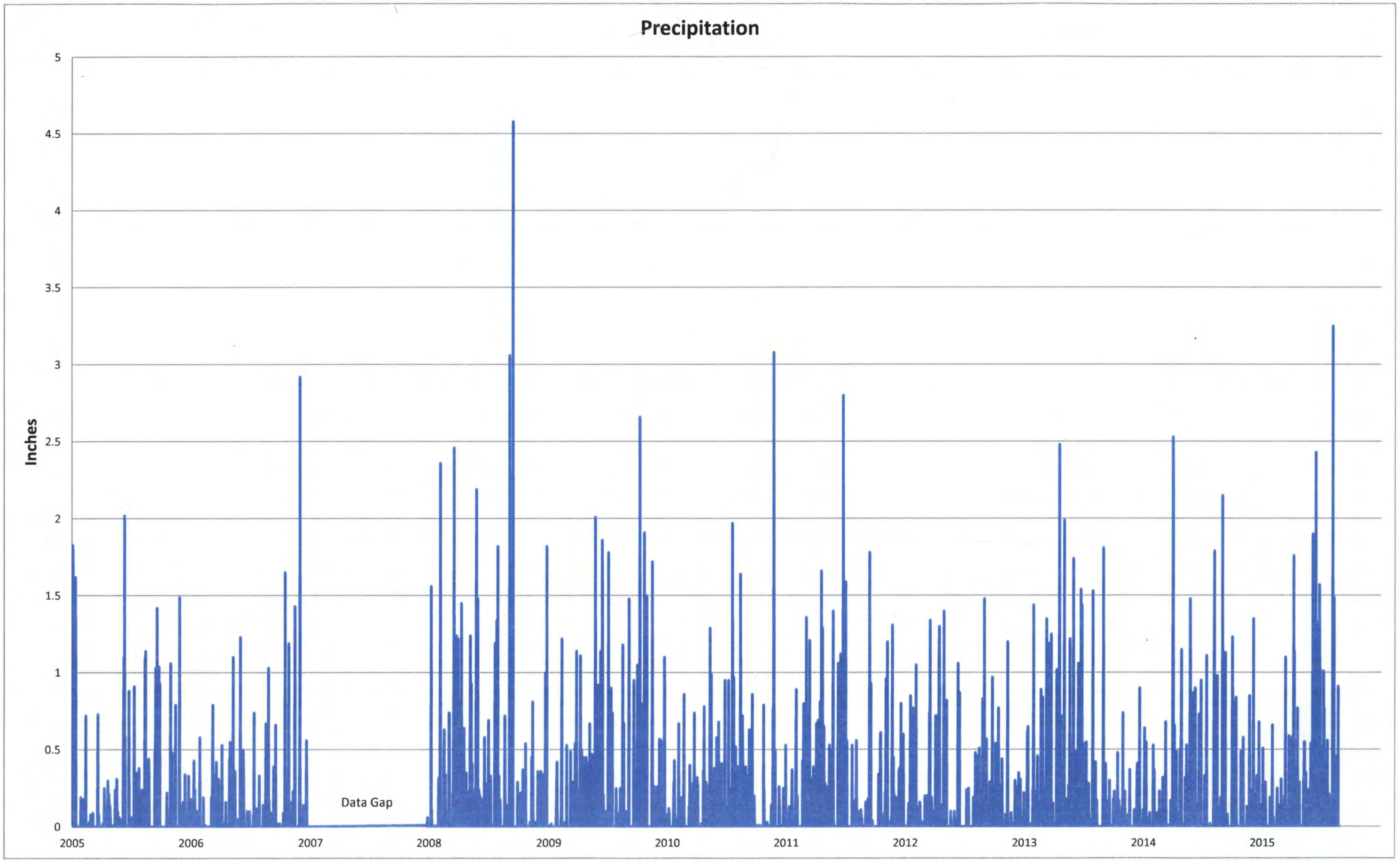
Bridgeton Sanitary Landfill
St. Louis County, Missouri

08/2015



USGS 06935965 Missouri River at St. Charles, MO. Retrieved from http://waterdata.usgs.gov

Figure 5



Weather history for KSTL weather station. Retrieved from http://www.wunderground.com

Figure 6

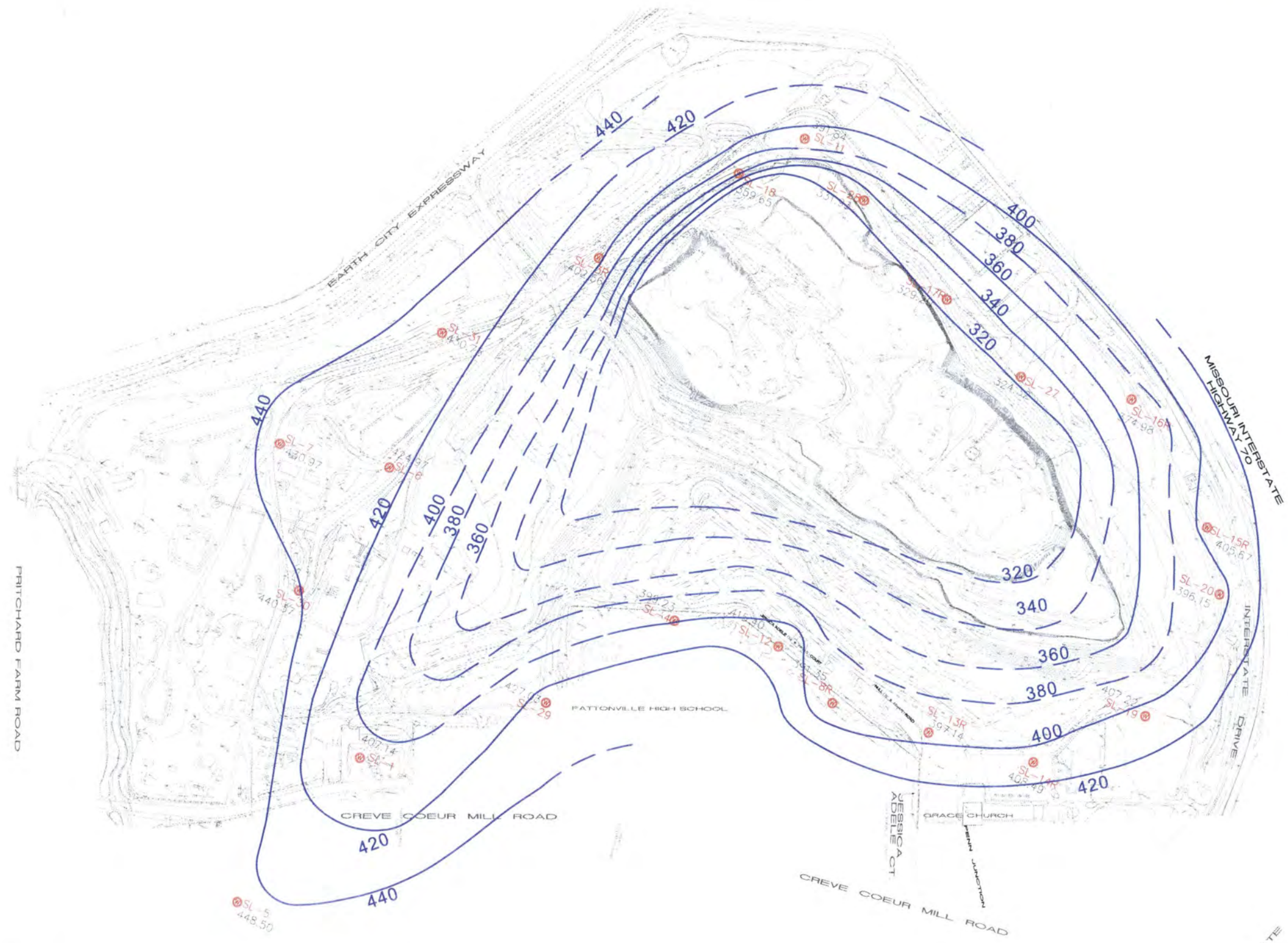
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Project #4186E

Environmental Operations, Inc.

North

0 400 800 1600
Approximate Scale, feet



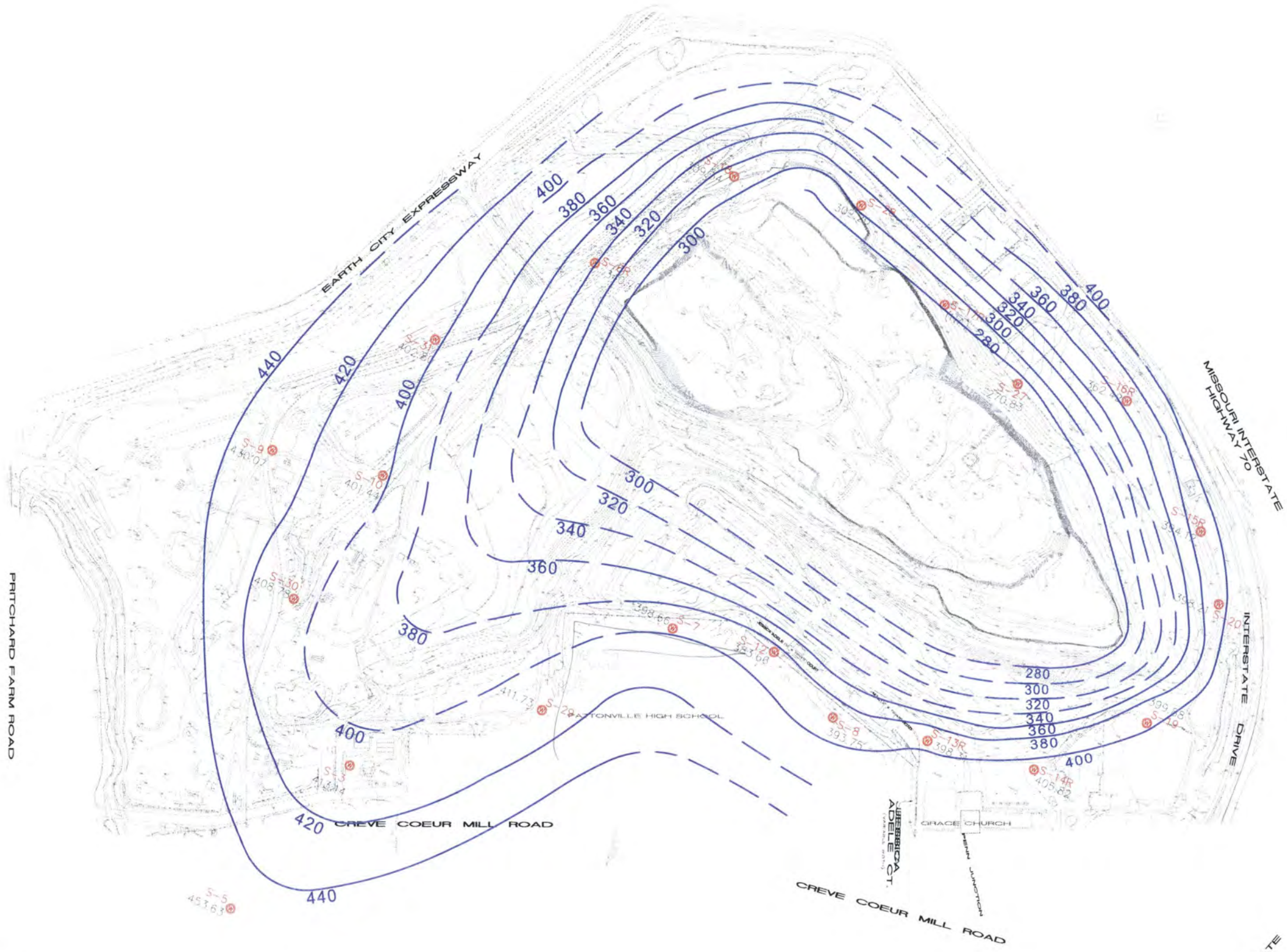
Legend

- 400 Contour Lines
- 400 Inferred Contour Lines
- Property Line

Potentiometric Surface Map
Saint Louis Limestone, Map 2015
IESI MO Champ Landfill
Saint Louis, Missouri

Figure 7

Environmental Operations, Inc.



North

0 400 800 1600

Approximate Scale, feet

Legend

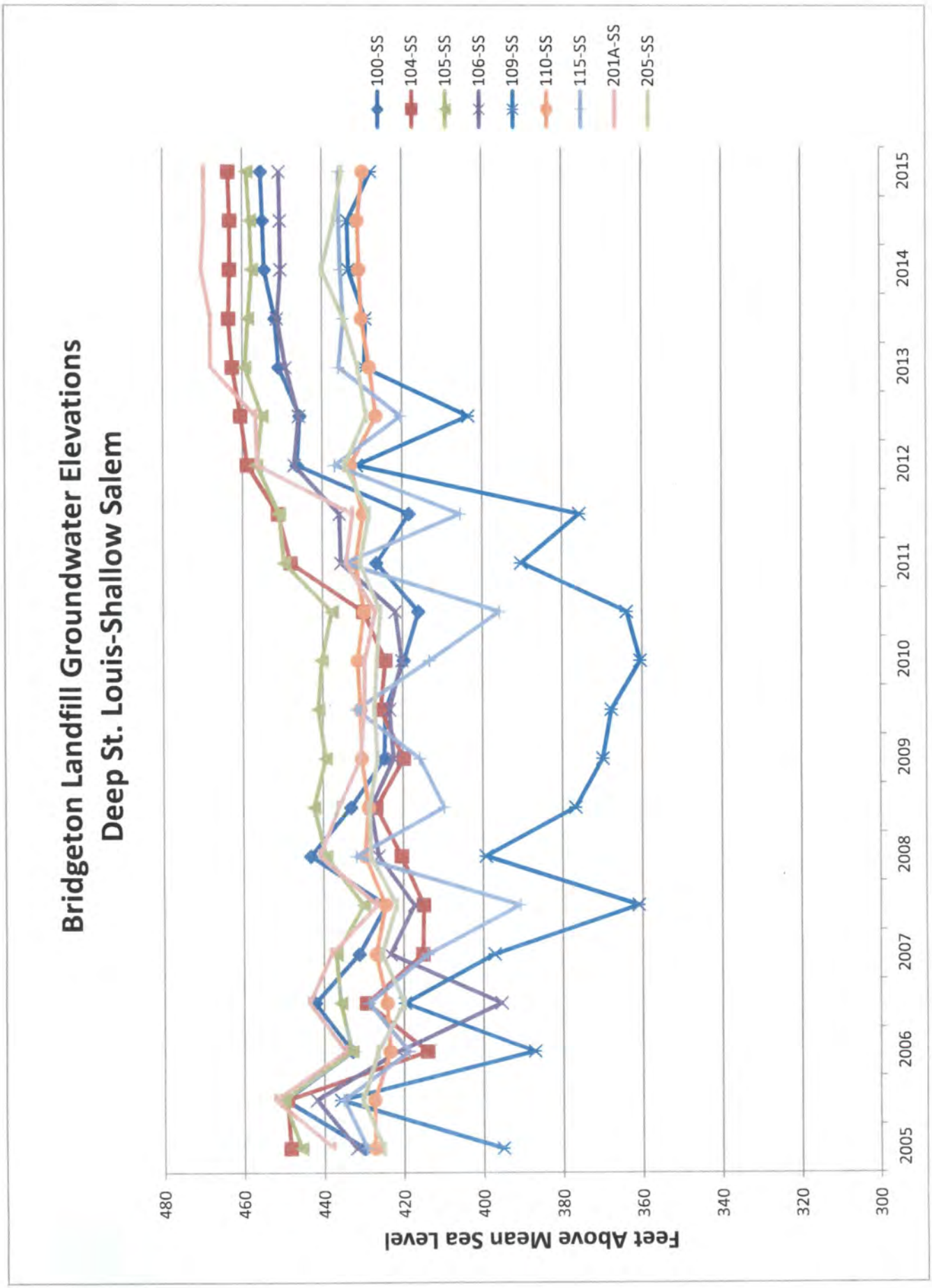
- 400 Contour Lines
- 400 Inferred Contour Lines
- Property Line

Potentiometric Surface Map
Salem Limestone, May 2015

IESI MO Champ Landfill
Saint Louis, Missouri

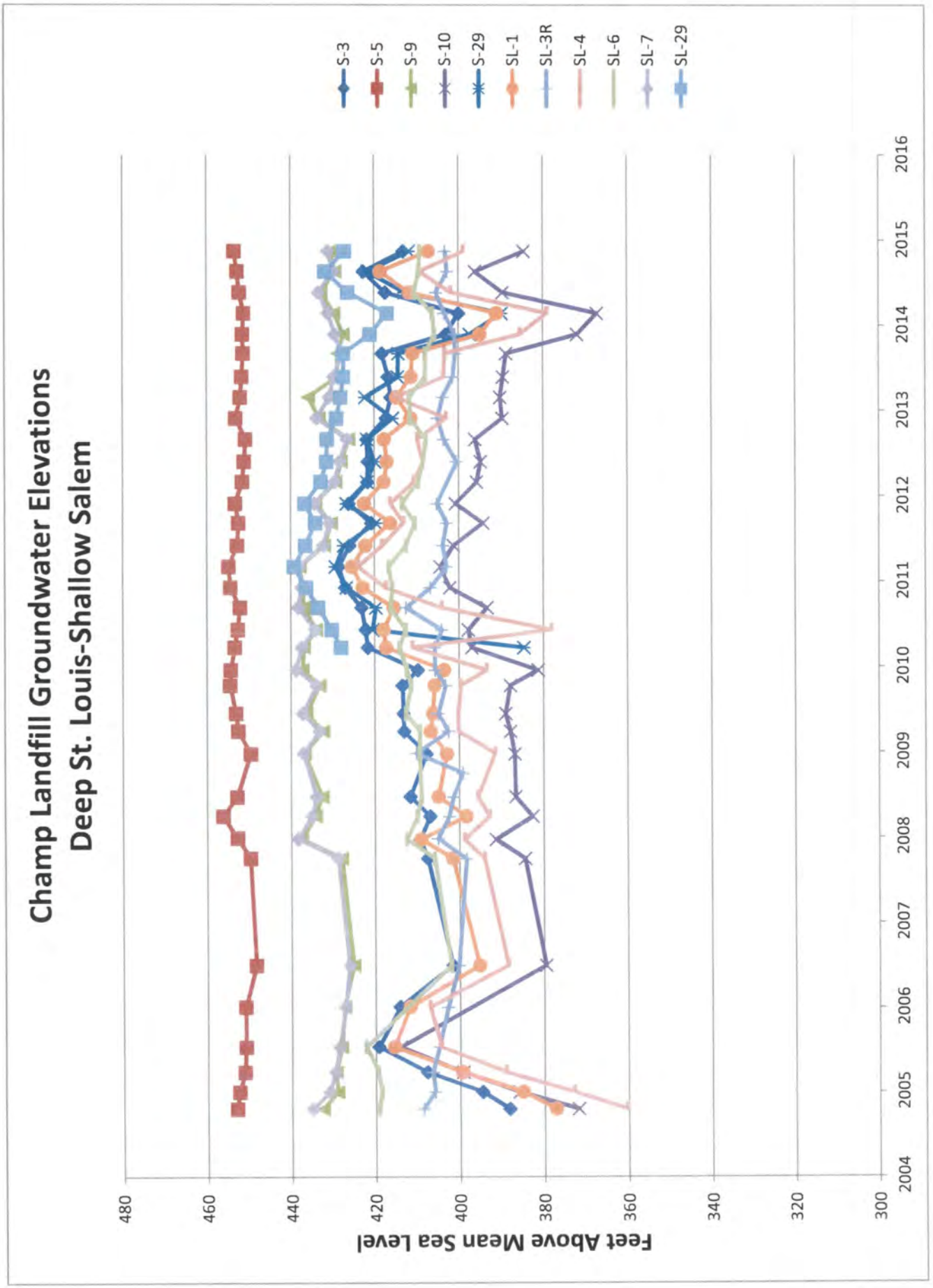
Figure 8

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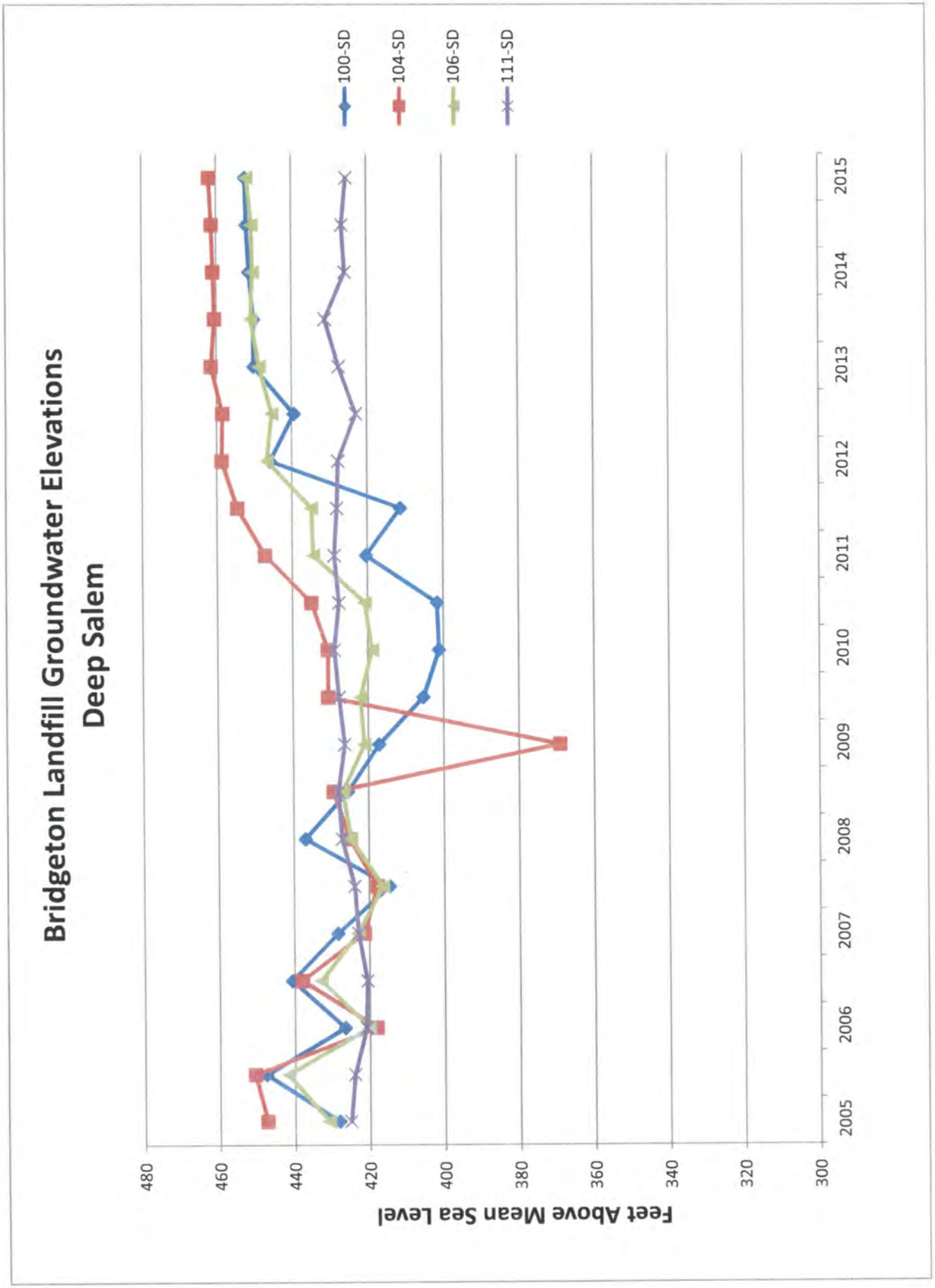
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Price - 0000036

Figure 9



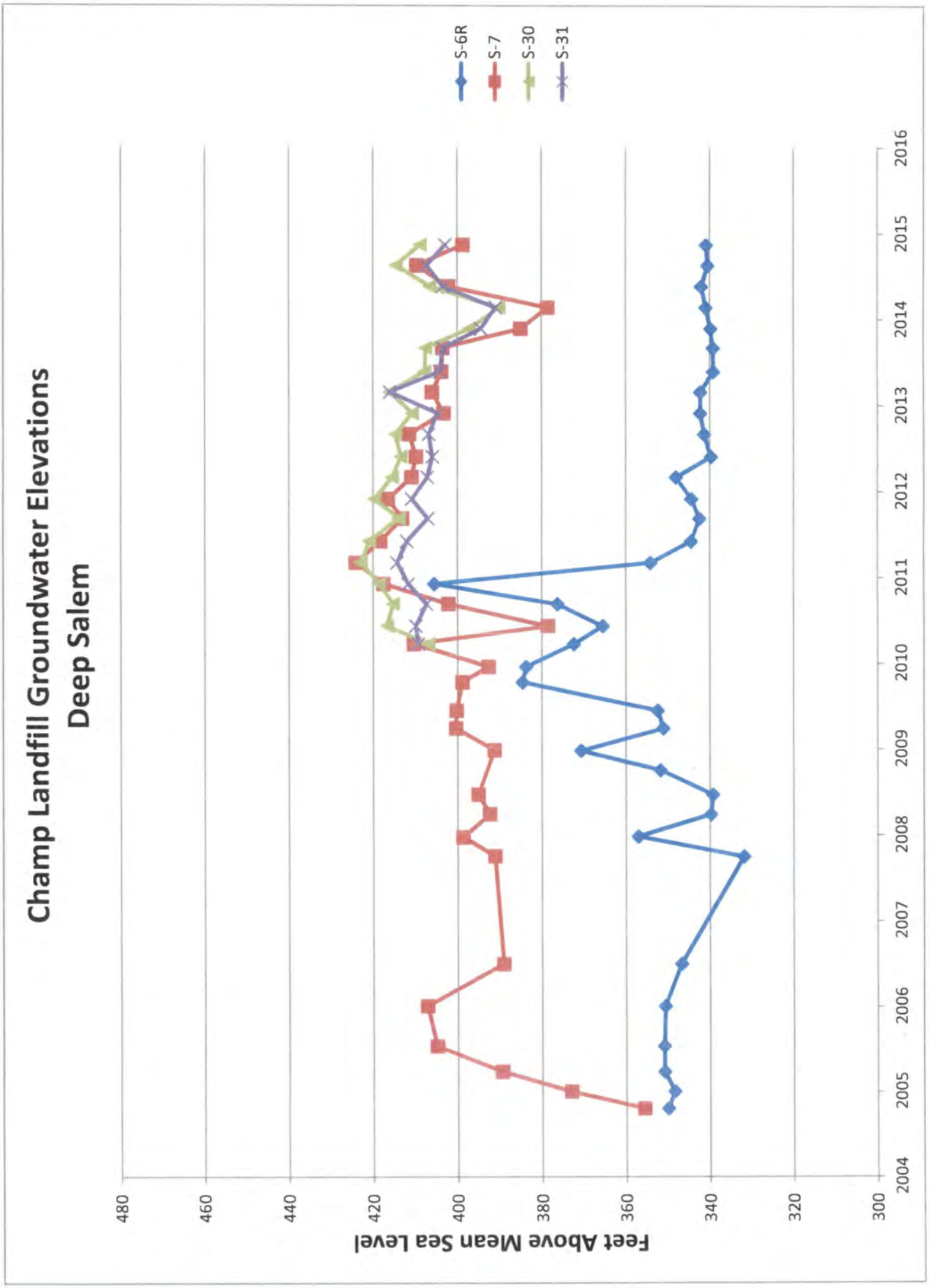
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Figure 10



State of MO v. Republic Services, Inc. et al
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Figure 11



State of MO v. Republic Services, Inc. et al
Price - 0000039

Figure 12

State of MO v. Republic Services, Inc. et al
Price - 0000040

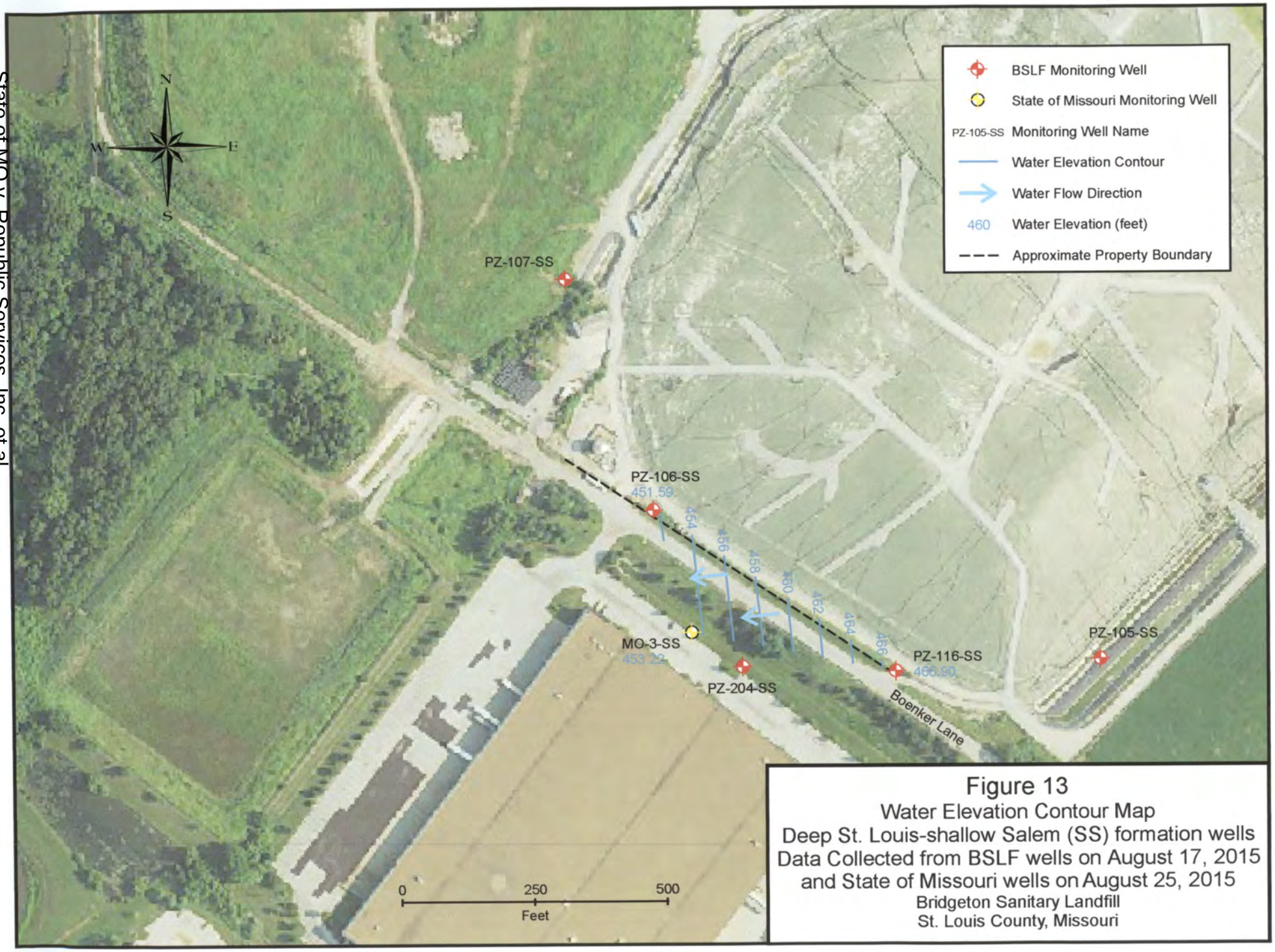


Figure 13
Water Elevation Contour Map
Deep St. Louis-shallow Salem (SS) formation wells
Data Collected from BSLF wells on August 17, 2015
and State of Missouri wells on August 25, 2015
Bridgeton Sanitary Landfill
St. Louis County, Missouri

State of MO v. Republic Services, Inc. et al
Price - 0000041

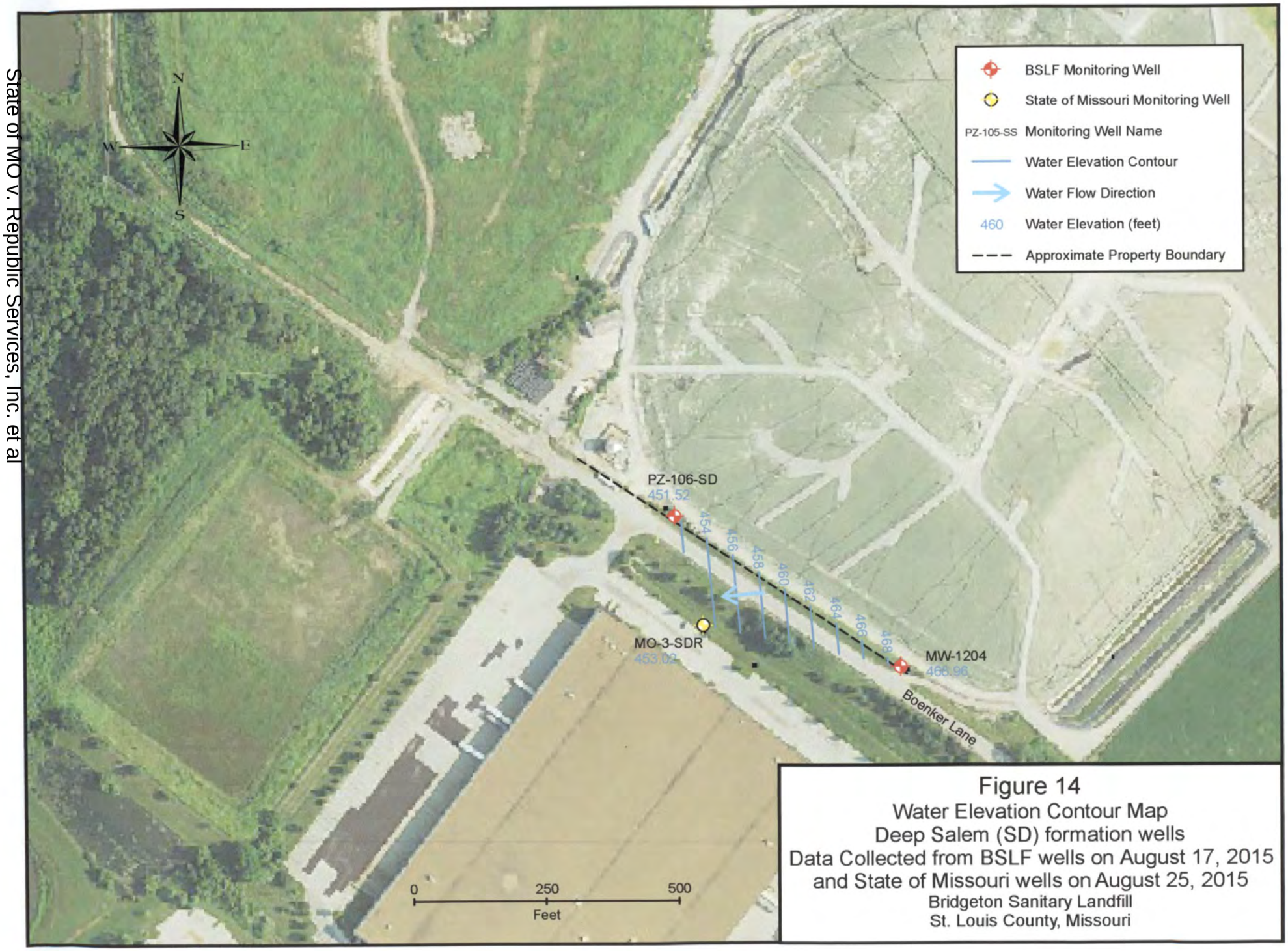


Figure 14
Water Elevation Contour Map
Deep Salem (SD) formation wells
Data Collected from BSLF wells on August 17, 2015
and State of Missouri wells on August 25, 2015
Bridgeton Sanitary Landfill
St. Louis County, Missouri

State of MO v. Republic Services, Inc. et al
Price - 0000042



Figure 15

Water Elevation Contour Map
Deep Salem (SD) Formation wells
Data Collected from BSLF wells on August 17, 2015
and State of Missouri wells on August 25, 2015

Bridgeton Sanitary Landfill
St. Louis County, Missouri

State of MO v. Republic Services, Inc. et al
Price - 0000043

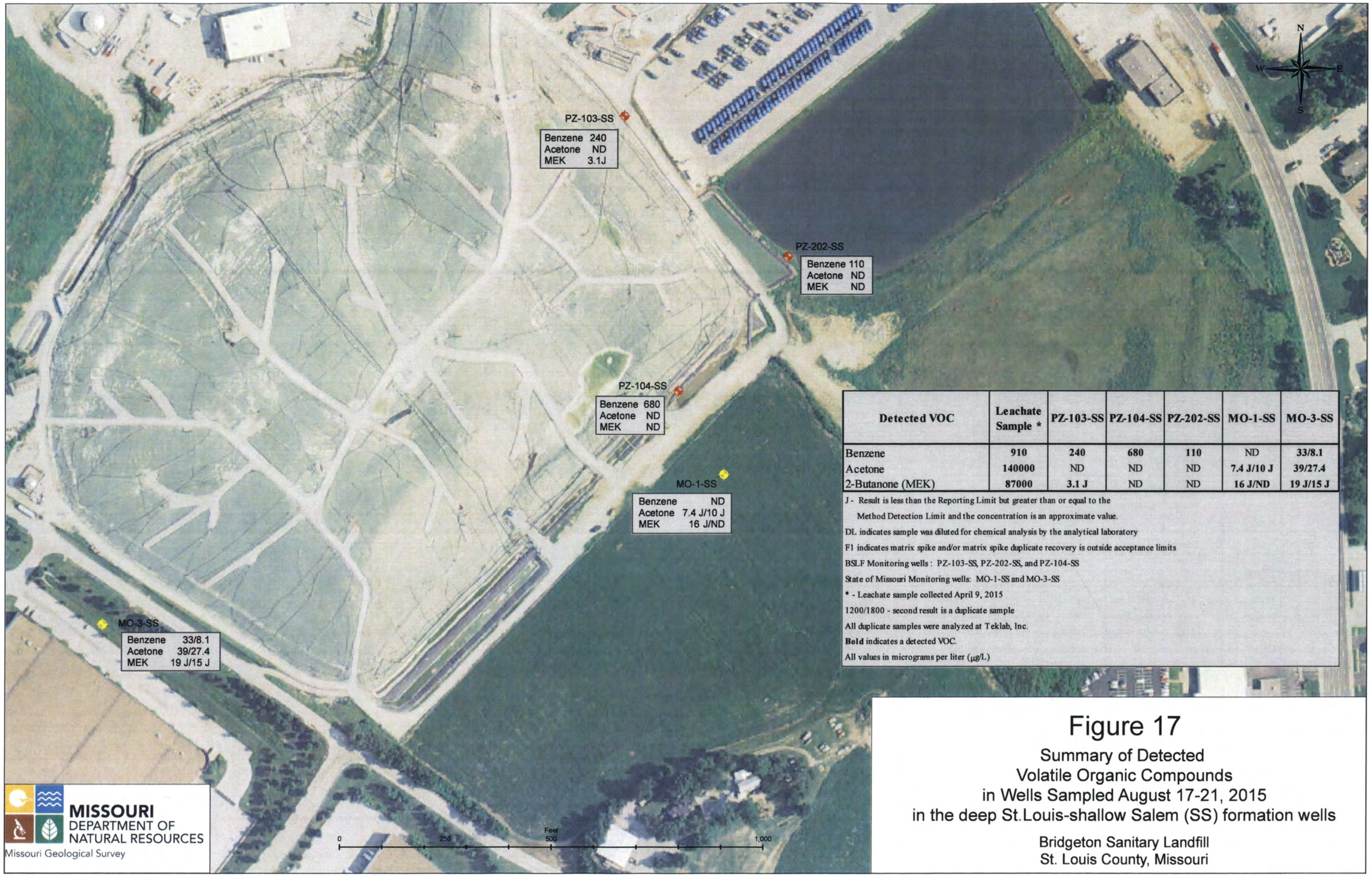


Figure 16

Water Elevation Contour Map
Deep Salem (SD) Formation wells
Data Collected from BSLF wells on August 17, 2015
and State of Missouri wells on August 28, 2015

Bridgeton Sanitary Landfill
St. Louis County, Missouri

State of MO v. Republic Services, Inc. et al
Price - 0000044



Detected VOC	Leachate Sample *	PZ-103-SS	PZ-104-SS	PZ-202-SS	MO-1-SS	MO-3-SS
Benzene	**910**	**240**	**680**	**110**	ND	**33/8.1**
Acetone	**140000**	ND	ND	ND	**7.4 J/10 J**	**39/27.4**
2-Butanone (MEK)	**87000**	**3.1 J**	ND	ND	**16 J/ND**	**19 J/15 J**

J - Result is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.

DL indicates sample was diluted for chemical analysis by the analytical laboratory

F1 indicates matrix spike and/or matrix spike duplicate recovery is outside acceptance limits

BSLF Monitoring wells : PZ-103-SS, PZ-202-SS, and PZ-104-SS

State of Missouri Monitoring wells: MO-1-SS and MO-3-SS

* - Leachate sample collected April 9, 2015

1200/1800 - second result is a duplicate sample

All duplicate samples were analyzed at Teklab, Inc.

Bold indicates a detected VOC.

All values in micrograms per liter (µg/L)

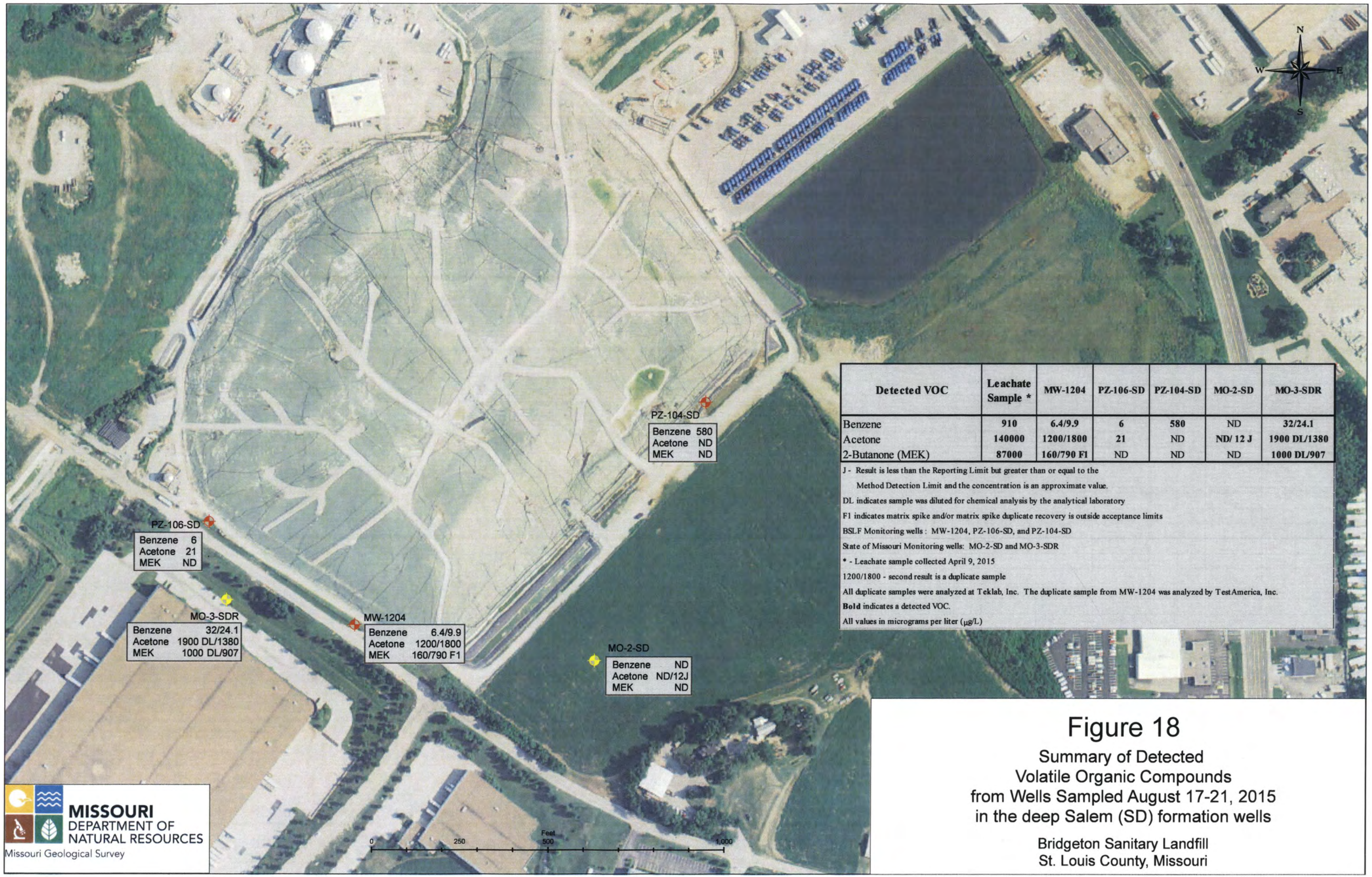
MISSOURI DEPARTMENT OF NATURAL RESOURCES
Missouri Geological Survey

Figure 17

Summary of Detected
Volatile Organic Compounds
in Wells Sampled August 17-21, 2015
in the deep St.Louis-shallow Salem (SS) formation wells

Bridgeton Sanitary Landfill
St. Louis County, Missouri

State of MO v. Republic Services, Inc. et al
Price - 0000045



Detected VOC	Leachate Sample *	MW-1204	PZ-106-SD	PZ-104-SD	MO-2-SD	MO-3-SDR
Benzene	910	6.4/9.9	6	580	ND	32/24.1
Acetone	140000	1200/1800	21	ND	ND/ 12 J	1900 DL/1380
2-Butanone (MEK)	87000	160/790 F1	ND	ND	ND	1000 DL/907

J - Result is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.

DL indicates sample was diluted for chemical analysis by the analytical laboratory

F1 indicates matrix spike and/or matrix spike duplicate recovery is outside acceptance limits

BSLF Monitoring wells : MW-1204, PZ-106-SD, and PZ-104-SD

State of Missouri Monitoring wells: MO-2-SD and MO-3-SDR

* - Leachate sample collected April 9, 2015

1200/1800 - second result is a duplicate sample

All duplicate samples were analyzed at Teklab, Inc. The duplicate sample from MW-1204 was analyzed by TestAmerica, Inc.

Bold indicates a detected VOC.

All values in micrograms per liter (µg/L)

Figure 18

Summary of Detected
Volatile Organic Compounds
from Wells Sampled August 17-21, 2015
in the deep Salem (SD) formation wells

Bridgeton Sanitary Landfill
St. Louis County, Missouri

Appendix A

State of Missouri
Monitoring Well
Boring Logs

Missouri Department of Natural Resources
Missouri Geological Survey

Boring Log

WELL NO.: **MO-1-SS**

TOTAL DEPTH: **150.9 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Turner Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Fletcher Bone**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/05/2015 to 08/06/2015**	LATITUDE/LONGITUDE:	**38 45'48.510" -90 26'26.666"**
		REL GROUND ELEV:	**484.98 feet**

▼ Water level at time of drilling

DEPTH (Feet)	LITHOLOGIC SYMBOLS	LITHOLOGIC DESC	WATER LEVEL	COMMENTS
0 to -100		sandy, clayey, silt Very fine sand with interbedded clay and silt layers Residuum- Very soft, weathered limestone gravels (St. Louis Limestone Residuum) Limestone- light gray/brown with interbedded shales. Very soft (St. Louis Limestone) Argillaceous Limestone- very soft, light gray to beige cuttings. Dry Argillaceous Limestone- very soft, nearly white/beige. Dry Argillaceous Limestone- light to medium gray. Dry Limestone- buff and light to medium gray, very fine grained- lithographic. Dry	▼	Water Encountered

NOTES: C:\71...\Logs\MO-1-SS.BOR

State of MO v. Republic Services, Inc. et al
Price - 0000047

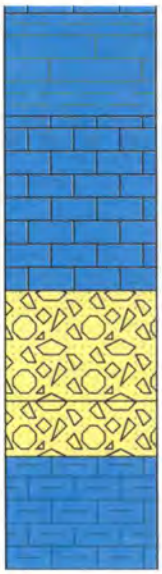
Missouri Department of Natural Resources
Missouri Geological Survey

Boring Log

WELL NO.: **MO-1-SS**
TOTAL DEPTH: **150.9 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Turner Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Fletcher Bone**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/05/2015 to 08/06/2015**	LATITUDE/LONGITUDE:	**38 45'48.510" -90 26'26.666"**
		REL GROUND ELEV:	**484.98 feet**

▼ Water level at time of drilling

DEPTH (Feet)	LITHOLOGIC SYMBOLS	LITHOLOGIC DESC	WATER LEVEL	COMMENTS
-100 -105 -110 -115 -120 -125 -130 -135 -140 -145 -150		Limestone- medium to dark gray, medium to dark gray shale. Dry Limestone- medium to dark gray. Wet Limestone gravels- light gray clayey gravel. Wet Limestone gravels- light to dark gray with no clay and less fines. Wet Argillaceous Limestone- light to dark gray, litohgraphic, few fines. Wet		Water Encountered

NOTES:

State of MO v. Republic Services, Inc. et al
Price - 0000048

Missouri Department of Natural Resources
Missouri Geological Survey

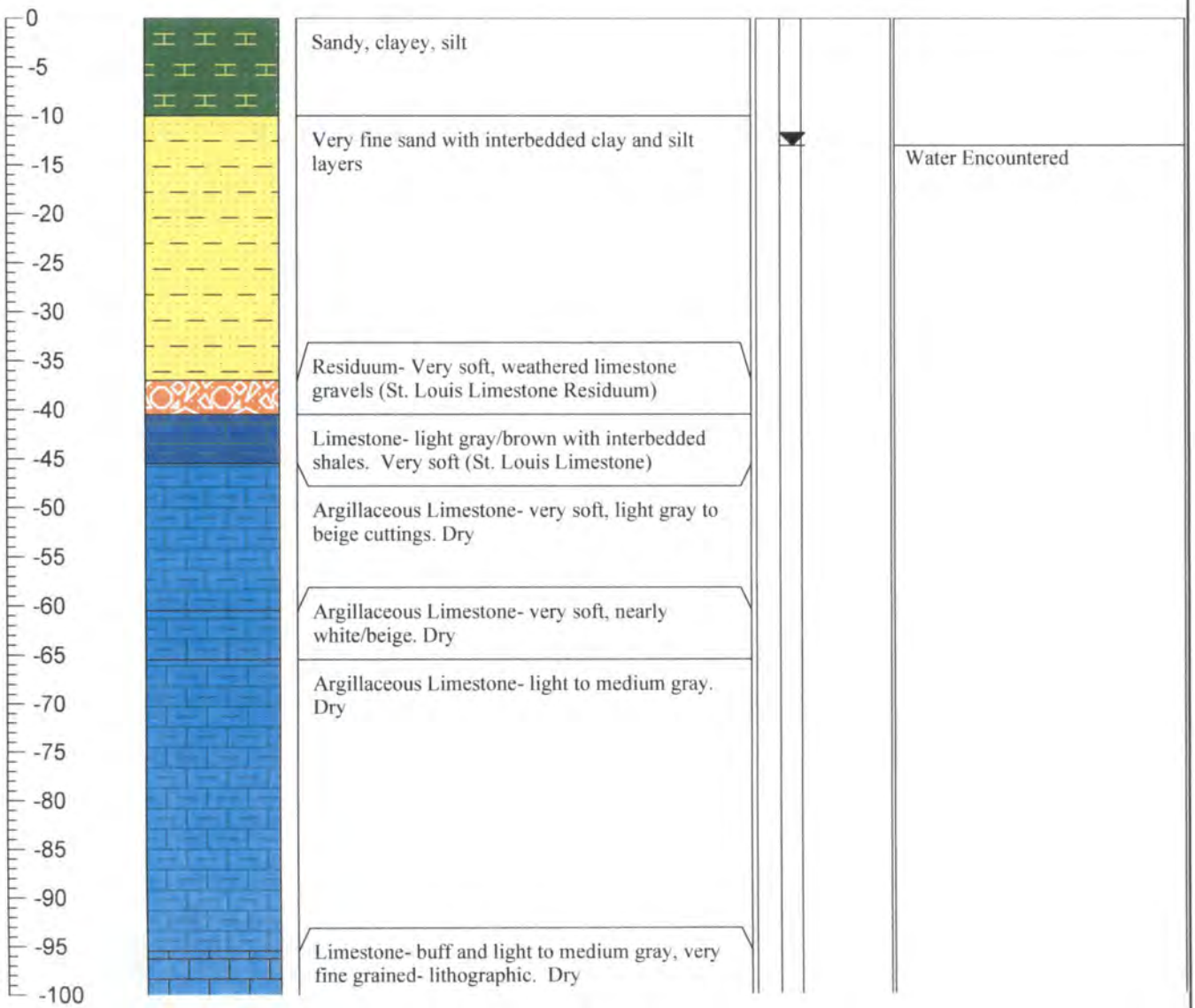
Boring Log

WELL NO.: **MO-1-SDR**

TOTAL DEPTH: **252.3 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Turner Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Fletcher Bone**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/03/2015 to 08/04/2015**	LATITUDE/LONGITUDE:	**38 45'48.574" -90 26'26.584"**
		REL GROUND ELEV:	**485.07 feet**

▼ Water level at time of drilling



NOTES

State of MO v. Republic Services, Inc. et al
Price - 0000049

Missouri Department of Natural Resources
Missouri Geological Survey

Boring Log

WELL NO.: **MO-1-SDR**

TOTAL DEPTH: **252.3 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Turner Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Fletcher Bone**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/03/2015 to 08/04/2015**	LATITUDE/LONGITUDE:	**38 45'48.574" -90 26'26.584"**
		REL GROUND ELEV:	**485.07 feet**

▼ Water level at time of drilling

DEPTH (Feet)	LITHOLOGIC SYMBOLS	LITHOLOGIC DESC	WATER LEVEL	COMMENTS
-100 to -200		Limestone- medium to dark gray, medium to dark gray shale. Dry Limestone- medium to dark gray. Wet Limestone gravels- light gray clayey gravel. Wet Limestone gravels- light to dark gray with no clay and less fines. Wet Argillaceous Limestone- light to dark gray, litohgraphic, few fines. Wet Argillaceous Limestone- light to dark gray, lithographic, few fines. Wet. MnO staining (Salem Formation) Limestone with shale interbedded- light to dark gray, fine grained limestone with black shale. Wet.	▼	Water Encountered

NOTES:

State of MO v. Republic Services, Inc. et al
Price - 0000050

Missouri Department of Natural Resources
Missouri Geological Survey

Boring Log

WELL NO.: **MO-1-SDR**

TOTAL DEPTH: **252.3 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Turner Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Fletcher Bone**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/03/2015 to 08/04/2015**	LATITUDE/LONGITUDE:	**38 45'48.574" -90 26'26.584"**
		REL GROUND ELEV:	**485.07 feet**

▼ Water level at time of drilling

DEPTH (Feet)	LITHOLOGIC SYMBOLS	LITHOLOGIC DESC	WATER LEVEL	COMMENTS
-200 -205 -210 -215 -220 -225 -230 -235 -240 -245 -250		Argillaceous Limestone- medium gray with dark gray/black mottling, weathered to highly weathered, MnO staining. Wet		Lost water around outside of augers at surface

NOTES:

State of MO v. Republic Services, Inc. et al
Price - 0000051

Missouri Department of Natural Resources
Missouri Geological Survey

Boring Log

WELL NO.: **MO-2-SD**

TOTAL DEPTH: **250.4 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Turner Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Brenna McDonald**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/07/2015 to 08/08/2015**	LATITUDE/LONGITUDE:	**38 45'43.584" -90 26'32.225"**
		REL GROUND ELEV:	**490.69 feet**

▼ Water level at time of drilling

DEPTH (Feet)	LITHOLOGIC SYMBOLS	LITHOLOGIC DESC	WATER LEVEL	COMMENTS
0 to -40		sandy, clayey, silt		
-40 to -45		Very fine sand with interbedded clay and silt layers	▼	Water Encountered
-45 to -55		Residuum- Very soft, weathered limestone gravels, cherty (St. Louis Limestone Residuum)		
-55 to -60		Limestone- gray with some chert and clay (St. Louis Limestone)		
-60 to -85		Limestone- gray		
-85 to -90		Limestone- gray and red		
-90 to -110		Limestone- gray to dark gray		

NOTES:

State of MO v. Republic Services, Inc. et al
Price - 0000052

Missouri Department of Natural Resources
Missouri Geological Survey

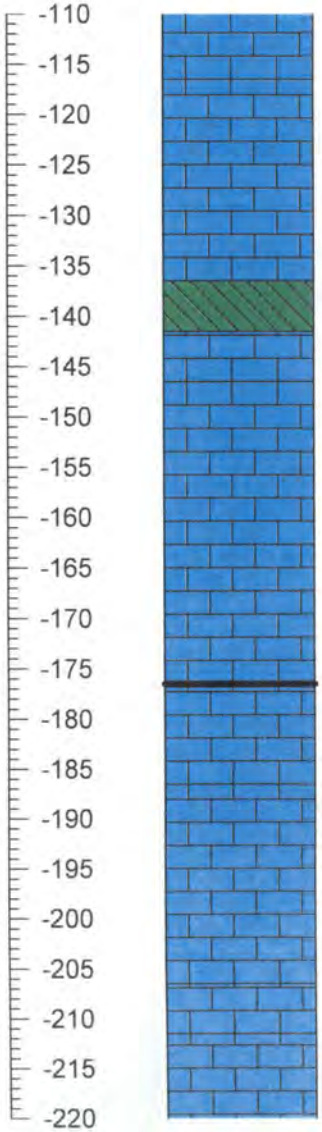
Boring Log

WELL NO.: **MO-2-SD**

TOTAL DEPTH: **250.4 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Turner Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Brenna McDonald**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/07/2015 to 08/08/2015**	LATITUDE/LONGITUDE:	**38 45'43.584" -90 26'32.225"**
		REL GROUND ELEV:	**490.69 feet**

▼ Water level at time of drilling



DEPTH (Feet)	LITHOLOGIC SYMBOLS	LITHOLOGIC DESC	WATER LEVEL	COMMENTS
-110 to -120		Limestone- weathered, clay infill, red-orange		Oily Sheen on discharged drilling water. Petroliferous odor present
-135 to -140		Clay- very little limestone		
-140 to -145		Limestone- mostly gray, little clay		
-145 to -175		Limestone- gray		
-175 to -185		Limestone- gray (most likely within the Salem Formation)		Oily Sheen on discharged drilling water
-185 to -205		Limestone- brown to buff to dark gray		
-205 to -210		Limestone- gray to dark gray to brown		Petroliferous odor present
-210 to -220		Limestone- gray to dark gray to brown		

NOTES:

State of MO v. Republic Services, Inc. et al
Price - 0000053

Missouri Department of Natural Resources
Missouri Geological Survey

Boring Log

WELL NO.: **MO-2-SD**

TOTAL DEPTH: **250.4 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Turner Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Brenna McDonald**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/07/2015 to 08/08/2015**	LATITUDE/LONGITUDE:	**38 45'43.584" -90 26'32.225"**
		REL GROUND ELEV:	**490.69 feet**

▼ Water level at time of drilling

DEPTH (Feet)	LITHOLOGIC SYMBOLS	LITHOLOGIC DESC	WATER LEVEL	COMMENTS
-220 -225 -230 -235 -240 -245 -250		Limestone- dark gray Limestone- dark gray Limestone- medium to dark gray limestone, some red-orange limestone Limestone- medium to dark gray limestone, some red-orange limestone.		Orange foam emitting from top of drill stem after it is disconnected from the swivel Return water is foamy out of drilling discharge pipe

NOTES:

State of MO v. Republic Services, Inc. et al
Price - 0000054

Missouri Department of Natural Resources
Missouri Geological Survey

Boring Log

WELL NO.: **MO-3-SS**

TOTAL DEPTH: **170.4 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Materialogic Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Fletcher Bone**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/11/2015 to 08/12/2015**	LATITUDE/LONGITUDE:	**38 45'45.416 -90 26'45.156"**
		REL GROUND ELEV:	**461.89 feet**

▼ Water level at time of drilling

DEPTH (Feet)	LITHOLOGIC SYMBOLS	LITHOLOGIC DESC	WATER LEVEL	COMMENTS
0 to -110		Sand and silt No sample Limestone- light gray to light brown, finely crystaline. Dry (St. Louis Limestone) Limestone- light gray to light tan, finely crystalline, weathered. Dry Limestone- light gray, weathered. Dry Limestone- light gray, weathered with some sandstone. Dry Limestone- light brown, weathered. Dry Limestone- light gray, soft, weathered with some sandstone. Dry Limestone- light to medium gray and brown. Dry Limestone- light gray with black weathered limestone. Moist Limestone- medium gray with black weathered limestone- speckled. Wet Limestone- varying amounts of light to medium brown, gray and white. Some black weathering. lithographic. Wet Limestone- light to medium gray with dark gray shale, lithographic. Wet	▼	Water Encountered

NOTES:

State of MO v. Republic Services, Inc. et al
Price - 0000055

Missouri Department of Natural Resources
Missouri Geological Survey

Boring Log

WELL NO.: **MO-3-SS**
TOTAL DEPTH: **170.4 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Materialogic Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Fletcher Bone**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/11/2015 to 08/12/2015**	LATITUDE/LONGITUDE:	**38 45'45.416 -90 26'45.156"**
		REL GROUND ELEV:	**461.89 feet**

▼ Water level at time of drilling

DEPTH (Feet)	LITHOLOGIC SYMBOLS	LITHOLOGIC DESC	WATER LEVEL	COMMENTS
-110 -115 -120 -125 -130 -135 -140 -145 -150 -155 -160 -165 -170		Limestone- light to dark gray, lithographic. Wet No sample Limestone- light to dark gray, lithographic. Wet Limestone- light to dary gray, lithographic. Wet (most likely within the Salem Formation) Limestone- medium to dark gray, lithographic. Black weathered pieces of limestone and FeO pieces. Wet		

NOTES:

State of MO v. Republic Services, Inc. et al
Price - 0000056

Missouri Department of Natural Resources
Missouri Geological Survey

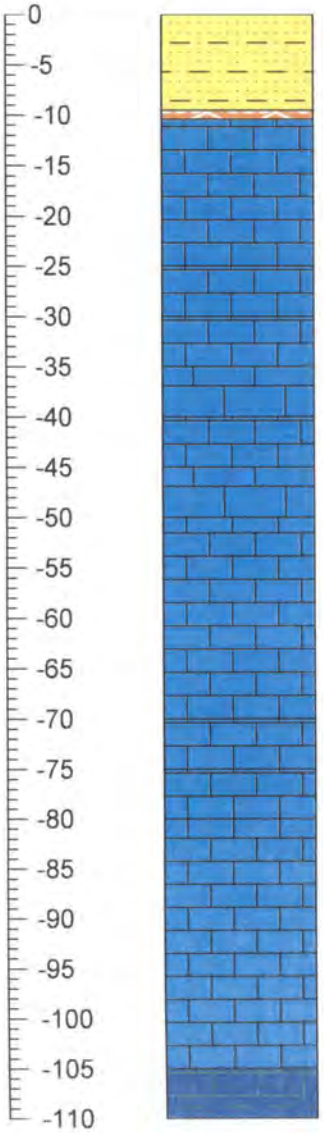
Boring Log

WELL NO.: **MO-3-SDR**

TOTAL DEPTH: **210.4 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Materialogic Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Fletcher Bone**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/13/2015 - 08/14/2015**	LATITUDE/LONGITUDE:	**38 45'45.517" -90 26'45.202"**
		REL GROUND ELEV:	**461.13 feet**

▼ Water level at time of drilling

DEPTH (Feet)	LITHOLOGIC SYMBOLS	LITHOLOGIC DESC	WATER LEVEL	COMMENTS
0 to -110		Sand and silt No sample Limestone- light gray to light brown, finely crystaline. Dry (St. Louis Limestone) Limestone- light gray to light tan, finely crystalline, weathered. Dry Limestone- light gray, weathered. Dry Limestone- light gray, weathered with some sandstone. Dry Limestone- light brown, weathered. Dry Limestone- light gray, soft, weathered with some sandstone. Dry Limestone- light to medium gray and brown. Dry Limestone- light gray with black weathered limestone. Moist Limestone- medium gray with black weathered limestone- speckled. Wet. Limestone- varying amounts of light to medium brown, gray and white. Some black weathering, lithographic. Wet Limestone- light to medium gray with dark gray shale, lithographic. Wet	▼	possible ammonia smell Water Encountered

State of MO v. Republic Services, Inc. et al
Price - 0000057

Missouri Department of Natural Resources
Missouri Geological Survey

Boring Log

WELL NO.: **MO-3-SDR**

TOTAL DEPTH: **210.4 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Bridgeton Landfill**	DRILLER:	**Steve Tapetti**
SITE LOCATION:	**Materialogic Property**		**Geotechnology Inc.**
CITY/COUNTY:	**Bridgeton/ St. Louis Co.**	RIG TYPE:	**CME ATV**
LOGGED BY:	**Fletcher Bone**	METHOD OF DRILLING:	**5 7/8in O.D. Air hammer**
DATES DRILLED:	**08/13/2015 - 08/14/2015**	LATITUDE/LONGITUDE:	**38 45'45.517" -90 26'45.202"**
		REL GROUND ELEV:	**461.13 feet**

▼ Water level at time of drilling

DEPTH (Feet)	LITHOLOGIC SYMBOLS	LITHOLOGIC DESC	WATER LEVEL	COMMENTS
-110 to -210		Limestone- light to dark gray, lithographic. Wet.		ammonia smell
-125		No sample		
-130 to -150		Limestone- light to dark gray, lithographic. Wet.		ammonia smell
-150 to -155		Limestone- light to dary gray, lithographic. Wet (most likely within the Salem Formation)		
-160 to -165		Limestone- medium to dark gray, lithographic. Black weathered pieces of limestone and FeO pieces. Wet		
-170 to -175		Limestone- light to dark gray, fine grained, some weathering. Wet		slight ammonia smell
-180		Limestone- light to dark gray, tan. Wet		
-185		Limestone- light to dark gray, tan, black. Wet		
-190 to -195		Limestone- light to dark gray, tan, black. Tan siltstone. Wet		black stain from FeO gravels in drilling discharge water
-200 to -210		Limestone- light to dark gray, tan, black. Abundant FeO gravels		nearly all FeO gravels with few limestone chips

NOTES:

State of MO v. Republic Services, Inc. et al
Price - 0000058

Appendix B

Missouri River Gage Height Data
USGS St. Charles Gaging Station
6935965

```
# ---------------------------------- WARNING ----------------------------------------
# The data you have obtained from this automated U.S. Geological Survey database
# have not received Director's approval and as such are provisional and subject to
# revision.  The data are released on the condition that neither the USGS nor the
# United States Government may be held liable for any damages resulting from its use.
# Additional info: http://help.waterdata.usgs.gov/policies/provisional-data-statement
#
# File-format description:  http://help.waterdata.usgs.gov/faq/about-tab-delimited-output
# Automated-retrieval info: http://help.waterdata.usgs.gov/faq/automated-retrievals
#
# Contact:   gs-w_support_nwisweb@usgs.gov
# retrieved: 2015-08-28 10:29:49 EDT       (caww01)
#
# Data for the following 1 site(s) are contained in this file
#    USGS 06935965 Missouri River at St. Charles, MO
# -----------------------------------------------------------------------------------
#
# Data provided for site 06935965
#    DD parameter statistic   Description
#    03   00065     30800     Gage height, feet (Observation at 8:00 AM)
#
# Data-value qualification codes included in this output:
#     A  Approved for publication -- Processing and review completed.
#     P  Provisional data subject to revision.
#     1  Daily value is write protected without any remark code to be printed.
#     e  Value has been estimated.
#
agency_cd       site_no datetime        03_00065_30800  03_00065_30800_cd
5s      15s     20d     14n     10s
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USGS	06935965	2015-01-24	7.86	A
USGS	06935965	2015-01-25	7.99	A
USGS	06935965	2015-01-26	8.10	A
USGS	06935965	2015-01-27	8.22	A
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USGS	06935965	2015-01-29	8.46	A
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USGS	06935965	2015-02-07	11.50	A
USGS	06935965	2015-02-08	10.91	A

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USGS	06935965	2015-02-12	10.38	A
USGS	06935965	2015-02-13	11.30	A
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USGS	06935965	2015-05-22	24.03	A
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USGS	06935965	2015-05-28	24.57	A
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USGS	06935965	2015-06-03	23.13	A
USGS	06935965	2015-06-04	22.07	A
USGS	06935965	2015-06-05	21.84	A
USGS	06935965	2015-06-06	23.91	A
USGS	06935965	2015-06-07	26.44	A
USGS	06935965	2015-06-08	27.79	A
USGS	06935965	2015-06-09	28.69	A
USGS	06935965	2015-06-10	29.09	A

USGS	06935965	2015-06-11	27.59	A
USGS	06935965	2015-06-12	24.58	A
USGS	06935965	2015-06-13	22.61	A
USGS	06935965	2015-06-14	22.93	A
USGS	06935965	2015-06-15	26.50	A
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USGS	06935965	2015-06-18	30.31	A
USGS	06935965	2015-06-19	31.09	A
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USGS	06935965	2015-06-21	30.56	P
USGS	06935965	2015-06-22	27.97	P
USGS	06935965	2015-06-23	27.80	P
USGS	06935965	2015-06-24	28.26	P
USGS	06935965	2015-06-25	28.46	P
USGS	06935965	2015-06-26	26.94	P
USGS	06935965	2015-06-27	27.25	P
USGS	06935965	2015-06-28	28.75	P
USGS	06935965	2015-06-29	29.40	P
USGS	06935965	2015-06-30	29.41	P
USGS	06935965	2015-07-01	28.14	P
USGS	06935965	2015-07-02	26.32	P
USGS	06935965	2015-07-03	28.29	P
USGS	06935965	2015-07-04	29.23	P
USGS	06935965	2015-07-05	28.89	P
USGS	06935965	2015-07-06	27.11	P
USGS	06935965	2015-07-07	25.19	P
USGS	06935965	2015-07-08	24.01	P
USGS	06935965	2015-07-09	26.64	P
USGS	06935965	2015-07-10	29.94	P
USGS	06935965	2015-07-11	30.50	P
USGS	06935965	2015-07-12	28.07	P
USGS	06935965	2015-07-13	25.94	P
USGS	06935965	2015-07-14	26.12	P
USGS	06935965	2015-07-15	26.34	P
USGS	06935965	2015-07-16	25.32	P
USGS	06935965	2015-07-17	23.10	P
USGS	06935965	2015-07-18	21.98	P
USGS	06935965	2015-07-19	22.12	P
USGS	06935965	2015-07-20	24.64	P
USGS	06935965	2015-07-21	26.46	P
USGS	06935965	2015-07-22	27.02	P
USGS	06935965	2015-07-23	26.56	P
USGS	06935965	2015-07-24	25.55	P
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USGS	06935965	2015-07-26	21.81	P
USGS	06935965	2015-07-27	22.00	P
USGS	06935965	2015-07-28	21.63	P
USGS	06935965	2015-07-29	21.74	P
USGS	06935965	2015-07-30	22.23	P
USGS	06935965	2015-07-31	22.03	P
USGS	06935965	2015-08-01	22.41	P
USGS	06935965	2015-08-02	23.31	P
USGS	06935965	2015-08-03	23.42	P
USGS	06935965	2015-08-04	22.68	P
USGS	06935965	2015-08-05	21.77	P
USGS	06935965	2015-08-06	20.99	P
USGS	06935965	2015-08-07	20.38	P
USGS	06935965	2015-08-08	20.06	P
USGS	06935965	2015-08-09	19.32	P
USGS	06935965	2015-08-10	18.33	P

USGS	06935965	2015-08-11	17.33	P
USGS	06935965	2015-08-12	18.06	P
USGS	06935965	2015-08-13	19.75	P
USGS	06935965	2015-08-14	20.24	P
USGS	06935965	2015-08-15	18.31	P
USGS	06935965	2015-08-16	16.97	P
USGS	06935965	2015-08-17	15.94	P
USGS	06935965	2015-08-18	15.18	P
USGS	06935965	2015-08-19	15.19	P
USGS	06935965	2015-08-20	15.48	P
USGS	06935965	2015-08-21	14.91	P
USGS	06935965	2015-08-22	14.75	P
USGS	06935965	2015-08-23	16.20	P
USGS	06935965	2015-08-24	17.05	P
USGS	06935965	2015-08-25	16.84	P
USGS	06935965	2015-08-26	15.81	P
USGS	06935965	2015-08-27	14.78	P

Appendix C

Precipitation Data
Lambert - St. Louis International Airport

http://www.wunderground.com/history/airport/KSTL/2015/1/1/CustomHistory.html?dayend=27&monthend=8&yearend=2015&req_city=&req_state=&req_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=&MR=1

Wunderground.com. Weather history for KSTL weather station.

Date	Precipitation (In)	12/7/2004	0.5
1/1/1995	0.08	12/8/2004	0
1/2/1995	0.07	12/9/2004	0
1/3/1995	0.35	12/10/2004	0.09
1/4/1995	0.22	12/11/2004	0.03
1/5/1995	0	12/12/2004	0
1/6/1995	0.35	12/13/2004	0
1/7/1995	0.18	12/14/2004	0
1/8/1995	0.87	12/15/2004	0
1/9/1995	0.2	12/16/2004	0
1/10/1995	0.47	12/17/2004	0
1/11/1995	0.42	12/18/2004	0
1/12/1995	0.03	12/19/2004	0
1/13/1995	2.05	12/20/2004	0
1/14/1995	0.12	12/21/2004	0
1/15/1995	0.13	12/22/2004	0
1/16/1995	0.13	12/23/2004	0
1/17/1995	0.01	12/24/2004	0
1/18/1995	0.39	12/25/2004	0
1/19/1995	0.54	12/26/2004	0
1/20/1995	0	12/27/2004	0
1/21/1995	0.04	12/28/2004	0
1/22/1995	0.06	12/29/2004	0
1/23/1995	0.03	12/30/2004	0
1/24/1995	0.25	12/31/2004	0.12
1/25/1995	0.46	1/1/2005	0.05
1/26/1995	0.46	1/2/2005	0.36
1/27/1995	0.5	1/3/2005	1.83
1/28/1995	0.1	1/4/2005	1.8
1/29/1995	0.23	1/5/2005	1.6
1/30/1995	0.22	1/6/2005	0
1/31/1995	0.36	1/7/2005	0.05
2/1/1995	0.01	1/8/2005	0
2/2/1995	0.03	1/9/2005	0
2/3/1995	0.74	1/10/2005	0
2/4/1995	0.17	1/11/2005	0.08
2/5/1995	0.27	1/12/2005	1.62
2/6/1995	0.02	1/13/2005	0.86
2/7/1995	0.04	1/14/2005	0
2/8/1995	0.46	1/15/2005	0.01
2/9/1995	0.69	1/16/2005	0.01

2/10/1995	0.64	1/17/2005	0
2/11/1995	0.64	1/18/2005	0
2/12/1995	0.23	1/19/2005	0
2/13/1995	0.13	1/20/2005	0
2/14/1995	0.05	1/21/2005	0
2/15/1995	0.85	1/22/2005	0
2/16/1995	0.44	1/23/2005	0
2/17/1995	0.35	1/24/2005	0
2/18/1995	0.27	1/25/2005	0
2/19/1995	0.17	1/26/2005	0
2/20/1995	0.67	1/27/2005	0
2/21/1995	0.45	1/28/2005	0.03
2/22/1995	0.39	1/29/2005	0.19
2/23/1995	0.81	1/30/2005	0
2/24/1995	0.56	1/31/2005	0
2/25/1995	0.72	2/1/2005	0
2/26/1995	0.34	2/2/2005	0.06
2/27/1995	0.02	2/3/2005	0
2/28/1995	0.02	2/4/2005	0
3/1/1995	0.28	2/5/2005	0
3/2/1995	0.04	2/6/2005	0.18
3/3/1995	0.15	2/7/2005	0.17
3/4/1995	0.06	2/8/2005	0.13
3/5/1995	0.12	2/9/2005	0.13
3/6/1995	0.26	2/10/2005	0
3/7/1995	1.67	2/11/2005	0
3/8/1995	0.49	2/12/2005	0.04
3/9/1995	0.48	2/13/2005	0.72
3/10/1995	0.38	2/14/2005	0
3/11/1995	0.36	2/15/2005	0
3/12/1995	0.23	2/16/2005	0
3/13/1995	0.23	2/17/2005	0
3/14/1995	0.27	2/18/2005	0
3/15/1995	0.22	2/19/2005	0
3/16/1995	0.15	2/20/2005	0.01
3/17/1995	0.25	2/21/2005	0
3/18/1995	0.65	2/22/2005	0
3/19/1995	0.78	2/23/2005	0.03
3/20/1995	0.16	2/24/2005	0.02
3/21/1995	0.57	2/25/2005	0
3/22/1995	0.53	2/26/2005	0
3/23/1995	0.95	2/27/2005	0
3/24/1995	0.29	2/28/2005	0.08
3/25/1995	0.58	3/1/2005	0
3/26/1995	0.53	3/2/2005	0
3/27/1995	0	3/3/2005	0
3/28/1995	0.19	3/4/2005	0

3/29/1995	0.13	3/5/2005	0
3/30/1995	0.22	3/6/2005	0
3/31/1995	0.16	3/7/2005	0.09
4/1/1995	0.12	3/8/2005	0
4/2/1995	0.48	3/9/2005	0
4/3/1995	0.12	3/10/2005	0
4/4/1995	0.49	3/11/2005	0
4/5/1995	0.68	3/12/2005	0
4/6/1995	0.17	3/13/2005	0
4/7/1995	0.4	3/14/2005	0
4/8/1995	0.39	3/15/2005	0
4/9/1995	0.02	3/16/2005	0
4/10/1995	0.02	3/17/2005	0
4/11/1995	0.33	3/18/2005	0
4/12/1995	0.02	3/19/2005	0
4/13/1995	0.45	3/20/2005	0
4/14/1995	0.35	3/21/2005	0
4/15/1995	0.26	3/22/2005	0.73
4/16/1995	0.46	3/23/2005	0.1
4/17/1995	0.02	3/24/2005	0.05
4/18/1995	0.12	3/25/2005	0.08
4/19/1995	0	3/26/2005	0
4/20/1995	0.77	3/27/2005	0
4/21/1995	0.58	3/28/2005	0
4/22/1995	0.24	3/29/2005	0
4/23/1995	0.6	3/30/2005	0
4/24/1995	0.01	3/31/2005	0
4/25/1995	0.34	4/1/2005	0
4/26/1995	0	4/2/2005	0
4/27/1995	0.05	4/3/2005	0
4/28/1995	0.2	4/4/2005	0
4/29/1995	0.58	4/5/2005	0
4/30/1995	0.11	4/6/2005	0.02
5/1/1995	0.7	4/7/2005	0.01
5/2/1995	0.2	4/8/2005	0
5/3/1995	0.18	4/9/2005	0
5/4/1995	0.15	4/10/2005	0
5/5/1995	0.44	4/11/2005	0.25
5/6/1995	0.01	4/12/2005	0.1
5/7/1995	0	4/13/2005	0.12
5/8/1995	0.73	4/14/2005	0
5/9/1995	0.25	4/15/2005	0
5/10/1995	0.06	4/16/2005	0
5/11/1995	0.27	4/17/2005	0
5/12/1995	0.09	4/18/2005	0
5/13/1995	0.2	4/19/2005	0
5/14/1995	0.62	4/20/2005	0.07

5/15/1995	0.58	4/21/2005	0.07
5/16/1995	4	4/22/2005	0.3
5/17/1995	3.93	4/23/2005	0.12
5/18/1995	1.06	4/24/2005	0
5/19/1995	0.35	4/25/2005	0.21
5/20/1995	0.29	4/26/2005	0.12
5/21/1995	0.27	4/27/2005	0
5/22/1995	0.31	4/28/2005	0.14
5/23/1995	0	4/29/2005	0.1
5/24/1995	0.23	4/30/2005	T
5/25/1995	0.37	5/1/2005	0
5/26/1995	0.01	5/2/2005	0
5/27/1995	0.23	5/3/2005	0
5/28/1995	0.06	5/4/2005	0
5/29/1995	0.29	5/5/2005	0
5/30/1995	0.24	5/6/2005	0
5/31/1995	0.39	5/7/2005	0
6/1/1995	0.6	5/8/2005	T
6/2/1995	0.09	5/9/2005	0.01
6/3/1995	0.31	5/10/2005	0
6/4/1995	0.33	5/11/2005	0
6/5/1995	0.44	5/12/2005	0
6/6/1995	0.06	5/13/2005	0
6/7/1995	0.44	5/14/2005	0.24
6/8/1995	0.17	5/15/2005	0
6/9/1995	0.06	5/16/2005	0
6/10/1995	0.28	5/17/2005	0
6/11/1995	0.05	5/18/2005	0
6/12/1995	0.16	5/19/2005	0.31
6/13/1995	0.3	5/20/2005	0
6/14/1995	0.31	5/21/2005	0.01
6/15/1995	0.16	5/22/2005	0.1
6/16/1995	0.32	5/23/2005	0
6/17/1995	0.37	5/24/2005	0
6/18/1995	0.38	5/25/2005	0
6/19/1995	0.46	5/26/2005	T
6/20/1995	0.03	5/27/2005	0.06
6/21/1995	0.01	5/28/2005	0
6/22/1995	0.29	5/29/2005	0.05
6/23/1995	0.37	5/30/2005	T
6/24/1995	0.31	5/31/2005	0
6/25/1995	0.07	6/1/2005	0
6/26/1995	0.91	6/2/2005	0
6/27/1995	0.45	6/3/2005	0
6/28/1995	0.15	6/4/2005	0
6/29/1995	0.3	6/5/2005	0
6/30/1995	0.15	6/6/2005	0.03

7/1/1995	0.19	6/7/2005	0
7/2/1995	0.27	6/8/2005	0.48
7/3/1995	0.15	6/9/2005	1.1
7/4/1995	0.12	6/10/2005 T	
7/5/1995	0.43	6/11/2005	2.02
7/6/1995	0.13	6/12/2005	0
7/7/1995	0.28	6/13/2005	0.59
7/8/1995	0.4	6/14/2005 T	
7/9/1995	0.1	6/15/2005	0
7/10/1995	0.25	6/16/2005	0
7/11/1995	0.16	6/17/2005	0
7/12/1995	0.18	6/18/2005	0
7/13/1995	0.35	6/19/2005	0
7/14/1995	0.39	6/20/2005	0
7/15/1995	0.32	6/21/2005	0
7/16/1995	0.01	6/22/2005	0
7/17/1995	0.15	6/23/2005	0
7/18/1995	0.17	6/24/2005	0
7/19/1995	0.3	6/25/2005	0.88
7/20/1995	0.56	6/26/2005	0
7/21/1995	0.19	6/27/2005	0
7/22/1995	0.19	6/28/2005	0
7/23/1995	0.01	6/29/2005	0
7/24/1995	0.05	6/30/2005 T	
7/25/1995	0	7/1/2005	0
7/26/1995	0.2	7/2/2005	0
7/27/1995	0.29	7/3/2005	0
7/28/1995	0.34	7/4/2005	0.06
7/29/1995	0.25	7/5/2005	0
7/30/1995	0.22	7/6/2005	0
7/31/1995	0.25	7/7/2005	0
8/1/1995	0.56	7/8/2005	0
8/2/1995	1.13	7/9/2005	0
8/3/1995	0.08	7/10/2005	0
8/4/1995	0.21	7/11/2005	0.91
8/5/1995	0.12	7/12/2005	0.35
8/6/1995	1.01	7/13/2005	0.04
8/7/1995	0.24	7/14/2005	0.04
8/8/1995	0.44	7/15/2005	0.03
8/9/1995	0.43	7/16/2005	0
8/10/1995	0.36	7/17/2005	0
8/11/1995	0.11	7/18/2005	0.35
8/12/1995	0.3	7/19/2005	0
8/13/1995	0.15	7/20/2005	0
8/14/1995	0.47	7/21/2005	0
8/15/1995	0.1	7/22/2005	0
8/16/1995	0.02	7/23/2005	0

8/17/1995	0.13	7/24/2005	0
8/18/1995	0.15	7/25/2005	0
8/19/1995	0.66	7/26/2005	0.38
8/20/1995	0.17	7/27/2005	0.06
8/21/1995	0.14	7/28/2005	0
8/22/1995	0.17	7/29/2005	0
8/23/1995	0.17	7/30/2005	0
8/24/1995	0.05	7/31/2005	0
8/25/1995	0.17	8/1/2005	0
8/26/1995	0.21	8/2/2005	0
8/27/1995	0.26	8/3/2005	0
8/28/1995	0.1	8/4/2005	0.24
8/29/1995	0.1	8/5/2005	0.1
8/30/1995	0.02	8/6/2005 T	
8/31/1995	0.01	8/7/2005	0
9/1/1995	0.15	8/8/2005	0
9/2/1995	0.29	8/9/2005	0
9/3/1995	0.16	8/10/2005 T	
9/4/1995	0.17	8/11/2005	0.06
9/5/1995	0.17	8/12/2005	0.05
9/6/1995	0.31	8/13/2005	1.09
9/7/1995	0.17	8/14/2005	0.11
9/8/1995	0.03	8/15/2005	1.14
9/9/1995	0.28	8/16/2005	0.04
9/10/1995	0.25	8/17/2005	0
9/11/1995	0.24	8/18/2005	0.23
9/12/1995	0.08	8/19/2005	0
9/13/1995	0.29	8/20/2005	0
9/14/1995	0.27	8/21/2005	0
9/15/1995	0.15	8/22/2005	0
9/16/1995	0.16	8/23/2005	0
9/17/1995	0.25	8/24/2005	0.02
9/18/1995	0.23	8/25/2005	0.44
9/19/1995	0.17	8/26/2005	0.35
9/20/1995	0.37	8/27/2005	0
9/21/1995	0.04	8/28/2005	0
9/22/1995	0.24	8/29/2005	0
9/23/1995	0.29	8/30/2005	0
9/24/1995	0.27	8/31/2005	0
9/25/1995	0.15	9/1/2005	0
9/26/1995	0.05	9/2/2005	0
9/27/1995	0.25	9/3/2005	0
9/28/1995	0.24	9/4/2005	0
9/29/1995	0.34	9/5/2005	0
9/30/1995	0	9/6/2005	0
10/1/1995	0.06	9/7/2005	0
10/2/1995	0	9/8/2005	0

10/3/1995	0.2	9/9/2005	0
10/4/1995	0.28	9/10/2005	0
10/5/1995	0.25	9/11/2005	0
10/6/1995	0.5	9/12/2005	0
10/7/1995	0.39	9/13/2005	0.49
10/8/1995	0.11	9/14/2005	0.17
10/9/1995	0.16	9/15/2005	1.03
10/10/1995	0.07	9/16/2005 T	
10/11/1995	0.14	9/17/2005	0
10/12/1995	0.34	9/18/2005	0.21
10/13/1995	0.02	9/19/2005	1.42
10/14/1995	0	9/20/2005	0
10/15/1995	0.3	9/21/2005	0
10/16/1995	0.27	9/22/2005	0
10/17/1995	0.24	9/23/2005	0
10/18/1995	0.08	9/24/2005	0.01
10/19/1995	0.48	9/25/2005	1.04
10/20/1995	0.1	9/26/2005 T	
10/21/1995	0.15	9/27/2005	0
10/22/1995	0.31	9/28/2005	0.93
10/23/1995	0.07	9/29/2005	0
10/24/1995	0.34	9/30/2005	0
10/25/1995	0.58	10/1/2005	0
10/26/1995	0.05	10/2/2005	0
10/27/1995	0.08	10/3/2005	0
10/28/1995	0.64	10/4/2005	0
10/29/1995	0.34	10/5/2005	0
10/30/1995	0.08	10/6/2005	0
10/31/1995	0.02	10/7/2005	0
11/1/1995	0.23	10/8/2005	0
11/2/1995	0.02	10/9/2005	0
11/3/1995	0.2	10/10/2005	0
11/4/1995	0.32	10/11/2005 T	
11/5/1995	0.01	10/12/2005	0
11/6/1995	0.02	10/13/2005	0
11/7/1995	0.61	10/14/2005	0
11/8/1995	0.36	10/15/2005	0
11/9/1995	0.44	10/16/2005	0
11/10/1995	0.84	10/17/2005	0
11/11/1995	0.05	10/18/2005	0
11/12/1995	0.01	10/19/2005	0.09
11/13/1995	0.47	10/20/2005	0.22
11/14/1995	0.13	10/21/2005 T	
11/15/1995	0.19	10/22/2005	0.03
11/16/1995	0.07	10/23/2005 T	
11/17/1995	0.56	10/24/2005	0
11/18/1995	0.2	10/25/2005	0

11/19/1995	0.29	10/26/2005	0
11/20/1995	0.46	10/27/2005	0
11/21/1995	0.15	10/28/2005	0
11/22/1995	0.36	10/29/2005	0
11/23/1995	0.74	10/30/2005	0.12
11/24/1995	0.52	10/31/2005	1.06
11/25/1995	0.52	11/1/2005	0
11/26/1995	0.86	11/2/2005	0
11/27/1995	1.52	11/3/2005	0
11/28/1995	0.4	11/4/2005	0
11/29/1995	0.28	11/5/2005	0.48
11/30/1995	0.78	11/6/2005	0.03
12/1/1995	0.43	11/7/2005	0
12/2/1995	0.27	11/8/2005	0
12/3/1995	0.64	11/9/2005	0
12/4/1995	0.63	11/10/2005	0
12/5/1995	0.96	11/11/2005	0
12/6/1995	0.04	11/12/2005 T	
12/7/1995	0.24	11/13/2005	0
12/8/1995	0.13	11/14/2005	0.27
12/9/1995	0.42	11/15/2005	0.79
12/10/1995	0.07	11/16/2005	0
12/11/1995	1.05	11/17/2005	0
12/12/1995	0.16	11/18/2005	0
12/13/1995	0.73	11/19/2005	0
12/14/1995	0.72	11/20/2005	0
12/15/1995	0.05	11/21/2005	0
12/16/1995	0.44	11/22/2005	0
12/17/1995	0.36	11/23/2005	0
12/18/1995	0.81	11/24/2005	0
12/19/1995	1.11	11/25/2005	0
12/20/1995	0.14	11/26/2005 T	
12/21/1995	0.05	11/27/2005	1.49
12/22/1995	0.01	11/28/2005	0.29
12/23/1995	0.03	11/29/2005 T	
12/24/1995	0.86	11/30/2005	0
12/25/1995	0.07	12/1/2005 T	
12/26/1995	0.38	12/2/2005	0
12/27/1995	0.08	12/3/2005	0.03
12/28/1995	0.14	12/4/2005 T	
12/29/1995	0.29	12/5/2005	0
12/30/1995	0.1	12/6/2005 T	
12/31/1995	0.12	12/7/2005	0
1/1/1996	0.02	12/8/2005	0.16
1/2/1996	0.84	12/9/2005	0
1/3/1996	0.19	12/10/2005 T	
1/4/1996	0.03	12/11/2005	0.01

1/5/1996	0.09	12/12/2005 T	
1/6/1996	0.06	12/13/2005	0
1/7/1996	0.26	12/14/2005	0.34
1/8/1996	1.22	12/15/2005 T	
1/9/1996	0.89	12/16/2005	0
1/10/1996	0.98	12/17/2005	0
1/11/1996	0.13	12/18/2005	0.01
1/12/1996	0.11	12/19/2005	0
1/13/1996	0.27	12/20/2005	0
1/14/1996	0.7	12/21/2005	0
1/15/1996	0.65	12/22/2005	0
1/16/1996	0.59	12/23/2005	0
1/17/1996	0	12/24/2005	0.13
1/18/1996	1.08	12/25/2005	0.33
1/19/1996	0	12/26/2005 T	
1/20/1996	0.12	12/27/2005	0
1/21/1996	0.08	12/28/2005	0.13
1/22/1996	0.04	12/29/2005 T	
1/23/1996	0.68	12/30/2005	0.08
1/24/1996	0.01	12/31/2005	0
1/25/1996	0.95	1/1/2006	0
1/26/1996	0.06	1/2/2006	0.18
1/27/1996	0.87	1/3/2006 T	
1/28/1996	0.93	1/4/2006	0
1/29/1996	0.81	1/5/2006 T	
1/30/1996	0.01	1/6/2006 T	
1/31/1996	0.2	1/7/2006	0
2/1/1996	0.01	1/8/2006	0
2/2/1996	0.29	1/9/2006	0
2/3/1996	0.36	1/10/2006	0.43
2/4/1996	0.32	1/11/2006 T	
2/5/1996	0.44	1/12/2006	0
2/6/1996	0.48	1/13/2006	0.24
2/7/1996	0.4	1/14/2006	0
2/8/1996	0.65	1/15/2006	0
2/9/1996	0.36	1/16/2006	0.08
2/10/1996	0.5	1/17/2006 T	
2/11/1996	0.55	1/18/2006 T	
2/12/1996	0.49	1/19/2006	0
2/13/1996	0.87	1/20/2006	0.1
2/14/1996	0.03	1/21/2006 T	
2/15/1996	0.09	1/22/2006	0
2/16/1996	0	1/23/2006	0
2/17/1996	1.03	1/24/2006	0
2/18/1996	0.46	1/25/2006	0
2/19/1996	0.18	1/26/2006	0
2/20/1996	0.66	1/27/2006	0

2/21/1996	0.22	1/28/2006	0.58
2/22/1996	0.51	1/29/2006	0.02
2/23/1996	1.03	1/30/2006	0
2/24/1996	0.3	1/31/2006	0
2/25/1996	0.33	2/1/2006	0
2/26/1996	0.25	2/2/2006	0
2/27/1996	0.13	2/3/2006	0
2/28/1996	0.38	2/4/2006	0
2/29/1996	0.52	2/5/2006	0
3/1/1996	0.65	2/6/2006	0
3/2/1996	0.71	2/7/2006	T
3/3/1996	0.44	2/8/2006	0.19
3/4/1996	0.96	2/9/2006	0
3/5/1996	0.5	2/10/2006	0
3/6/1996	0.02	2/11/2006	T
3/7/1996	0.01	2/12/2006	T
3/8/1996	0.3	2/13/2006	0
3/9/1996	0.17	2/14/2006	0
3/10/1996	0.26	2/15/2006	0.01
3/11/1996	0.34	2/16/2006	T
3/12/1996	0.39	2/17/2006	T
3/13/1996	0.27	2/18/2006	T
3/14/1996	0.16	2/19/2006	0
3/15/1996	0.25	2/20/2006	0
3/16/1996	0.23	2/21/2006	0
3/17/1996	0.14	2/22/2006	0
3/18/1996	0.2	2/23/2006	0
3/19/1996	0.32	2/24/2006	0
3/20/1996	0.06	2/25/2006	0
3/21/1996	0.28	2/26/2006	0
3/22/1996	0.11	2/27/2006	0
3/23/1996	0.46	2/28/2006	0
3/24/1996	0.9	3/1/2006	0
3/25/1996	0	3/2/2006	0
3/26/1996	0.25	3/3/2006	0
3/27/1996	0.64	3/4/2006	T
3/28/1996	0.04	3/5/2006	0.19
3/29/1996	0.39	3/6/2006	0
3/30/1996	0.01	3/7/2006	T
3/31/1996	0.95	3/8/2006	0.48
4/1/1996	0.39	3/9/2006	0.79
4/2/1996	0.53	3/10/2006	0
4/3/1996	0.44	3/11/2006	0.34
4/4/1996	0.76	3/12/2006	0.11
4/5/1996	0.19	3/13/2006	0.09
4/6/1996	0.29	3/14/2006	0
4/7/1996	0.01	3/15/2006	0

4/8/1996	0.15	3/16/2006	0
4/9/1996	0.23	3/17/2006	0
4/10/1996	0.51	3/18/2006	0
4/11/1996	0.38	3/19/2006	0
4/12/1996	0.01	3/20/2006	0.42
4/13/1996	0.51	3/21/2006	0.21
4/14/1996	0.2	3/22/2006	0
4/15/1996	0.07	3/23/2006	0
4/16/1996	0.44	3/24/2006 T	
4/17/1996	0.39	3/25/2006 T	
4/18/1996	0.01	3/26/2006	0
4/19/1996	0.94	3/27/2006	0.31
4/20/1996	0.36	3/28/2006	0
4/21/1996	0.02	3/29/2006	0
4/22/1996	1.78	3/30/2006	0
4/23/1996	0.09	3/31/2006	0.13
4/24/1996	0.97	4/1/2006	0
4/25/1996	0.64	4/2/2006	0.16
4/26/1996	0.81	4/3/2006	0
4/27/1996	0.1	4/4/2006	0
4/28/1996	3.84	4/5/2006	0.03
4/29/1996	0.62	4/6/2006	0.53
4/30/1996	0.02	4/7/2006	0
5/1/1996	0.03	4/8/2006	0
5/2/1996	0.04	4/9/2006	0
5/3/1996	0.01	4/10/2006	0
5/4/1996	0.79	4/11/2006	0
5/5/1996	0.17	4/12/2006	0
5/6/1996	0.03	4/13/2006	0
5/7/1996	0.39	4/14/2006	0
5/8/1996	0.04	4/15/2006	0.03
5/9/1996	0.27	4/16/2006	0
5/10/1996	0.04	4/17/2006	0
5/11/1996	0.23	4/18/2006	0.16
5/12/1996	0.03	4/19/2006	0.01
5/13/1996	0.01	4/20/2006	0
5/14/1996	0.73	4/21/2006	0
5/15/1996	0.32	4/22/2006	0
5/16/1996	0.39	4/23/2006	0.01
5/17/1996	0.34	4/24/2006	0
5/18/1996	0.21	4/25/2006	0.01
5/19/1996	0.23	4/26/2006	0
5/20/1996	0	4/27/2006	0
5/21/1996	0.27	4/28/2006	0
5/22/1996	0.46	4/29/2006	0.44
5/23/1996	0.4	4/30/2006	0.35
5/24/1996	0.37	5/1/2006	0.55

5/25/1996	0.45	5/2/2006	0.01
5/26/1996	0.56	5/3/2006	0.13
5/27/1996	1.33	5/4/2006	0
5/28/1996	0.37	5/5/2006	0
5/29/1996	0.26	5/6/2006	0
5/30/1996	0.46	5/7/2006	0
5/31/1996	0.23	5/8/2006	0
6/1/1996	0.28	5/9/2006	0.12
6/2/1996	0.02	5/10/2006	1.1
6/3/1996	0.24	5/11/2006	0.17
6/4/1996	0.06	5/12/2006	0
6/5/1996	0.29	5/13/2006	0
6/6/1996	0.61	5/14/2006	0.08
6/7/1996	0.12	5/15/2006	0.08
6/8/1996	0.09	5/16/2006	0.36
6/9/1996	1	5/17/2006	0
6/10/1996	0.45	5/18/2006	0
6/11/1996	0.13	5/19/2006	0
6/12/1996	0	5/20/2006	0
6/13/1996	0.36	5/21/2006	0
6/14/1996	0.03	5/22/2006	0
6/15/1996	0.44	5/23/2006	0
6/16/1996	0.06	5/24/2006	0.05
6/17/1996	0.16	5/25/2006	0
6/18/1996	0.06	5/26/2006	0
6/19/1996	0.05	5/27/2006	0
6/20/1996	0	5/28/2006	0
6/21/1996	0	5/29/2006	0
6/22/1996	0	5/30/2006	0
6/23/1996	0.06	5/31/2006	0.05
6/24/1996	0.04	6/1/2006	1.23
6/25/1996	0	6/2/2006	0
6/26/1996	0	6/3/2006	0
6/27/1996	0	6/4/2006	0
6/28/1996	0	6/5/2006	0
6/29/1996	0	6/6/2006	0
6/30/1996	0	6/7/2006	0
7/1/1996	1.48	6/8/2006	0
7/2/1996	0	6/9/2006	0
7/3/1996	0	6/10/2006	0.5
7/4/1996	0	6/11/2006	0.32
7/5/1996	0	6/12/2006	0
7/6/1996	0	6/13/2006	0
7/7/1996	0	6/14/2006	0
7/8/1996	0.2	6/15/2006	0
7/9/1996	0	6/16/2006	0
7/10/1996	0	6/17/2006	0

7/11/1996	0	6/18/2006	0
7/12/1996	0	6/19/2006	0
7/13/1996	0	6/20/2006	0
7/14/1996	0.61	6/21/2006	0
7/15/1996	0.01	6/22/2006	0.1
7/16/1996	0	6/23/2006	0
7/17/1996	0	6/24/2006	0
7/18/1996	0	6/25/2006	0
7/19/1996	0.85	6/26/2006	0.01
7/20/1996	0.02	6/27/2006	0
7/21/1996	0.21	6/28/2006	0
7/22/1996	0	6/29/2006	0.1
7/23/1996	0	6/30/2006	0
7/24/1996	0	7/1/2006	0
7/25/1996	0	7/2/2006	0
7/26/1996	0	7/3/2006	0
7/27/1996	0.02	7/4/2006	0
7/28/1996	1.78	7/5/2006	0
7/29/1996	0.91	7/6/2006	0
7/30/1996	0.01	7/7/2006	0
7/31/1996	0	7/8/2006	0
8/1/1996	0	7/9/2006	0
8/2/1996	0	7/10/2006	0
8/3/1996	0	7/11/2006	0.08
8/4/1996	0.01	7/12/2006	0.01
8/5/1996	0	7/13/2006	0.74
8/6/1996	0	7/14/2006	0
8/7/1996	0	7/15/2006	0
8/8/1996	0	7/16/2006	0
8/9/1996	0	7/17/2006	0
8/10/1996	0	7/18/2006	0
8/11/1996	0	7/19/2006	0.12
8/12/1996	0	7/20/2006	0
8/13/1996	0	7/21/2006	0
8/14/1996	0	7/22/2006	0
8/15/1996	0.02	7/23/2006	0
8/16/1996	0.06	7/24/2006	0
8/17/1996	0	7/25/2006	0
8/18/1996	0.17	7/26/2006	0
8/19/1996	0	7/27/2006	0.1
8/20/1996	0	7/28/2006	0
8/21/1996	0	7/29/2006	0.33
8/22/1996	0	7/30/2006	0
8/23/1996	1.3	7/31/2006	0
8/24/1996	0.01	8/1/2006	0
8/25/1996	0	8/2/2006	0
8/26/1996	0	8/3/2006	0

8/27/1996	0	8/4/2006	0
8/28/1996	0	8/5/2006	0
8/29/1996	0	8/6/2006	0
8/30/1996	0	8/7/2006	0
8/31/1996	0	8/8/2006	0
9/1/1996	0	8/9/2006	0
9/2/1996	0	8/10/2006	0.14
9/3/1996	0	8/11/2006	0
9/4/1996	0	8/12/2006	0
9/5/1996	0	8/13/2006	0
9/6/1996	0.02	8/14/2006	0.01
9/7/1996	0.03	8/15/2006	0
9/8/1996	0	8/16/2006	0
9/9/1996	0	8/17/2006	0
9/10/1996	0.01	8/18/2006	0.67
9/11/1996	0	8/19/2006	0.12
9/12/1996	0	8/20/2006	0
9/13/1996	0	8/21/2006	0
9/14/1996	0	8/22/2006	0
9/15/1996	0.2	8/23/2006	0
9/16/1996	0.32	8/24/2006	0
9/17/1996	0	8/25/2006	0.06
9/18/1996	0	8/26/2006	1.03
9/19/1996	0	8/27/2006	0.07
9/20/1996	0	8/28/2006	0.17
9/21/1996	0	8/29/2006	T
9/22/1996	0	8/30/2006	0
9/23/1996	1.23	8/31/2006	T
9/24/1996	0	9/1/2006	0.05
9/25/1996	0	9/2/2006	0
9/26/1996	0.66	9/3/2006	T
9/27/1996	0.13	9/4/2006	0.09
9/28/1996	0	9/5/2006	0.03
9/29/1996	0	9/6/2006	0
9/30/1996	0	9/7/2006	0
10/1/1996	0	9/8/2006	0
10/2/1996	0	9/9/2006	0
10/3/1996	0	9/10/2006	0
10/4/1996	0	9/11/2006	0.39
10/5/1996	0	9/12/2006	0.02
10/6/1996	0	9/13/2006	0
10/7/1996	0	9/14/2006	0
10/8/1996	0.16	9/15/2006	0
10/9/1996	0.01	9/16/2006	0
10/10/1996	0	9/17/2006	0.66
10/11/1996	0	9/18/2006	T
10/12/1996	0	9/19/2006	0

10/13/1996	0	9/20/2006	0
10/14/1996	0	9/21/2006	T
10/15/1996	0	9/22/2006	T
10/16/1996	0	9/23/2006	0.02
10/17/1996	0.9	9/24/2006	0
10/18/1996	0	9/25/2006	0
10/19/1996	0	9/26/2006	0
10/20/1996	0	9/27/2006	T
10/21/1996	0.54	9/28/2006	T
10/22/1996	0.39	9/29/2006	T
10/23/1996	0.15	9/30/2006	0.02
10/24/1996	0	10/1/2006	0
10/25/1996	0	10/2/2006	0
10/26/1996	0	10/3/2006	0
10/27/1996	0.15	10/4/2006	0
10/28/1996	0	10/5/2006	0
10/29/1996	0.06	10/6/2006	0
10/30/1996	0	10/7/2006	0
10/31/1996	0	10/8/2006	0
11/1/1996	0	10/9/2006	0
11/2/1996	0	10/10/2006	T
11/3/1996	0	10/11/2006	0.09
11/4/1996	0.05	10/12/2006	0
11/5/1996	0	10/13/2006	0
11/6/1996	2.23	10/14/2006	0
11/7/1996	0.99	10/15/2006	T
11/8/1996	0.02	10/16/2006	1.65
11/9/1996	0	10/17/2006	T
11/10/1996	0	10/18/2006	T
11/11/1996	0	10/19/2006	T
11/12/1996	0	10/20/2006	0
11/13/1996	0	10/21/2006	0.16
11/14/1996	0	10/22/2006	0
11/15/1996	0	10/23/2006	0
11/16/1996	0.12	10/24/2006	0
11/17/1996	0.35	10/25/2006	0.23
11/18/1996	0	10/26/2006	0.39
11/19/1996	0	10/27/2006	1.19
11/20/1996	0.03	10/28/2006	0
11/21/1996	0.06	10/29/2006	0
11/22/1996	0	10/30/2006	0.01
11/23/1996	0.01	10/31/2006	T
11/24/1996	1.05	11/1/2006	0
11/25/1996	0.72	11/2/2006	0
11/26/1996	0	11/3/2006	0
11/27/1996	0	11/4/2006	T
11/28/1996	0	11/5/2006	0.01

11/29/1996	0.26	11/6/2006	0.16
11/30/1996	0.1	11/7/2006	0.01
12/1/1996	0.19	11/8/2006	0
12/2/1996	0	11/9/2006	0
12/3/1996	0	11/10/2006	0.23
12/4/1996	0.15	11/11/2006	T
12/5/1996	0.22	11/12/2006	0
12/6/1996	0	11/13/2006	0.03
12/7/1996	0	11/14/2006	0.14
12/8/1996	0	11/15/2006	1.43
12/9/1996	0	11/16/2006	T
12/10/1996	0	11/17/2006	0
12/11/1996	0	11/18/2006	0
12/12/1996	0.02	11/19/2006	0
12/13/1996	0	11/20/2006	0
12/14/1996	0	11/21/2006	0
12/15/1996	0.01	11/22/2006	0
12/16/1996	0	11/23/2006	0
12/17/1996	0	11/24/2006	0
12/18/1996	0	11/25/2006	0
12/19/1996	0	11/26/2006	0
12/20/1996	0	11/27/2006	0
12/21/1996	0	11/28/2006	T
12/22/1996	0	11/29/2006	0.32
12/23/1996	0.36	11/30/2006	2.92
12/24/1996	0	12/1/2006	0.38
12/25/1996	0	12/2/2006	0
12/26/1996	0.02	12/3/2006	0
12/27/1996	0	12/4/2006	0
12/28/1996	0.01	12/5/2006	0
12/29/1996	0	12/6/2006	0
12/30/1996	0	12/7/2006	0.01
12/31/1996	0	12/8/2006	0
1/1/1997	0	12/9/2006	0
1/2/1997	0	12/10/2006	0
1/3/1997	0	12/11/2006	0.14
1/4/1997	0	12/12/2006	0
1/5/1997	0	12/13/2006	0
1/6/1997	0	12/14/2006	0
1/7/1997	0	12/15/2006	0
1/8/1997	0.05	12/16/2006	0
1/9/1997	0.3	12/17/2006	0
1/10/1997	0	12/18/2006	T
1/11/1997	0	12/19/2006	0
1/12/1997	0	12/20/2006	0.56
1/13/1997	0	12/21/2006	0.35
1/14/1997	0	12/22/2006	0

1/15/1997	0.55	12/23/2006	0
1/16/1997	0	12/24/2006	0
1/17/1997	0	12/25/2006	T
1/18/1997	0	12/26/2006	0
1/19/1997	0.01	12/27/2007	0.01
1/20/1997	0	12/28/2007	0.06
1/21/1997	0.07	12/29/2007	0
1/22/1997	0.12	12/30/2007	0
1/23/1997	0	12/31/2007	0
1/24/1997	0.63	1/1/2008	T
1/25/1997	0	1/2/2008	T
1/26/1997	0.06	1/3/2008	0
1/27/1997	0.79	1/4/2008	0
1/28/1997	0	1/5/2008	T
1/29/1997	0.01	1/6/2008	0
1/30/1997	0	1/7/2008	T
1/31/1997	0	1/8/2008	1.56
2/1/1997	0	1/9/2008	0
2/2/1997	0	1/10/2008	0.11
2/3/1997	0.44	1/11/2008	0
2/4/1997	0	1/12/2008	0
2/5/1997	0	1/13/2008	T
2/6/1997	0	1/14/2008	T
2/7/1997	0.01	1/15/2008	0
2/8/1997	0	1/16/2008	0
2/9/1997	0	1/17/2008	T
2/10/1997	0	1/18/2008	T
2/11/1997	0	1/19/2008	0
2/12/1997	0	1/20/2008	0
2/13/1997	0	1/21/2008	0.01
2/14/1997	0	1/22/2008	T
2/15/1997	0	1/23/2008	T
2/16/1997	0.01	1/24/2008	T
2/17/1997	0	1/25/2008	0
2/18/1997	0	1/26/2008	0
2/19/1997	0	1/27/2008	0
2/20/1997	0.97	1/28/2008	T
2/21/1997	0.33	1/29/2008	T
2/22/1997	0	1/30/2008	0
2/23/1997	0	1/31/2008	0.3
2/24/1997	0	2/1/2008	0.32
2/25/1997	0	2/2/2008	0
2/26/1997	2.19	2/3/2008	0.14
2/27/1997	0	2/4/2008	T
2/28/1997	0.11	2/5/2008	2.36
3/1/1997	0.12	2/6/2008	0.06
3/2/1997	0	2/7/2008	T

3/3/1997	0	2/8/2008	0.01
3/4/1997	0	2/9/2008	0
3/5/1997	0.02	2/10/2008	T
3/6/1997	0	2/11/2008	0.04
3/7/1997	0	2/12/2008	T
3/8/1997	0	2/13/2008	T
3/9/1997	0.47	2/14/2008	0
3/10/1997	0	2/15/2008	0
3/11/1997	0	2/16/2008	0.46
3/12/1997	0	2/17/2008	0.63
3/13/1997	0.87	2/18/2008	T
3/14/1997	0.02	2/19/2008	0
3/15/1997	0	2/20/2008	T
3/16/1997	0	2/21/2008	0.34
3/17/1997	0.05	2/22/2008	0.02
3/18/1997	0.46	2/23/2008	T
3/19/1997	0	2/24/2008	0.1
3/20/1997	0	2/25/2008	0.05
3/21/1997	0	2/26/2008	0.03
3/22/1997	0	2/27/2008	T
3/23/1997	0	2/28/2008	0.04
3/24/1997	0	2/29/2008	0
3/25/1997	0.33	3/1/2008	0
3/26/1997	0	3/2/2008	0
3/27/1997	0.08	3/3/2008	0.74
3/28/1997	0.18	3/4/2008	0.73
3/29/1997	0	3/5/2008	0
3/30/1997	0.27	3/6/2008	0
3/31/1997	0	3/7/2008	0
4/1/1997	0	3/8/2008	0
4/2/1997	0	3/9/2008	0
4/3/1997	0	3/10/2008	0
4/4/1997	0.32	3/11/2008	0
4/5/1997	0.52	3/12/2008	0
4/6/1997	0	3/13/2008	0.04
4/7/1997	0	3/14/2008	T
4/8/1997	0	3/15/2008	0.21
4/9/1997	0	3/16/2008	0
4/10/1997	0.04	3/17/2008	0.85
4/11/1997	0.07	3/18/2008	2.46
4/12/1997	0	3/19/2008	0.31
4/13/1997	0	3/20/2008	0
4/14/1997	0	3/21/2008	0
4/15/1997	0	3/22/2008	0
4/16/1997	0.03	3/23/2008	0.04
4/17/1997	0	3/24/2008	0
4/18/1997	0.36	3/25/2008	0

4/19/1997	0	3/26/2008	1.24
4/20/1997	0.64	3/27/2008	0.22
4/21/1997	0.02	3/28/2008	T
4/22/1997	0	3/29/2008	T
4/23/1997	0	3/30/2008	0.33
4/24/1997	0.05	3/31/2008	1.22
4/25/1997	0	4/1/2008	0
4/26/1997	0	4/2/2008	0
4/27/1997	0.19	4/3/2008	0.82
4/28/1997	0	4/4/2008	T
4/29/1997	0	4/5/2008	0
4/30/1997	0	4/6/2008	0
5/1/1997	0	4/7/2008	0
5/2/1997	0.41	4/8/2008	0.12
5/3/1997	0.05	4/9/2008	T
5/4/1997	0	4/10/2008	1.45
5/5/1997	0.03	4/11/2008	T
5/6/1997	0	4/12/2008	T
5/7/1997	0	4/13/2008	0.03
5/8/1997	0.28	4/14/2008	0
5/9/1997	0	4/15/2008	0
5/10/1997	0	4/16/2008	0
5/11/1997	0.05	4/17/2008	0
5/12/1997	0.01	4/18/2008	0.64
5/13/1997	0.02	4/19/2008	0.03
5/14/1997	0.03	4/20/2008	0
5/15/1997	0	4/21/2008	0
5/16/1997	0	4/22/2008	0.06
5/17/1997	0	4/23/2008	0
5/18/1997	0.11	4/24/2008	0.14
5/19/1997	0	4/25/2008	0.35
5/20/1997	0	4/26/2008	0
5/21/1997	0	4/27/2008	0.07
5/22/1997	0	4/28/2008	0.05
5/23/1997	0	4/29/2008	0
5/24/1997	0.1	4/30/2008	0
5/25/1997	0.62	5/1/2008	0
5/26/1997	0.6	5/2/2008	0.23
5/27/1997	0.04	5/3/2008	T
5/28/1997	0.02	5/4/2008	0
5/29/1997	0	5/5/2008	0
5/30/1997	0.67	5/6/2008	T
5/31/1997	0	5/7/2008	1.24
6/1/1997	0.04	5/8/2008	0.72
6/2/1997	0	5/9/2008	0.21
6/3/1997	0.01	5/10/2008	0.93
6/4/1997	0	5/11/2008	0.28

6/5/1997	0	5/12/2008	0
6/6/1997	0.09	5/13/2008	0.41
6/7/1997	0	5/14/2008	0.04
6/8/1997	0.02	5/15/2008	0.22
6/9/1997	0	5/16/2008	0
6/10/1997	0	5/17/2008	0
6/11/1997	0	5/18/2008	0
6/12/1997	0	5/19/2008	T
6/13/1997	0.68	5/20/2008	0
6/14/1997	0.01	5/21/2008	0
6/15/1997	0	5/22/2008	0.16
6/16/1997	0.88	5/23/2008	0.25
6/17/1997	0.02	5/24/2008	0.03
6/18/1997	0	5/25/2008	1.61
6/19/1997	0	5/26/2008	2.19
6/20/1997	0	5/27/2008	0.62
6/21/1997	0	5/28/2008	T
6/22/1997	0	5/29/2008	0
6/23/1997	0	5/30/2008	1.48
6/24/1997	0	5/31/2008	0.22
6/25/1997	0.23	6/1/2008	0
6/26/1997	0	6/2/2008	0
6/27/1997	0	6/3/2008	0.24
6/28/1997	0.01	6/4/2008	0.2
6/29/1997	0	6/5/2008	0
6/30/1997	0	6/6/2008	0.2
7/1/1997	0	6/7/2008	0.01
7/2/1997	0	6/8/2008	0
7/3/1997	0.07	6/9/2008	0.06
7/4/1997	0.01	6/10/2008	0
7/5/1997	0	6/11/2008	0
7/6/1997	0	6/12/2008	0
7/7/1997	0	6/13/2008	0.18
7/8/1997	0	6/14/2008	0
7/9/1997	0	6/15/2008	0
7/10/1997	0	6/16/2008	0
7/11/1997	0	6/17/2008	0
7/12/1997	0	6/18/2008	0
7/13/1997	0	6/19/2008	0
7/14/1997	0	6/20/2008	0.58
7/15/1997	0	6/21/2008	0
7/16/1997	0	6/22/2008	0.01
7/17/1997	0	6/23/2008	0
7/18/1997	0	6/24/2008	0.28
7/19/1997	0.92	6/25/2008	0
7/20/1997	0	6/26/2008	0.01
7/21/1997	0	6/27/2008	0.12

7/22/1997	0	6/28/2008	T
7/23/1997	0	6/29/2008	T
7/24/1997	0	6/30/2008	0
7/25/1997	0	7/1/2008	0
7/26/1997	0	7/2/2008	0.69
7/27/1997	0	7/3/2008	0.3
7/28/1997	0	7/4/2008	0
7/29/1997	0	7/5/2008	0
7/30/1997	0	7/6/2008	0
7/31/1997	0	7/7/2008	0
8/1/1997	0	7/8/2008	0.33
8/2/1997	0	7/9/2008	0.28
8/3/1997	0	7/10/2008	T
8/4/1997	0.11	7/11/2008	0.02
8/5/1997	0	7/12/2008	0.01
8/6/1997	0	7/13/2008	0
8/7/1997	0	7/14/2008	0
8/8/1997	0.03	7/15/2008	0
8/9/1997	0.19	7/16/2008	0
8/10/1997	0	7/17/2008	0
8/11/1997	0	7/18/2008	0
8/12/1997	0.04	7/19/2008	0.01
8/13/1997	0	7/20/2008	0
8/14/1997	0.06	7/21/2008	0.42
8/15/1997	0.9	7/22/2008	1.19
8/16/1997	0	7/23/2008	0
8/17/1997	0.35	7/24/2008	0.14
8/18/1997	0	7/25/2008	0.76
8/19/1997	1.25	7/26/2008	0
8/20/1997	0	7/27/2008	1.34
8/21/1997	0	7/28/2008	0.19
8/22/1997	0	7/29/2008	0
8/23/1997	0	7/30/2008	1.82
8/24/1997	0	7/31/2008	0
8/25/1997	0	8/1/2008	0
8/26/1997	0.06	8/2/2008	0
8/27/1997	0	8/3/2008	0.33
8/28/1997	0	8/4/2008	0
8/29/1997	0	8/5/2008	T
8/30/1997	0.38	8/6/2008	0.18
8/31/1997	0	8/7/2008	0.16
9/1/1997	0	8/8/2008	0
9/2/1997	1.27	8/9/2008	0
9/3/1997	0	8/10/2008	0
9/4/1997	0	8/11/2008	0
9/5/1997	0	8/12/2008	T
9/6/1997	0	8/13/2008	0

9/7/1997	0	8/14/2008	0
9/8/1997	0.17	8/15/2008	0
9/9/1997	0.03	8/16/2008	0
9/10/1997	0	8/17/2008	0
9/11/1997	0	8/18/2008	0
9/12/1997	0	8/19/2008	0
9/13/1997	0	8/20/2008	0.06
9/14/1997	0	8/21/2008	0.72
9/15/1997	0	8/22/2008	T
9/16/1997	0	8/23/2008	T
9/17/1997	0.96	8/24/2008	0
9/18/1997	0	8/25/2008	0
9/19/1997	0	8/26/2008	0
9/20/1997	0	8/27/2008	0
9/21/1997	0	8/28/2008	0.14
9/22/1997	0	8/29/2008	T
9/23/1997	0.26	8/30/2008	0
9/24/1997	0.04	8/31/2008	0
9/25/1997	0	9/1/2008	0
9/26/1997	0	9/2/2008	0
9/27/1997	0	9/3/2008	0.04
9/28/1997	0	9/4/2008	3.06
9/29/1997	0	9/5/2008	T
9/30/1997	0	9/6/2008	0
10/1/1997	0	9/7/2008	0.08
10/2/1997	0	9/8/2008	T
10/3/1997	0	9/9/2008	0
10/4/1997	0	9/10/2008	0
10/5/1997	0	9/11/2008	0.01
10/6/1997	0	9/12/2008	1.71
10/7/1997	0	9/13/2008	T
10/8/1997	0	9/14/2008	4.58
10/9/1997	0.02	9/15/2008	0
10/10/1997	0	9/16/2008	0
10/11/1997	0	9/17/2008	0
10/12/1997	0.01	9/18/2008	0
10/13/1997	0.52	9/19/2008	0
10/14/1997	0	9/20/2008	T
10/15/1997	0	9/21/2008	T
10/16/1997	0	9/22/2008	0
10/17/1997	0	9/23/2008	0
10/18/1997	0	9/24/2008	0
10/19/1997	0	9/25/2008	0
10/20/1997	0	9/26/2008	0
10/21/1997	0	9/27/2008	0
10/22/1997	0	9/28/2008	0
10/23/1997	0	9/29/2008	0.29

10/24/1997	0.09	9/30/2008	0
10/25/1997	0.24	10/1/2008	0
10/26/1997	0.19	10/2/2008	0
10/27/1997	0	10/3/2008	0
10/28/1997	0	10/4/2008	0
10/29/1997	0	10/5/2008	0
10/30/1997	0	10/6/2008 T	
10/31/1997	0	10/7/2008	0.22
11/1/1997	0.14	10/8/2008 T	
11/2/1997	0.03	10/9/2008	0
11/3/1997	0.02	10/10/2008	0
11/4/1997	0	10/11/2008	0
11/5/1997	1.19	10/12/2008	0
11/6/1997	0.06	10/13/2008	0
11/7/1997	0	10/14/2008	0
11/8/1997	0	10/15/2008	0.37
11/9/1997	0	10/16/2008	0
11/10/1997	0.03	10/17/2008 T	
11/11/1997	0	10/18/2008	0
11/12/1997	0	10/19/2008	0
11/13/1997	0.23	10/20/2008	0
11/14/1997	0.09	10/21/2008	0
11/15/1997	0	10/22/2008	0
11/16/1997	0	10/23/2008	0.54
11/17/1997	0	10/24/2008	0.1
11/18/1997	0	10/25/2008	0
11/19/1997	0	10/26/2008	0
11/20/1997	0.11	10/27/2008	0
11/21/1997	0	10/28/2008	0
11/22/1997	0	10/29/2008	0
11/23/1997	0	10/30/2008	0
11/24/1997	0	10/31/2008	0
11/25/1997	0	11/1/2008	0
11/26/1997	0	11/2/2008	0
11/27/1997	0	11/3/2008	0
11/28/1997	0.03	11/4/2008	0
11/29/1997	0.46	11/5/2008	0
11/30/1997	0.05	11/6/2008	0.03
12/1/1997	0	11/7/2008	0
12/2/1997	0	11/8/2008	0
12/3/1997	0.23	11/9/2008	0
12/4/1997	0.07	11/10/2008 T	
12/5/1997	0.01	11/11/2008	0.45
12/6/1997	0	11/12/2008	0.04
12/7/1997	0	11/13/2008	0
12/8/1997	0	11/14/2008	0.81
12/9/1997	0.17	11/15/2008	0.1

12/10/1997	0	11/16/2008	0
12/11/1997	0.02	11/17/2008	T
12/12/1997	0	11/18/2008	0
12/13/1997	0	11/19/2008	0
12/14/1997	0	11/20/2008	T
12/15/1997	0	11/21/2008	0
12/16/1997	0	11/22/2008	0
12/17/1997	0	11/23/2008	0.03
12/18/1997	0	11/24/2008	0
12/19/1997	0	11/25/2008	0
12/20/1997	0	11/26/2008	0
12/21/1997	0.41	11/27/2008	0
12/22/1997	0.07	11/28/2008	0
12/23/1997	0	11/29/2008	0.04
12/24/1997	0.59	11/30/2008	0.36
12/25/1997	0	12/1/2008	0.04
12/26/1997	0	12/2/2008	0
12/27/1997	0	12/3/2008	0.07
12/28/1997	0	12/4/2008	0
12/29/1997	0.04	12/5/2008	0
12/30/1997	0.02	12/6/2008	0.01
12/31/1997	0.01	12/7/2008	T
1/1/1998	0	12/8/2008	0.04
1/2/1998	0	12/9/2008	0.36
1/3/1998	0	12/10/2008	T
1/4/1998	0.37	12/11/2008	0
1/5/1998	0.13	12/12/2008	T
1/6/1998	0.34	12/13/2008	0
1/7/1998	0.68	12/14/2008	0.27
1/8/1998	0.79	12/15/2008	0.08
1/9/1998	0	12/16/2008	0.04
1/10/1998	0	12/17/2008	T
1/11/1998	0	12/18/2008	0.34
1/12/1998	0	12/19/2008	0.28
1/13/1998	0	12/20/2008	T
1/14/1998	0.29	12/21/2008	T
1/15/1998	0	12/22/2008	0
1/16/1998	0	12/23/2008	1
1/17/1998	0.03	12/24/2008	0.2
1/18/1998	0	12/25/2008	0
1/19/1998	0	12/26/2008	T
1/20/1998	0	12/27/2008	1.82
1/21/1998	0	12/28/2008	T
1/22/1998	0.08	12/29/2008	0
1/23/1998	0	12/30/2008	0
1/24/1998	0.03	12/31/2008	0
1/25/1998	0	1/1/2009	0

1/26/1998	0.04	1/2/2009	0
1/27/1998	0	1/3/2009	T
1/28/1998	0	1/4/2009	T
1/29/1998	0	1/5/2009	0
1/30/1998	0	1/6/2009	0.01
1/31/1998	0	1/7/2009	T
2/1/1998	0	1/8/2009	0
2/2/1998	0	1/9/2009	T
2/3/1998	0	1/10/2009	0.02
2/4/1998	0	1/11/2009	0
2/5/1998	0.01	1/12/2009	0
2/6/1998	0	1/13/2009	T
2/7/1998	0	1/14/2009	T
2/8/1998	0	1/15/2009	0
2/9/1998	0	1/16/2009	T
2/10/1998	0.25	1/17/2009	0
2/11/1998	0.74	1/18/2009	T
2/12/1998	0	1/19/2009	T
2/13/1998	0	1/20/2009	T
2/14/1998	0	1/21/2009	0
2/15/1998	0	1/22/2009	0
2/16/1998	0.49	1/23/2009	0
2/17/1998	0.6	1/24/2009	T
2/18/1998	0.05	1/25/2009	0.07
2/19/1998	0.02	1/26/2009	0.17
2/20/1998	0	1/27/2009	0.42
2/21/1998	0	1/28/2009	0.08
2/22/1998	0	1/29/2009	T
2/23/1998	0	1/30/2009	0
2/24/1998	0	1/31/2009	0
2/25/1998	0	2/1/2009	0
2/26/1998	0.69	2/2/2009	0
2/27/1998	0.01	2/3/2009	0
2/28/1998	0	2/4/2009	0
3/1/1998	0	2/5/2009	0
3/2/1998	0.01	2/6/2009	0
3/3/1998	0.02	2/7/2009	0
3/4/1998	0	2/8/2009	0
3/5/1998	0.01	2/9/2009	0.1
3/6/1998	0.01	2/10/2009	0.44
3/7/1998	0.32	2/11/2009	1.22
3/8/1998	0.85	2/12/2009	0
3/9/1998	0.12	2/13/2009	0.01
3/10/1998	0	2/14/2009	0
3/11/1998	0.01	2/15/2009	0
3/12/1998	0	2/16/2009	0
3/13/1998	0	2/17/2009	T

3/14/1998	0	2/18/2009	T
3/15/1998	0	2/19/2009	T
3/16/1998	0.26	2/20/2009	0
3/17/1998	0.95	2/21/2009	0.03
3/18/1998	0	2/22/2009	0
3/19/1998	0.9	2/23/2009	0
3/20/1998	0.89	2/24/2009	T
3/21/1998	0	2/25/2009	0
3/22/1998	0	2/26/2009	0.53
3/23/1998	0	2/27/2009	0
3/24/1998	0	2/28/2009	T
3/25/1998	0	3/1/2009	0
3/26/1998	0	3/2/2009	0
3/27/1998	0.42	3/3/2009	0
3/28/1998	0.31	3/4/2009	0
3/29/1998	0	3/5/2009	0
3/30/1998	0	3/6/2009	0
3/31/1998	0.48	3/7/2009	0
4/1/1998	0	3/8/2009	T
4/2/1998	0	3/9/2009	0.07
4/3/1998	0.72	3/10/2009	0.49
4/4/1998	0	3/11/2009	0
4/5/1998	0	3/12/2009	0
4/6/1998	0	3/13/2009	0
4/7/1998	0	3/14/2009	0
4/8/1998	0	3/15/2009	0
4/9/1998	0.02	3/16/2009	0
4/10/1998	0	3/17/2009	0
4/11/1998	0	3/18/2009	0.29
4/12/1998	0	3/19/2009	0
4/13/1998	0.74	3/20/2009	0
4/14/1998	0	3/21/2009	0.04
4/15/1998	0.51	3/22/2009	T
4/16/1998	0.04	3/23/2009	T
4/17/1998	0	3/24/2009	0.54
4/18/1998	0	3/25/2009	0
4/19/1998	0	3/26/2009	T
4/20/1998	0	3/27/2009	T
4/21/1998	0	3/28/2009	1.14
4/22/1998	0.12	3/29/2009	0.37
4/23/1998	0	3/30/2009	T
4/24/1998	0	3/31/2009	0.1
4/25/1998	0.1	4/1/2009	0
4/26/1998	0	4/2/2009	0.24
4/27/1998	0.43	4/3/2009	0
4/28/1998	0.68	4/4/2009	0
4/29/1998	0.53	4/5/2009	0.09

4/30/1998	0.01	4/6/2009	0.04
5/1/1998	0.5	4/7/2009	0
5/2/1998	0.08	4/8/2009	0
5/3/1998	0	4/9/2009	1.11
5/4/1998	0	4/10/2009	0.33
5/5/1998	0	4/11/2009	0
5/6/1998	0.68	4/12/2009	0.13
5/7/1998	0.09	4/13/2009	0.5
5/8/1998	0	4/14/2009	0
5/9/1998	0	4/15/2009	0
5/10/1998	0	4/16/2009	0
5/11/1998	0	4/17/2009	0
5/12/1998	0.13	4/18/2009	0.23
5/13/1998	0	4/19/2009	0.45
5/14/1998	0	4/20/2009	0.01
5/15/1998	0	4/21/2009	0
5/16/1998	0	4/22/2009	0
5/17/1998	0	4/23/2009	0
5/18/1998	0	4/24/2009	0
5/19/1998	0	4/25/2009	0
5/20/1998	0.03	4/26/2009	0
5/21/1998	0.7	4/27/2009	0.45
5/22/1998	0.28	4/28/2009	0.01
5/23/1998	0.45	4/29/2009	0.42
5/24/1998	0	4/30/2009	0.05
5/25/1998	0.36	5/1/2009	0.16
5/26/1998	0.05	5/2/2009	0.01
5/27/1998	0	5/3/2009	0
5/28/1998	0	5/4/2009	0
5/29/1998	0	5/5/2009	0.02
5/30/1998	0	5/6/2009	0.1
5/31/1998	0.01	5/7/2009	0.14
6/1/1998	0	5/8/2009	0.67
6/2/1998	0	5/9/2009	0
6/3/1998	0.05	5/10/2009	0
6/4/1998	2.45	5/11/2009	0
6/5/1998	0.05	5/12/2009 T	
6/6/1998	0	5/13/2009	0.13
6/7/1998	0	5/14/2009 T	
6/8/1998	0.85	5/15/2009	0.47
6/9/1998	0	5/16/2009	0.03
6/10/1998	0	5/17/2009	0
6/11/1998	1.01	5/18/2009	0
6/12/1998	0	5/19/2009	0
6/13/1998	0	5/20/2009	0
6/14/1998	0.58	5/21/2009	0
6/15/1998	0.04	5/22/2009	0

6/16/1998	0.44	5/23/2009	0.03
6/17/1998	0	5/24/2009	0.03
6/18/1998	0.03	5/25/2009	2.01
6/19/1998	0	5/26/2009	0.07
6/20/1998	0.07	5/27/2009	0.4
6/21/1998	0.68	5/28/2009	0.24
6/22/1998	0.02	5/29/2009	0
6/23/1998	0	5/30/2009	0.21
6/24/1998	0	5/31/2009	0
6/25/1998	0	6/1/2009	0
6/26/1998	0	6/2/2009	0.92
6/27/1998	0	6/3/2009	0.13
6/28/1998	0	6/4/2009	0
6/29/1998	0.61	6/5/2009	0
6/30/1998	0	6/6/2009	0
7/1/1998	0	6/7/2009	0.01
7/2/1998	0	6/8/2009	0.21
7/3/1998	0.46	6/9/2009	0.02
7/4/1998	1.12	6/10/2009	1.14
7/5/1998	0	6/11/2009	0.14
7/6/1998	0	6/12/2009	0
7/7/1998	0.4	6/13/2009	0
7/8/1998	0	6/14/2009	0
7/9/1998	0	6/15/2009	1.86
7/10/1998	0.14	6/16/2009	1.59
7/11/1998	0	6/17/2009	T
7/12/1998	0	6/18/2009	0
7/13/1998	0	6/19/2009	0.21
7/14/1998	0	6/20/2009	0.07
7/15/1998	0	6/21/2009	T
7/16/1998	0	6/22/2009	0
7/17/1998	0	6/23/2009	0
7/18/1998	0	6/24/2009	0
7/19/1998	0	6/25/2009	0
7/20/1998	0	6/26/2009	0
7/21/1998	0	6/27/2009	0.02
7/22/1998	0.57	6/28/2009	0.1
7/23/1998	0	6/29/2009	0
7/24/1998	0	6/30/2009	0
7/25/1998	0	7/1/2009	0
7/26/1998	0.43	7/2/2009	0
7/27/1998	0	7/3/2009	T
7/28/1998	0	7/4/2009	1.78
7/29/1998	0.94	7/5/2009	0.08
7/30/1998	2.33	7/6/2009	0
7/31/1998	0	7/7/2009	0
8/1/1998	0.06	7/8/2009	0

8/2/1998	0	7/9/2009	0
8/3/1998	0	7/10/2009	T
8/4/1998	0.36	7/11/2009	0
8/5/1998	0.31	7/12/2009	0.9
8/6/1998	0	7/13/2009	0
8/7/1998	0.46	7/14/2009	T
8/8/1998	0	7/15/2009	0.36
8/9/1998	0	7/16/2009	0.74
8/10/1998	0	7/17/2009	0
8/11/1998	0.01	7/18/2009	0
8/12/1998	0	7/19/2009	0
8/13/1998	0	7/20/2009	0
8/14/1998	0	7/21/2009	T
8/15/1998	0	7/22/2009	T
8/16/1998	0.06	7/23/2009	T
8/17/1998	0	7/24/2009	0
8/18/1998	0.81	7/25/2009	T
8/19/1998	0	7/26/2009	0
8/20/1998	0	7/27/2009	0
8/21/1998	0	7/28/2009	0.25
8/22/1998	0	7/29/2009	0.08
8/23/1998	0	7/30/2009	0.01
8/24/1998	0	7/31/2009	0
8/25/1998	0	8/1/2009	0.09
8/26/1998	0	8/2/2009	0
8/27/1998	0	8/3/2009	0
8/28/1998	0	8/4/2009	T
8/29/1998	0	8/5/2009	0
8/30/1998	0	8/6/2009	0
8/31/1998	0.28	8/7/2009	0
9/1/1998	0.51	8/8/2009	0
9/2/1998	0	8/9/2009	0
9/3/1998	0	8/10/2009	0.25
9/4/1998	0	8/11/2009	0
9/5/1998	0	8/12/2009	0
9/6/1998	0	8/13/2009	0
9/7/1998	0	8/14/2009	0
9/8/1998	0	8/15/2009	0
9/9/1998	0	8/16/2009	0.11
9/10/1998	0	8/17/2009	1.18
9/11/1998	0	8/18/2009	T
9/12/1998	0	8/19/2009	0.06
9/13/1998	0.21	8/20/2009	0.67
9/14/1998	0.25	8/21/2009	0.02
9/15/1998	0.04	8/22/2009	0
9/16/1998	0.07	8/23/2009	0
9/17/1998	0.46	8/24/2009	0

9/18/1998	0	8/25/2009	0
9/19/1998	0	8/26/2009	0
9/20/1998	0	8/27/2009	T
9/21/1998	0.2	8/28/2009	0.1
9/22/1998	0	8/29/2009	0
9/23/1998	0	8/30/2009	0
9/24/1998	0.02	8/31/2009	0
9/25/1998	0.04	9/1/2009	0
9/26/1998	0	9/2/2009	0
9/27/1998	0	9/3/2009	0
9/28/1998	0	9/4/2009	0
9/29/1998	0	9/5/2009	1.48
9/30/1998	0	9/6/2009	0.01
10/1/1998	0	9/7/2009	0
10/2/1998	0.09	9/8/2009	0
10/3/1998	0.01	9/9/2009	0
10/4/1998	0	9/10/2009	0
10/5/1998	0.26	9/11/2009	0
10/6/1998	0.39	9/12/2009	0
10/7/1998	0	9/13/2009	0
10/8/1998	0	9/14/2009	0
10/9/1998	0	9/15/2009	T
10/10/1998	0	9/16/2009	0
10/11/1998	0.01	9/17/2009	0
10/12/1998	0	9/18/2009	0
10/13/1998	0	9/19/2009	T
10/14/1998	0	9/20/2009	0.95
10/15/1998	0	9/21/2009	0.37
10/16/1998	0.32	9/22/2009	0.03
10/17/1998	0.3	9/23/2009	T
10/18/1998	0.51	9/24/2009	0.1
10/19/1998	0	9/25/2009	T
10/20/1998	0	9/26/2009	0.22
10/21/1998	0	9/27/2009	0
10/22/1998	0	9/28/2009	0
10/23/1998	0	9/29/2009	0
10/24/1998	0	9/30/2009	0
10/25/1998	0	10/1/2009	1.05
10/26/1998	0	10/2/2009	0
10/27/1998	0	10/3/2009	0
10/28/1998	0	10/4/2009	0
10/29/1998	0.63	10/5/2009	0
10/30/1998	0	10/6/2009	0.42
10/31/1998	0	10/7/2009	T
11/1/1998	0	10/8/2009	2.66
11/2/1998	1.84	10/9/2009	0.64
11/3/1998	0.04	10/10/2009	0

11/4/1998	0	10/11/2009	0
11/5/1998	0	10/12/2009	0.05
11/6/1998	0	10/13/2009	0.8
11/7/1998	0.11	10/14/2009	0.78
11/8/1998	0	10/15/2009	0.16
11/9/1998	0.2	10/16/2009	T
11/10/1998	0.19	10/17/2009	0
11/11/1998	0	10/18/2009	0
11/12/1998	0	10/19/2009	0
11/13/1998	0	10/20/2009	0
11/14/1998	0	10/21/2009	0
11/15/1998	0	10/22/2009	1.91
11/16/1998	0	10/23/2009	0.08
11/17/1998	0	10/24/2009	0
11/18/1998	0	10/25/2009	0.29
11/19/1998	0.18	10/26/2009	0.12
11/20/1998	0	10/27/2009	0.51
11/21/1998	0	10/28/2009	T
11/22/1998	0	10/29/2009	1.41
11/23/1998	0	10/30/2009	1.5
11/24/1998	0	10/31/2009	0
11/25/1998	0.03	11/1/2009	0
11/26/1998	0	11/2/2009	0
11/27/1998	0	11/3/2009	T
11/28/1998	0	11/4/2009	T
11/29/1998	0	11/5/2009	0
11/30/1998	0.13	11/6/2009	0
12/1/1998	0	11/7/2009	0
12/2/1998	0	11/8/2009	0
12/3/1998	0	11/9/2009	0
12/4/1998	0.02	11/10/2009	0
12/5/1998	0	11/11/2009	0
12/6/1998	0.26	11/12/2009	0
12/7/1998	0	11/13/2009	0
12/8/1998	0	11/14/2009	0
12/9/1998	0	11/15/2009	0.7
12/10/1998	0	11/16/2009	1.72
12/11/1998	0	11/17/2009	0.3
12/12/1998	0	11/18/2009	0.09
12/13/1998	0	11/19/2009	0.03
12/14/1998	0	11/20/2009	0
12/15/1998	0	11/21/2009	0
12/16/1998	0	11/22/2009	0
12/17/1998	0	11/23/2009	0
12/18/1998	0.04	11/24/2009	0.26
12/19/1998	0.18	11/25/2009	0.01
12/20/1998	0.12	11/26/2009	T

12/21/1998	0.1	11/27/2009	0
12/22/1998	0	11/28/2009	0
12/23/1998	0	11/29/2009	T
12/24/1998	0	11/30/2009	0
12/25/1998	0	12/1/2009	0
12/26/1998	0	12/2/2009	0.26
12/27/1998	0	12/3/2009	0
12/28/1998	0	12/4/2009	T
12/29/1998	0	12/5/2009	0
12/30/1998	0.1	12/6/2009	0.01
12/31/1998	0	12/7/2009	T
1/1/1999	0.37	12/8/2009	0.57
1/2/1999	0.31	12/9/2009	0.02
1/3/1999	0	12/10/2009	0
1/4/1999	0	12/11/2009	0
1/5/1999	0	12/12/2009	0.46
1/6/1999	0.03	12/13/2009	0.56
1/7/1999	0.08	12/14/2009	T
1/8/1999	0.01	12/15/2009	0
1/9/1999	0	12/16/2009	0
1/10/1999	0.01	12/17/2009	0
1/11/1999	0	12/18/2009	0.04
1/12/1999	0.04	12/19/2009	0.02
1/13/1999	0.19	12/20/2009	T
1/14/1999	0	12/21/2009	0
1/15/1999	0	12/22/2009	0.06
1/16/1999	0	12/23/2009	1.1
1/17/1999	0.27	12/24/2009	0.95
1/18/1999	0	12/25/2009	0.08
1/19/1999	0	12/26/2009	T
1/20/1999	0	12/27/2009	0.04
1/21/1999	0.01	12/28/2009	T
1/22/1999	0.03	12/29/2009	T
1/23/1999	0.87	12/30/2009	0.08
1/24/1999	0	12/31/2009	T
1/25/1999	0	1/1/2010	0.03
1/26/1999	0	1/2/2010	0
1/27/1999	0	1/3/2010	0
1/28/1999	0.07	1/4/2010	0
1/29/1999	0	1/5/2010	0
1/30/1999	0.65	1/6/2010	0.12
1/31/1999	1.46	1/7/2010	0.07
2/1/1999	0.02	1/8/2010	T
2/2/1999	0.01	1/9/2010	T
2/3/1999	0	1/10/2010	0
2/4/1999	0	1/11/2010	T
2/5/1999	0	1/12/2010	0

2/6/1999	0.78	1/13/2010	0
2/7/1999	1.82	1/14/2010	0
2/8/1999	0	1/15/2010 T	
2/9/1999	0	1/16/2010 T	
2/10/1999	0	1/17/2010	0
2/11/1999	0.41	1/18/2010 T	
2/12/1999	0	1/19/2010	0
2/13/1999	0	1/20/2010	0.11
2/14/1999	0	1/21/2010	0.29
2/15/1999	0	1/22/2010 T	
2/16/1999	0.26	1/23/2010	0.43
2/17/1999	0	1/24/2010	0.09
2/18/1999	0.02	1/25/2010 T	
2/19/1999	0	1/26/2010	0.01
2/20/1999	0	1/27/2010	0.05
2/21/1999	0	1/28/2010	0
2/22/1999	0	1/29/2010 T	
2/23/1999	0.08	1/30/2010	0
2/24/1999	0	1/31/2010	0
2/25/1999	0	2/1/2010	0
2/26/1999	0	2/2/2010 T	
2/27/1999	0.08	2/3/2010	0
2/28/1999	0	2/4/2010	0.12
3/1/1999	0	2/5/2010	0.67
3/2/1999	0.19	2/6/2010 T	
3/3/1999	0	2/7/2010	0
3/4/1999	0	2/8/2010	0.12
3/5/1999	0.27	2/9/2010	0.04
3/6/1999	0	2/10/2010 T	
3/7/1999	0	2/11/2010	0
3/8/1999	0.8	2/12/2010 T	
3/9/1999	0.01	2/13/2010 T	
3/10/1999	0	2/14/2010	0.19
3/11/1999	0	2/15/2010	0.01
3/12/1999	0	2/16/2010 T	
3/13/1999	0	2/17/2010	0
3/14/1999	0	2/18/2010	0
3/15/1999	0	2/19/2010	0.01
3/16/1999	0	2/20/2010 T	
3/17/1999	0	2/21/2010	0.86
3/18/1999	0	2/22/2010	0.07
3/19/1999	0	2/23/2010 T	
3/20/1999	0	2/24/2010 T	
3/21/1999	0	2/25/2010	0
3/22/1999	0.27	2/26/2010	0
3/23/1999	0.67	2/27/2010	0
3/24/1999	0	2/28/2010	0

3/25/1999	0	3/1/2010	T
3/26/1999	0	3/2/2010	0
3/27/1999	0	3/3/2010	0
3/28/1999	0.14	3/4/2010	0
3/29/1999	0	3/5/2010	0
3/30/1999	0	3/6/2010	0
3/31/1999	0	3/7/2010	T
4/1/1999	0	3/8/2010	0
4/2/1999	0	3/9/2010	0.13
4/3/1999	1.04	3/10/2010	T
4/4/1999	0	3/11/2010	0.4
4/5/1999	0.01	3/12/2010	0.23
4/6/1999	0	3/13/2010	0.21
4/7/1999	0	3/14/2010	0.03
4/8/1999	0.2	3/15/2010	0
4/9/1999	0	3/16/2010	0
4/10/1999	0	3/17/2010	0
4/11/1999	0	3/18/2010	0
4/12/1999	0	3/19/2010	0
4/13/1999	0	3/20/2010	0.03
4/14/1999	0.16	3/21/2010	0.28
4/15/1999	0.59	3/22/2010	0.03
4/16/1999	0.06	3/23/2010	0
4/17/1999	0	3/24/2010	0
4/18/1999	0	3/25/2010	0.74
4/19/1999	0	3/26/2010	0
4/20/1999	0	3/27/2010	0.01
4/21/1999	0.18	3/28/2010	0.26
4/22/1999	0	3/29/2010	0
4/23/1999	0.17	3/30/2010	0
4/24/1999	0	3/31/2010	0
4/25/1999	0.27	4/1/2010	0
4/26/1999	0.13	4/2/2010	0.1
4/27/1999	0.59	4/3/2010	0.32
4/28/1999	0.19	4/4/2010	0.25
4/29/1999	0	4/5/2010	0.27
4/30/1999	0	4/6/2010	0
5/1/1999	0	4/7/2010	T
5/2/1999	0	4/8/2010	0
5/3/1999	0.01	4/9/2010	0
5/4/1999	0.35	4/10/2010	0
5/5/1999	0	4/11/2010	0
5/6/1999	0.05	4/12/2010	0
5/7/1999	0	4/13/2010	0
5/8/1999	0	4/14/2010	0
5/9/1999	0	4/15/2010	0
5/10/1999	0	4/16/2010	0.02

5/11/1999	0.05	4/17/2010	0
5/12/1999	0.68	4/18/2010	0
5/13/1999	0.05	4/19/2010	0
5/14/1999	0.01	4/20/2010	0
5/15/1999	0.19	4/21/2010	T
5/16/1999	0	4/22/2010	0.37
5/17/1999	0	4/23/2010	0.13
5/18/1999	0	4/24/2010	0.78
5/19/1999	0	4/25/2010	0.33
5/20/1999	0	4/26/2010	0.03
5/21/1999	0.1	4/27/2010	0.12
5/22/1999	0	4/28/2010	0
5/23/1999	0	4/29/2010	0
5/24/1999	0	4/30/2010	0.29
5/25/1999	0	5/1/2010	0.01
5/26/1999	0	5/2/2010	0.13
5/27/1999	0	5/3/2010	0.02
5/28/1999	0	5/4/2010	0
5/29/1999	0	5/5/2010	0
5/30/1999	0.1	5/6/2010	0
5/31/1999	0.01	5/7/2010	T
6/1/1999	0.43	5/8/2010	0
6/2/1999	0	5/9/2010	T
6/3/1999	0	5/10/2010	0.27
6/4/1999	0	5/11/2010	0.01
6/5/1999	0	5/12/2010	1.29
6/6/1999	0	5/13/2010	0.09
6/7/1999	0	5/14/2010	0.3
6/8/1999	0.01	5/15/2010	0.5
6/9/1999	0	5/16/2010	0.99
6/10/1999	0.01	5/17/2010	0.02
6/11/1999	0.37	5/18/2010	0
6/12/1999	3.03	5/19/2010	T
6/13/1999	0.01	5/20/2010	0.35
6/14/1999	0	5/21/2010	0.27
6/15/1999	0	5/22/2010	0
6/16/1999	0	5/23/2010	0
6/17/1999	0	5/24/2010	0
6/18/1999	0	5/25/2010	0
6/19/1999	0	5/26/2010	0.38
6/20/1999	0	5/27/2010	0
6/21/1999	0.05	5/28/2010	0
6/22/1999	0	5/29/2010	0
6/23/1999	0.11	5/30/2010	T
6/24/1999	0.2	5/31/2010	0.01
6/25/1999	0	6/1/2010	0
6/26/1999	0.15	6/2/2010	0.58

6/27/1999	0	6/3/2010	0.05
6/28/1999	0.04	6/4/2010	0
6/29/1999	0	6/5/2010	T
6/30/1999	0	6/6/2010	0
7/1/1999	2.21	6/7/2010	0
7/2/1999	0.12	6/8/2010	0.68
7/3/1999	0	6/9/2010	0.03
7/4/1999	0	6/10/2010	0
7/5/1999	0	6/11/2010	T
7/6/1999	0.65	6/12/2010	0.26
7/7/1999	0	6/13/2010	0.34
7/8/1999	0	6/14/2010	0.25
7/9/1999	0.15	6/15/2010	0.38
7/10/1999	0	6/16/2010	0
7/11/1999	0	6/17/2010	0.41
7/12/1999	0	6/18/2010	0
7/13/1999	0	6/19/2010	0.07
7/14/1999	0	6/20/2010	0
7/15/1999	0	6/21/2010	0
7/16/1999	0	6/22/2010	0.01
7/17/1999	0	6/23/2010	0
7/18/1999	0	6/24/2010	0.03
7/19/1999	0	6/25/2010	0
7/20/1999	0	6/26/2010	0
7/21/1999	0	6/27/2010	0.95
7/22/1999	0	6/28/2010	0
7/23/1999	0	6/29/2010	0
7/24/1999	0	6/30/2010	0
7/25/1999	0	7/1/2010	0
7/26/1999	0	7/2/2010	0
7/27/1999	0	7/3/2010	0
7/28/1999	0.01	7/4/2010	0.13
7/29/1999	0	7/5/2010	0
7/30/1999	0	7/6/2010	0.08
7/31/1999	0	7/7/2010	0.14
8/1/1999	0	7/8/2010	0.95
8/2/1999	0	7/9/2010	0.36
8/3/1999	0	7/10/2010	0
8/4/1999	0	7/11/2010	0.01
8/5/1999	0	7/12/2010	0.02
8/6/1999	0	7/13/2010	0.08
8/7/1999	0.41	7/14/2010	0
8/8/1999	0.61	7/15/2010	T
8/9/1999	0	7/16/2010	0
8/10/1999	0	7/17/2010	0.14
8/11/1999	0	7/18/2010	0.25
8/12/1999	0.22	7/19/2010	0.02

8/13/1999	0.01	7/20/2010	1.97
8/14/1999	0	7/21/2010	0.74
8/15/1999	0	7/22/2010	0
8/16/1999	0	7/23/2010	0
8/17/1999	0	7/24/2010	0.97
8/18/1999	0	7/25/2010 T	
8/19/1999	0	7/26/2010 T	
8/20/1999	0	7/27/2010	0.3
8/21/1999	0	7/28/2010	0
8/22/1999	0	7/29/2010	0.01
8/23/1999	0.1	7/30/2010	0.52
8/24/1999	0	7/31/2010 T	
8/25/1999	0	8/1/2010	0
8/26/1999	0	8/2/2010	0
8/27/1999	0	8/3/2010	0
8/28/1999	0	8/4/2010	0
8/29/1999	0.18	8/5/2010	0.39
8/30/1999	0	8/6/2010	0
8/31/1999	0	8/7/2010	0
9/1/1999	0	8/8/2010	0
9/2/1999	0	8/9/2010	0
9/3/1999	0	8/10/2010	0.04
9/4/1999	0	8/11/2010	0
9/5/1999	0	8/12/2010 T	
9/6/1999	0	8/13/2010 T	
9/7/1999	0	8/14/2010	1.64
9/8/1999	0	8/15/2010	0
9/9/1999	0	8/16/2010	0
9/10/1999	0	8/17/2010 T	
9/11/1999	0	8/18/2010 T	
9/12/1999	0.35	8/19/2010	0
9/13/1999	0	8/20/2010	0.72
9/14/1999	0	8/21/2010	0.44
9/15/1999	0	8/22/2010	0
9/16/1999	0	8/23/2010	0
9/17/1999	0	8/24/2010	0
9/18/1999	0	8/25/2010	0
9/19/1999	0.17	8/26/2010	0
9/20/1999	0.01	8/27/2010	0
9/21/1999	0	8/28/2010	0
9/22/1999	0	8/29/2010	0
9/23/1999	0	8/30/2010	0.39
9/24/1999	0	8/31/2010	0
9/25/1999	0	9/1/2010	0.07
9/26/1999	0	9/2/2010	0.33
9/27/1999	0	9/3/2010	0.01
9/28/1999	0.35	9/4/2010	0

9/29/1999	0.07	9/5/2010	0
9/30/1999	0	9/6/2010	0
10/1/1999	0	9/7/2010	T
10/2/1999	0.15	9/8/2010	0
10/3/1999	0.27	9/9/2010	0.26
10/4/1999	0	9/10/2010	0.63
10/5/1999	0	9/11/2010	0.54
10/6/1999	0	9/12/2010	0
10/7/1999	0	9/13/2010	0
10/8/1999	0.93	9/14/2010	0
10/9/1999	0.59	9/15/2010	0.06
10/10/1999	0	9/16/2010	T
10/11/1999	0	9/17/2010	0
10/12/1999	0	9/18/2010	0.46
10/13/1999	0	9/19/2010	0.86
10/14/1999	0	9/20/2010	0
10/15/1999	0	9/21/2010	0
10/16/1999	0	9/22/2010	0.07
10/17/1999	0.09	9/23/2010	0
10/18/1999	0	9/24/2010	0.16
10/19/1999	0	9/25/2010	0.2
10/20/1999	0	9/26/2010	0.08
10/21/1999	0	9/27/2010	0
10/22/1999	0	9/28/2010	0
10/23/1999	0	9/29/2010	0
10/24/1999	0	9/30/2010	0
10/25/1999	0	10/1/2010	0
10/26/1999	0	10/2/2010	0.01
10/27/1999	0	10/3/2010	0
10/28/1999	0	10/4/2010	0
10/29/1999	0	10/5/2010	0
10/30/1999	0	10/6/2010	0
10/31/1999	0	10/7/2010	0
11/1/1999	0.02	10/8/2010	0
11/2/1999	0	10/9/2010	0
11/3/1999	0	10/10/2010	0
11/4/1999	0	10/11/2010	0.01
11/5/1999	0	10/12/2010	0
11/6/1999	0	10/13/2010	0.01
11/7/1999	0	10/14/2010	0
11/8/1999	0	10/15/2010	0
11/9/1999	0	10/16/2010	0
11/10/1999	0	10/17/2010	0
11/11/1999	0	10/18/2010	0
11/12/1999	0	10/19/2010	0
11/13/1999	0	10/20/2010	0
11/14/1999	0	10/21/2010	0

11/15/1999	0	10/22/2010	0
11/16/1999	0	10/23/2010	0
11/17/1999	0	10/24/2010	0.79
11/18/1999	0	10/25/2010	0
11/19/1999	0	10/26/2010	0.24
11/20/1999	0	10/27/2010	0
11/21/1999	0	10/28/2010	0
11/22/1999	0	10/29/2010	0
11/23/1999	0.7	10/30/2010	0
11/24/1999	0	10/31/2010	0
11/25/1999	0	11/1/2010	0
11/26/1999	0	11/2/2010	0
11/27/1999	0	11/3/2010	0
11/28/1999	0	11/4/2010	0.03
11/29/1999	0	11/5/2010 T	
11/30/1999	0	11/6/2010	0
12/1/1999	0	11/7/2010	0
12/2/1999	0	11/8/2010	0
12/3/1999	0.14	11/9/2010	0
12/4/1999	0.26	11/10/2010	0
12/5/1999	0.43	11/11/2010	0
12/6/1999	0	11/12/2010	0
12/7/1999	0	11/13/2010	0.01
12/8/1999	0	11/14/2010	0
12/9/1999	0.8	11/15/2010 T	
12/10/1999	0.07	11/16/2010	0
12/11/1999	0.06	11/17/2010	0.14
12/12/1999	0.06	11/18/2010	0.03
12/13/1999	0	11/19/2010	0
12/14/1999	0	11/20/2010	0
12/15/1999	0.02	11/21/2010	0
12/16/1999	0	11/22/2010	0.77
12/17/1999	0	11/23/2010	0
12/18/1999	0	11/24/2010	3.08
12/19/1999	0	11/25/2010	0.78
12/20/1999	0	11/26/2010	0
12/21/1999	0	11/27/2010	0
12/22/1999	0	11/28/2010	0
12/23/1999	0	11/29/2010	0.5
12/24/1999	0	11/30/2010 T	
12/25/1999	0	12/1/2010 T	
12/26/1999	0	12/2/2010	0
12/27/1999	0	12/3/2010 T	
12/28/1999	0	12/4/2010 T	
12/29/1999	0	12/5/2010 T	
12/30/1999	0	12/6/2010 T	
12/31/1999	0	12/7/2010	0

1/1/2000	0	12/8/2010	0
1/2/2000	0	12/9/2010	0
1/3/2000	0.52	12/10/2010	0
1/4/2000	0	12/11/2010	0.26
1/5/2000	0	12/12/2010	0.13
1/6/2000	0	12/13/2010	0
1/7/2000	0	12/14/2010	0
1/8/2000	0.16	12/15/2010	0.01
1/9/2000	0.01	12/16/2010	T
1/10/2000	0.02	12/17/2010	0
1/11/2000	0	12/18/2010	0
1/12/2000	0	12/19/2010	0.01
1/13/2000	0	12/20/2010	T
1/14/2000	0	12/21/2010	0
1/15/2000	0	12/22/2010	0
1/16/2000	0	12/23/2010	0
1/17/2000	0.21	12/24/2010	0.25
1/18/2000	0	12/25/2010	0.05
1/19/2000	0.01	12/26/2010	T
1/20/2000	0	12/27/2010	T
1/21/2000	0	12/28/2010	0
1/22/2000	0.01	12/29/2010	0.06
1/23/2000	0.01	12/30/2010	T
1/24/2000	0	12/31/2010	0.53
1/25/2000	0	1/1/2011	0
1/26/2000	0	1/2/2011	0
1/27/2000	0	1/3/2011	0
1/28/2000	0.02	1/4/2011	0
1/29/2000	0.21	1/5/2011	0
1/30/2000	0.03	1/6/2011	T
1/31/2000	0	1/7/2011	0.03
2/1/2000	0	1/8/2011	T
2/2/2000	0	1/9/2011	0
2/3/2000	0	1/10/2011	0.1
2/4/2000	0	1/11/2011	0.13
2/5/2000	0	1/12/2011	T
2/6/2000	0	1/13/2011	T
2/7/2000	0	1/14/2011	0
2/8/2000	0	1/15/2011	0
2/9/2000	0	1/16/2011	0
2/10/2000	0	1/17/2011	0.01
2/11/2000	0	1/18/2011	0.08
2/12/2000	0	1/19/2011	0.21
2/13/2000	0.18	1/20/2011	0.37
2/14/2000	0	1/21/2011	T
2/15/2000	0	1/22/2011	T
2/16/2000	0	1/23/2011	0.05

2/17/2000	0.36	1/24/2011	0.01
2/18/2000	2.24	1/25/2011	0
2/19/2000	0	1/26/2011 T	
2/20/2000	0	1/27/2011	0
2/21/2000	0	1/28/2011	0
2/22/2000	0	1/29/2011	0
5/3/2000	0	1/30/2011	0
5/4/2000	0	1/31/2011	0.34
5/5/2000	0	2/1/2011	0.89
5/6/2000	0.27	2/2/2011 T	
5/7/2000	2.21	2/3/2011	0
5/8/2000	0	2/4/2011 T	
5/9/2000	0.07	2/5/2011	0.2
5/10/2000	0	2/6/2011 T	
5/11/2000	0	2/7/2011 T	
5/12/2000	0.18	2/8/2011 T	
5/13/2000	0	2/9/2011	0
5/14/2000	0	2/10/2011	0
5/15/2000	0	2/11/2011	0
5/16/2000	0	2/12/2011	0
5/17/2000	0	2/13/2011	0
5/18/2000	0.02	2/14/2011	0
5/19/2000	0	2/15/2011	0
5/20/2000	0	2/16/2011	0
5/21/2000	0	2/17/2011	0
5/22/2000	1.31	2/18/2011	0
5/23/2000	0	2/19/2011	0.01
5/24/2000	0	2/20/2011	0
5/25/2000	0	2/21/2011	0.43
5/26/2000	0.68	2/22/2011	0
5/27/2000	1.1	2/23/2011	0.08
5/28/2000	0	2/24/2011	0.8
5/29/2000	0	2/25/2011	0.4
5/30/2000	0	2/26/2011 T	
5/31/2000	0	2/27/2011	0.39
6/9/2000	0	2/28/2011	0.16
6/10/2000	0	3/1/2011 T	
6/11/2000	0.59	3/2/2011	0
6/12/2000	0.1	3/3/2011	0
6/13/2000	0	3/4/2011	1.36
6/14/2000	0.19	3/5/2011	0.37
6/15/2000	0	3/6/2011 T	
6/16/2000	0.42	3/7/2011 T	
6/17/2000	0.13	3/8/2011	0.47
6/18/2000	0	3/9/2011 T	
6/19/2000	0	3/10/2011 T	
6/20/2000	0.8	3/11/2011	0

6/21/2000	0.06	3/12/2011	0
6/22/2000	0	3/13/2011	0.27
6/23/2000	0	3/14/2011	1.21
6/24/2000	2.37	3/15/2011	T
6/25/2000	0	3/16/2011	0
6/26/2000	1.12	3/17/2011	0
6/27/2000	0	3/18/2011	0.03
6/28/2000	0	3/19/2011	0.31
6/29/2000	0	3/20/2011	0
6/30/2000	0.04	3/21/2011	0
7/1/2000	0	3/22/2011	T
7/2/2000	0.12	3/23/2011	0
7/3/2000	0.06	3/24/2011	0.02
7/4/2000	0	3/25/2011	0.27
7/5/2000	0	3/26/2011	0.39
7/6/2000	0	3/27/2011	0
7/7/2000	0	3/28/2011	T
7/8/2000	0	3/29/2011	T
7/9/2000	0	3/30/2011	0.04
7/10/2000	0	3/31/2011	0
7/11/2000	0	4/1/2011	0
7/12/2000	0	4/2/2011	0
7/13/2000	0	4/3/2011	0
7/14/2000	0	4/4/2011	0.67
7/15/2000	0	4/5/2011	0
7/16/2000	0	4/6/2011	0
7/17/2000	0.22	4/7/2011	0
7/18/2000	0.52	4/8/2011	0.01
7/19/2000	0	4/9/2011	0.69
7/20/2000	0	4/10/2011	0.18
7/21/2000	0	4/11/2011	0.17
7/22/2000	0	4/12/2011	0
7/23/2000	0	4/13/2011	0
7/24/2000	0	4/14/2011	0
7/25/2000	0	4/15/2011	0.81
7/26/2000	0	4/16/2011	0.01
7/27/2000	0.01	4/17/2011	0
7/28/2000	1.2	4/18/2011	0.01
7/29/2000	0.11	4/19/2011	1.66
7/30/2000	0	4/20/2011	0
7/31/2000	0.01	4/21/2011	0.09
8/1/2000	0	4/22/2011	1.29
8/2/2000	0	4/23/2011	0.64
8/3/2000	0	4/24/2011	0.26
8/4/2000	0	4/25/2011	0.66
8/5/2000	0	4/26/2011	0.05
8/6/2000	0.07	4/27/2011	0.65

8/7/2000	0.5	4/28/2011	0.03
8/8/2000	0.46	4/29/2011	0
8/9/2000	0	4/30/2011	0
8/10/2000	0	5/1/2011	0.28
8/11/2000	0	5/2/2011	0.01
8/22/2000	0	5/3/2011	0
8/27/2000	0.3	5/4/2011	0
8/31/2000	0	5/5/2011	0.05
9/1/2000	0	5/6/2011	0
9/2/2000	0	5/7/2011	0.05
9/3/2000	0	5/8/2011	0
9/4/2000	0	5/9/2011 T	
9/5/2000	0	5/10/2011	0.26
9/6/2000	0	5/11/2011	0
9/7/2000	0	5/12/2011 T	
9/8/2000	0	5/13/2011	0.03
9/9/2000	0	5/14/2011	0.53
9/10/2000	0.02	5/15/2011	0.35
9/11/2000	0.33	5/16/2011	0
9/12/2000	0.33	5/17/2011	0
9/13/2000	0	5/18/2011 T	
9/14/2000	0.03	5/19/2011	0.04
9/15/2000	0	5/20/2011	0.01
9/16/2000	0	5/21/2011	0.03
9/17/2000	0	5/22/2011	0.5
9/18/2000	0	5/23/2011	0.25
9/19/2000	0	5/24/2011	0
9/20/2000	0.06	5/25/2011	1.4
9/21/2000	0	5/26/2011	0.31
9/22/2000	0.11	5/27/2011	0.04
9/23/2000	0	5/28/2011	0.02
9/24/2000	0.28	5/29/2011	0
9/25/2000	1.47	5/30/2011	0
9/26/2000	0	5/31/2011	0
9/27/2000	0	6/1/2011	0
9/28/2000	0	6/2/2011 T	
9/29/2000	0	6/3/2011	0
9/30/2000	0	6/4/2011	0
10/1/2000	0	6/5/2011	0
10/2/2000	0	6/6/2011	0
10/3/2000	0	6/7/2011	0
10/4/2000	0.38	6/8/2011	0
10/5/2000	1.04	6/9/2011	0
10/6/2000	0	6/10/2011	1.06
10/7/2000	0	6/11/2011	0.04
10/8/2000	0	6/12/2011	0.01
10/9/2000	0	6/13/2011 T	

10/10/2000	0	6/14/2011	0.54
10/11/2000	0	6/15/2011	0.14
10/12/2000	0	6/16/2011	0
10/13/2000	0	6/17/2011	1.12
10/14/2000	0.23	6/18/2011	0.34
10/15/2000	0.24	6/19/2011	0.33
10/16/2000	0.6	6/20/2011	0
10/17/2000	0	6/21/2011	0.05
10/18/2000	0	6/22/2011	T
10/19/2000	0	6/23/2011	0
10/20/2000	0	6/24/2011	0
10/21/2000	0	6/25/2011	2.8
10/22/2000	0.11	6/26/2011	1.65
10/23/2000	0	6/27/2011	1.02
10/24/2000	0	6/28/2011	0
10/25/2000	0	6/29/2011	0
10/26/2000	0	6/30/2011	0
10/27/2000	0	7/1/2011	T
10/28/2000	0	7/2/2011	0
10/29/2000	0	7/3/2011	1.59
10/30/2000	0	7/4/2011	0.06
10/31/2000	0	7/5/2011	0
11/1/2000	0	7/6/2011	T
11/2/2000	0.2	7/7/2011	0.56
11/3/2000	0	7/8/2011	T
11/4/2000	0	7/9/2011	0
11/5/2000	0	7/10/2011	0
11/6/2000	0.72	7/11/2011	T
11/7/2000	0	7/12/2011	T
11/8/2000	0.02	7/13/2011	T
11/9/2000	0.78	7/14/2011	T
11/10/2000	0	7/15/2011	0
11/11/2000	0	7/16/2011	0
11/12/2000	0.37	7/17/2011	0
11/13/2000	0	7/18/2011	0
11/14/2000	0	7/19/2011	0
11/15/2000	0	7/20/2011	0
11/16/2000	0	7/21/2011	0
11/17/2000	0	7/22/2011	0
11/18/2000	0	7/23/2011	0.53
11/19/2000	0	7/24/2011	T
11/20/2000	0	7/25/2011	0
11/21/2000	0	7/26/2011	0
11/22/2000	0	7/27/2011	0
11/23/2000	0	7/28/2011	0
11/24/2000	0.22	7/29/2011	0
11/25/2000	0.49	7/30/2011	0.17

11/26/2000	0	7/31/2011	0
11/27/2000	0	8/1/2011	0
11/28/2000	0	8/2/2011	0
11/29/2000	0	8/3/2011	0
11/30/2000	0	8/4/2011 T	
12/1/2000	0.02	8/5/2011	0.56
12/2/2000	0.04	8/6/2011	0.02
12/3/2000	0	8/7/2011	0
12/4/2000	0	8/8/2011	0
12/5/2000	0	8/9/2011	0
12/6/2000	0.01	8/10/2011	0.04
12/7/2000	0	8/11/2011 T	
12/8/2000	0	8/12/2011	0.1
12/9/2000	0	8/13/2011	0.09
12/10/2000	0	8/14/2011	0
12/11/2000	0.36	8/15/2011	0
12/12/2000	0	8/16/2011 T	
12/13/2000	0.32	8/17/2011	0
12/14/2000	0	8/18/2011	0
12/15/2000	0.16	8/19/2011	0.11
12/16/2000	0.03	8/20/2011	0.07
12/17/2000	0.01	8/21/2011	0
12/18/2000	0.01	8/22/2011	0.05
12/19/2000	0	8/23/2011	0
12/20/2000	0	8/24/2011	0
12/21/2000	0	8/25/2011	0
12/22/2000	0	8/26/2011	0
12/23/2000	0	8/27/2011	0
12/24/2000	0	8/28/2011 T	
12/25/2000	0	8/29/2011	0
12/26/2000	0.04	8/30/2011	0
12/27/2000	0	8/31/2011	0
12/28/2000	0.01	9/1/2011	0
12/29/2000	0.01	9/2/2011	0
12/30/2000	0	9/3/2011	0.16
12/31/2000	0.01	9/4/2011 T	
1/1/2001	0	9/5/2011	0
1/2/2001	0	9/6/2011	0
1/3/2001	0	9/7/2011	0
1/4/2001	0	9/8/2011	0
1/5/2001	0	9/9/2011	0.18
1/6/2001	0	9/10/2011	0.02
1/7/2001	0	9/11/2011	0
1/8/2001	0	9/12/2011	0
1/9/2001	0	9/13/2011 T	
1/10/2001	0	9/14/2011	1.78
1/11/2001	0.02	9/15/2011	0

1/12/2001	0.01	9/16/2011	0.02
1/13/2001	0.19	9/17/2011	0.02
1/14/2001	0.01	9/18/2011	0.93
1/15/2001	0	9/19/2011	T
1/16/2001	0	9/20/2011	0
1/17/2001	0	9/21/2011	T
1/18/2001	0	9/22/2011	0.03
1/19/2001	0.01	9/23/2011	0.04
1/20/2001	0	9/24/2011	0
1/21/2001	0	9/25/2011	0
1/22/2001	0	9/26/2011	T
1/23/2001	0	9/27/2011	0
1/24/2001	0	9/28/2011	0
1/25/2001	0	9/29/2011	0
1/26/2001	0.09	9/30/2011	0
1/27/2001	0	10/1/2011	0
1/28/2001	0.11	10/2/2011	0
1/29/2001	0.59	10/3/2011	0
1/30/2001	0.08	10/4/2011	0
1/31/2001	0.01	10/5/2011	0
2/1/2001	0	10/6/2011	0
2/2/2001	0	10/7/2011	0
2/3/2001	0	10/8/2011	0
2/4/2001	0	10/9/2011	0
2/5/2001	0	10/10/2011	0
2/6/2001	0	10/11/2011	0
2/7/2001	0	10/12/2011	0.34
2/8/2001	0.01	10/13/2011	0.01
2/9/2001	0.55	10/14/2011	0
2/10/2001	0	10/15/2011	0
2/11/2001	0	10/16/2011	0
2/12/2001	0	10/17/2011	0.57
2/13/2001	0.1	10/18/2011	0.61
2/14/2001	0.08	10/19/2011	0.05
2/15/2001	0	10/20/2011	0
2/16/2001	0	10/21/2011	0
2/17/2001	0	10/22/2011	0
2/18/2001	0	10/23/2011	0
2/19/2001	0	10/24/2011	0
2/20/2001	0	10/25/2011	0
2/21/2001	0.01	10/26/2011	0.08
2/22/2001	0.03	10/27/2011	T
2/23/2001	0.12	10/28/2011	T
2/24/2001	1.49	10/29/2011	0
2/25/2001	0	10/30/2011	T
2/26/2001	0	10/31/2011	0
2/27/2001	0.05	11/1/2011	0.22

2/28/2001	0	11/2/2011	0.05
3/1/2001	0.01	11/3/2011	0.96
3/2/2001	0	11/4/2011	0
3/3/2001	0	11/5/2011	0
3/4/2001	0	11/6/2011	T
3/5/2001	0	11/7/2011	1.2
3/6/2001	0	11/8/2011	0.37
3/7/2001	0	11/9/2011	0.02
3/8/2001	0	11/10/2011	0
3/9/2001	0	11/11/2011	0
3/10/2001	0	11/12/2011	0
3/11/2001	0	11/13/2011	0.03
3/12/2001	0.02	11/14/2011	T
3/13/2001	0	11/15/2011	0
3/14/2001	0.02	11/16/2011	0
3/15/2001	1.1	11/17/2011	0
3/16/2001	0.14	11/18/2011	0
3/17/2001	0	11/19/2011	T
3/18/2001	0	11/20/2011	0.06
3/19/2001	0	11/21/2011	T
3/20/2001	0	11/22/2011	1.31
3/21/2001	0	11/23/2011	T
3/22/2001	0.07	11/24/2011	0
3/23/2001	0	11/25/2011	0
3/24/2001	0.04	11/26/2011	0.45
3/25/2001	0	11/27/2011	0.02
3/26/2001	0	11/28/2011	0.21
3/27/2001	0	11/29/2011	T
3/28/2001	0	11/30/2011	0
3/29/2001	0	12/1/2011	0
3/30/2001	0	12/2/2011	T
3/31/2001	0.05	12/3/2011	0.17
4/1/2001	0	12/4/2011	0.19
4/2/2001	0.2	12/5/2011	T
4/3/2001	0.55	12/6/2011	T
4/4/2001	0	12/7/2011	T
4/5/2001	0	12/8/2011	0
4/6/2001	0	12/9/2011	0
4/7/2001	0	12/10/2011	0
4/8/2001	0	12/11/2011	0
4/9/2001	0.38	12/12/2011	T
4/10/2001	1.02	12/13/2011	0.36
4/11/2001	0.14	12/14/2011	0.38
4/12/2001	0	12/15/2011	T
4/13/2001	0	12/16/2011	0
4/14/2001	0	12/17/2011	0
4/15/2001	0.36	12/18/2011	0

4/16/2001	0	12/19/2011	0.8
4/17/2001	0	12/20/2011	0.25
4/18/2001	0	12/21/2011	0.01
4/19/2001	0	12/22/2011	0
4/20/2001	0	12/23/2011	0
4/21/2001	0	12/24/2011	0
4/22/2001	0	12/25/2011	0
4/23/2001	0.08	12/26/2011	0.6
4/24/2001	0	12/27/2011	0.34
4/25/2001	0	12/28/2011	0
4/26/2001	0	12/29/2011	0.01
4/27/2001	0	12/30/2011	0.01
4/28/2001	0	12/31/2011	0
4/29/2001	0	1/1/2012	T
4/30/2001	0.27	1/2/2012	T
5/1/2001	0	1/3/2012	0
5/2/2001	0	1/4/2012	0
5/3/2001	0	1/5/2012	0
5/4/2001	0	1/6/2012	0
5/5/2001	0.04	1/7/2012	0
5/6/2001	0.01	1/8/2012	0
5/7/2001	0	1/9/2012	0
5/8/2001	0	1/10/2012	0
5/9/2001	0	1/11/2012	0.04
5/10/2001	0	1/12/2012	0.15
5/11/2001	0	1/13/2012	T
5/12/2001	0	1/14/2012	0
5/13/2001	0	1/15/2012	0
5/14/2001	0	1/16/2012	0
5/15/2001	0	1/17/2012	0.85
5/16/2001	0	1/18/2012	0
5/17/2001	0.42	1/19/2012	0
5/18/2001	0.45	1/20/2012	T
5/19/2001	0	1/21/2012	T
5/20/2001	0.06	1/22/2012	T
5/21/2001	0.37	1/23/2012	0
5/22/2001	0.05	1/24/2012	0
5/23/2001	0.04	1/25/2012	0.77
5/24/2001	0	1/26/2012	0.34
5/25/2001	0.05	1/27/2012	0.12
5/26/2001	0	1/28/2012	0.07
5/27/2001	0	1/29/2012	0
5/28/2001	0	1/30/2012	0
5/29/2001	0.13	1/31/2012	T
5/30/2001	0.61	2/1/2012	0
5/31/2001	0.5	2/2/2012	0
6/1/2001	0.04	2/3/2012	1.05

6/2/2001	0	2/4/2012	0.23
6/3/2001	0.38	2/5/2012	0.04
6/4/2001	0.45	2/6/2012 T	
6/5/2001	0	2/7/2012	0.09
6/6/2001	0.4	2/8/2012	0.04
6/7/2001	0	2/9/2012	0
6/8/2001	0	2/10/2012	0.04
6/9/2001	0	2/11/2012	0.01
6/10/2001	0	2/12/2012	0
6/11/2001	0	2/13/2012	0.13
6/12/2001	0	2/14/2012 T	
6/13/2001	0	2/15/2012	0.16
6/14/2001	0.73	2/16/2012	0.14
6/15/2001	0.01	2/17/2012	0
6/16/2001	0	2/18/2012	0
6/17/2001	0	2/19/2012	0
6/18/2001	0	2/20/2012	0.03
6/19/2001	0	2/21/2012	0.02
6/20/2001	0.21	2/22/2012	0
6/21/2001	0.21	2/23/2012	0.03
6/22/2001	0	2/24/2012 T	
6/23/2001	0	2/25/2012 T	
6/24/2001	0	2/26/2012	0
6/25/2001	0	2/27/2012	0
6/26/2001	0	2/28/2012 T	
6/27/2001	1.16	2/29/2012	0.02
6/28/2001	0.01	3/1/2012	0
6/29/2001	0	3/2/2012	0.2
6/30/2001	0	3/3/2012	0
7/1/2001	0	3/4/2012 T	
7/2/2001	0.05	3/5/2012	0
7/3/2001	0	3/6/2012	0
7/4/2001	0.51	3/7/2012	0.01
7/5/2001	0.55	3/8/2012	0.2
7/6/2001	0	3/9/2012	0
7/7/2001	0	3/10/2012	0
7/8/2001	0	3/11/2012	0.19
7/9/2001	0	3/12/2012 T	
7/10/2001	0	3/13/2012	0
7/11/2001	0	3/14/2012 T	
7/12/2001	0.24	3/15/2012	0.74
7/13/2001	0	3/16/2012	0.22
7/14/2001	0	3/17/2012	1.34
7/15/2001	0	3/18/2012	0.01
7/16/2001	0	3/19/2012	0
7/17/2001	0.04	3/20/2012	0
7/18/2001	1.29	3/21/2012 T	

7/19/2001	0.42	3/22/2012	0.19
7/20/2001	0.15	3/23/2012	0.13
7/21/2001	0	3/24/2012	T
7/22/2001	0	3/25/2012	0
7/23/2001	0.53	3/26/2012	0
7/24/2001	0.22	3/27/2012	0
7/25/2001	0	3/28/2012	0
7/26/2001	0	3/29/2012	0.1
7/27/2001	0	3/30/2012	0
7/28/2001	0	3/31/2012	0
7/29/2001	0	4/1/2012	0
7/30/2001	0	4/2/2012	0
7/31/2001	0	4/3/2012	0.72
8/1/2001	0	4/4/2012	0.31
8/2/2001	0.26	4/5/2012	0.72
8/3/2001	0	4/6/2012	0
8/4/2001	0	4/7/2012	T
8/5/2001	0	4/8/2012	0
8/6/2001	0	4/9/2012	0
8/7/2001	0	4/10/2012	0
8/8/2001	0	4/11/2012	0
8/9/2001	0.15	4/12/2012	0
8/10/2001	0.08	4/13/2012	1.12
8/11/2001	0	4/14/2012	1.3
8/12/2001	0	4/15/2012	0.92
8/13/2001	0	4/16/2012	0
8/14/2001	0	4/17/2012	0
8/15/2001	0.05	4/18/2012	0
8/16/2001	0.03	4/19/2012	0
8/17/2001	0	4/20/2012	0.1
8/18/2001	0.08	4/21/2012	T
8/19/2001	0	4/22/2012	0.14
8/20/2001	0	4/23/2012	0
8/21/2001	0	4/24/2012	0
8/22/2001	0	4/25/2012	T
8/23/2001	0.79	4/26/2012	0
8/24/2001	0.44	4/27/2012	T
8/25/2001	0.09	4/28/2012	1.4
8/26/2001	0	4/29/2012	0.52
8/27/2001	0	4/30/2012	0.05
8/28/2001	0	5/1/2012	0.57
8/29/2001	0	5/2/2012	0
8/30/2001	0.02	5/3/2012	0
8/31/2001	0	5/4/2012	0.1
9/1/2001	0	5/5/2012	0
9/2/2001	0	5/6/2012	0.01
9/3/2001	0	5/7/2012	0.82

9/4/2001	0	5/8/2012	0
9/5/2001	0	5/9/2012	0
9/6/2001	0	5/10/2012	0
9/7/2001	0	5/11/2012	0
9/8/2001	1.33	5/12/2012	0
9/9/2001	0.22	5/13/2012	0
9/10/2001	0.01	5/14/2012	0
9/11/2001	0	5/15/2012	0
9/12/2001	0	5/16/2012	0
9/13/2001	0	5/17/2012	0
9/14/2001	0	5/18/2012	0
9/15/2001	0	5/19/2012	0
9/16/2001	0	5/20/2012	0.1
9/17/2001	0	5/21/2012	0
9/18/2001	1.05	5/22/2012	0
9/19/2001	0	5/23/2012	0
9/20/2001	0.16	5/24/2012	0
9/21/2001	0.05	5/25/2012	0
9/22/2001	0.01	5/26/2012	0
9/23/2001	0	5/27/2012	0
9/24/2001	0	5/28/2012 T	
9/25/2001	0	5/29/2012 T	
9/26/2001	0	5/30/2012 T	
9/27/2001	0	5/31/2012	0.1
9/28/2001	0	6/1/2012 T	
9/29/2001	0	6/2/2012 T	
9/30/2001	0	6/3/2012	0
10/1/2001	0	6/4/2012	0.04
10/2/2001	0	6/5/2012	0
10/3/2001	0	6/6/2012	0
10/4/2001	0	6/7/2012	0
10/5/2001	0.9	6/8/2012	0
10/6/2001	0	6/9/2012	0
10/7/2001	0	6/10/2012	0
10/8/2001	0	6/11/2012	1.06
10/9/2001	0	6/12/2012	0
10/10/2001	1.26	6/13/2012	0
10/11/2001	1.28	6/14/2012	0
10/12/2001	0	6/15/2012	0
10/13/2001	0.22	6/16/2012	0.87
10/14/2001	0	6/17/2012 T	
10/15/2001	0.63	6/18/2012	0
10/16/2001	0.01	6/19/2012	0
10/17/2001	0	6/20/2012	0
10/18/2001	0	6/21/2012	0
10/19/2001	0	6/22/2012	0
10/20/2001	0	6/23/2012	0

10/21/2001	0	6/24/2012	0
10/22/2001	0	6/25/2012	0
10/23/2001	0.49	6/26/2012	0
10/24/2001	0.39	6/27/2012	0
10/25/2001	0	6/28/2012	0
10/26/2001	0	6/29/2012	0
10/27/2001	0	6/30/2012	0
10/28/2001	0	7/1/2012	0
10/29/2001	0	7/2/2012	T
10/30/2001	0	7/3/2012	0
10/31/2001	0	7/4/2012	0
11/1/2001	0	7/5/2012	0
11/2/2001	0.14	7/6/2012	0
11/3/2001	0	7/7/2012	0.01
11/4/2001	0	7/8/2012	0.24
11/5/2001	0	7/9/2012	0.03
11/6/2001	0	7/10/2012	0
11/7/2001	0	7/11/2012	0
11/8/2001	0	7/12/2012	0
11/9/2001	0	7/13/2012	0
11/10/2001	0	7/14/2012	0.25
11/11/2001	0	7/15/2012	0
11/12/2001	0	7/16/2012	0
11/13/2001	0	7/17/2012	0
11/14/2001	0	7/18/2012	T
11/15/2001	0	7/19/2012	0
11/16/2001	0	7/20/2012	0
11/17/2001	0	7/21/2012	0
11/18/2001	0.11	7/22/2012	0
11/19/2001	0.03	7/23/2012	0
11/20/2001	0	7/24/2012	0
11/21/2001	0	7/25/2012	0
11/22/2001	0	7/26/2012	T
11/23/2001	0.04	7/27/2012	0
11/24/2001	1.29	7/28/2012	0
11/25/2001	0	7/29/2012	0.19
11/26/2001	0.15	7/30/2012	T
11/27/2001	0	7/31/2012	0
11/28/2001	0.69	8/1/2012	0
11/29/2001	0.41	8/2/2012	0.01
11/30/2001	0.2	8/3/2012	0
12/1/2001	0	8/4/2012	0.48
12/2/2001	0	8/5/2012	T
12/3/2001	0	8/6/2012	0
12/4/2001	0	8/7/2012	0
12/5/2001	0.08	8/8/2012	0.46
12/6/2001	0	8/9/2012	0.01

12/7/2001	0	8/10/2012	0
12/8/2001	0	8/11/2012	0
12/9/2001	0	8/12/2012	0.03
12/10/2001	0	8/13/2012	0.12
12/11/2001	0	8/14/2012	0
12/12/2001	0.8	8/15/2012	0
12/13/2001	0.02	8/16/2012	0.51
12/14/2001	0.52	8/17/2012	0
12/15/2001	0.26	8/18/2012	0
12/16/2001	1.16	8/19/2012 T	
12/17/2001	0.46	8/20/2012	0
12/18/2001	0	8/21/2012 T	
12/19/2001	0	8/22/2012	0
12/20/2001	0	8/23/2012	0
12/21/2001	0	8/24/2012	0
12/22/2001	0.16	8/25/2012	0.07
12/23/2001	0	8/26/2012	0.83
12/24/2001	0	8/27/2012	0.02
12/25/2001	0	8/28/2012	0
12/26/2001	0	8/29/2012	0
12/27/2001	0	8/30/2012	0
12/28/2001	0	8/31/2012	1.48
12/29/2001	0	9/1/2012	0.57
12/30/2001	0	9/2/2012	0.11
12/31/2001	0	9/3/2012 T	
1/1/2002	0	9/4/2012	0.01
1/2/2002	0	9/5/2012	0.13
1/3/2002	0	9/6/2012	0
1/4/2002	0	9/7/2012	0.57
1/5/2002	0.09	9/8/2012	0
1/6/2002	0.03	9/9/2012	0
1/7/2002	0	9/10/2012	0
1/8/2002	0	9/11/2012	0
1/9/2002	0	9/12/2012	0
1/10/2002	0	9/13/2012	0
1/11/2002	0	9/14/2012	0.1
1/12/2002	0	9/15/2012	0
1/13/2002	0	9/16/2012	0
1/14/2002	0	9/17/2012	0.29
1/15/2002	0	9/18/2012	0.01
1/16/2002	0	9/19/2012	0
1/17/2002	0	9/20/2012 T	
1/18/2002	0.11	9/21/2012	0
1/19/2002	0.07	9/22/2012	0
1/20/2002	0	9/23/2012	0
1/21/2002	0	9/24/2012	0
1/22/2002	0	9/25/2012	0.97

1/23/2002	0.24	9/26/2012	0.19
1/24/2002	0	9/27/2012	0
1/25/2002	0	9/28/2012	0.08
1/26/2002	0	9/29/2012	0
1/27/2002	0	9/30/2012	0
1/28/2002	0	10/1/2012	0
1/29/2002	0.28	10/2/2012	T
1/30/2002	1.35	10/3/2012	T
1/31/2002	0.99	10/4/2012	0
2/1/2002	0.01	10/5/2012	0.54
2/2/2002	0	10/6/2012	0
2/3/2002	0	10/7/2012	0
2/4/2002	0	10/8/2012	0
2/5/2002	0	10/9/2012	0.01
2/6/2002	0	10/10/2012	0.01
2/7/2002	0	10/11/2012	T
2/8/2002	0	10/12/2012	0
2/9/2002	0.01	10/13/2012	0.12
2/10/2002	0.14	10/14/2012	0.77
2/11/2002	0	10/15/2012	0
2/12/2002	0	10/16/2012	0
2/13/2002	0	10/17/2012	0.27
2/14/2002	0	10/18/2012	T
2/15/2002	0	10/19/2012	0.01
2/16/2002	0	10/20/2012	0
2/17/2002	0	10/21/2012	0
2/18/2002	0	10/22/2012	0.08
2/19/2002	0.4	10/23/2012	0.25
2/20/2002	0.04	10/24/2012	0
2/21/2002	0	10/25/2012	0.44
2/22/2002	0	10/26/2012	0
2/23/2002	0	10/27/2012	0
2/24/2002	0	10/28/2012	0
2/25/2002	0.17	10/29/2012	0
2/26/2002	0.02	10/30/2012	0
2/27/2002	0	10/31/2012	0
2/28/2002	0	11/1/2012	0
3/1/2002	0	11/2/2012	0
3/2/2002	0.93	11/3/2012	0
3/3/2002	0	11/4/2012	0
3/4/2002	0	11/5/2012	0.08
3/5/2002	0	11/6/2012	0.02
3/6/2002	0	11/7/2012	T
3/7/2002	0	11/8/2012	0
3/8/2002	0.03	11/9/2012	0
3/9/2002	0.59	11/10/2012	T
3/10/2002	0	11/11/2012	1.2

3/11/2002	0.03	11/12/2012	0
3/12/2002	0	11/13/2012	0
3/13/2002	0	11/14/2012	0
3/14/2002	0	11/15/2012	0
3/15/2002	0.6	11/16/2012	0
3/16/2002	0.01	11/17/2012	0
3/17/2002	0	11/18/2012	0
3/18/2002	0.04	11/19/2012	0.01
3/19/2002	0.36	11/20/2012	0
3/20/2002	0.06	11/21/2012	0
3/21/2002	0	11/22/2012	0.09
3/22/2002	0	11/23/2012	0
3/23/2002	0	11/24/2012	0
3/24/2002	0.32	11/25/2012	0
3/25/2002	0.41	11/26/2012	0
3/26/2002	0.22	11/27/2012	0
3/27/2002	0	11/28/2012	0
3/28/2002	0.01	11/29/2012	0
3/29/2002	0.04	11/30/2012	0
3/30/2002	0	12/1/2012	0
3/31/2002	0	12/2/2012	0.03
4/1/2002	0	12/3/2012	0
4/2/2002	0.01	12/4/2012	0.3
4/3/2002	0	12/5/2012	0
4/4/2002	0	12/6/2012	0
4/5/2002	0	12/7/2012	0.05
4/6/2002	0	12/8/2012	0.24
4/7/2002	0.13	12/9/2012	0.26
4/8/2002	0.54	12/10/2012	0
4/9/2002	0	12/11/2012	0
4/10/2002	0	12/12/2012	0
4/11/2002	0	12/13/2012	0
4/12/2002	0.07	12/14/2012	0.04
4/13/2002	0	12/15/2012	0.35
4/14/2002	0.02	12/16/2012	0
4/15/2002	0	12/17/2012	0.07
4/16/2002	0.06	12/18/2012	0
4/17/2002	0	12/19/2012	0.07
4/18/2002	0	12/20/2012	0.31
4/19/2002	1.75	12/21/2012	0
4/20/2002	0.4	12/22/2012	0
4/21/2002	0.17	12/23/2012	0
4/22/2002	0	12/24/2012	0
4/23/2002	0	12/25/2012	0
4/24/2002	0.07	12/26/2012	T
4/25/2002	0	12/27/2012	0
4/26/2002	0	12/28/2012	0.06

4/27/2002	1.03	12/29/2012	T
4/28/2002	0	12/30/2012	0
4/29/2002	0	12/31/2012	0.22
4/30/2002	0	1/1/2013	T
5/1/2002	0.01	1/2/2013	0
5/2/2002	0.13	1/3/2013	0
5/3/2002	0	1/4/2013	0
5/4/2002	0.03	1/5/2013	T
5/5/2002	0	1/6/2013	0
5/6/2002	0.57	1/7/2013	0
5/7/2002	1.27	1/8/2013	0
5/8/2002	0.48	1/9/2013	T
5/9/2002	0.71	1/10/2013	0.62
5/10/2002	0	1/11/2013	0
5/11/2002	0.01	1/12/2013	0.65
5/12/2002	2.14	1/13/2013	T
5/13/2002	0.52	1/14/2013	0
5/14/2002	0	1/15/2013	0
5/15/2002	0	1/16/2013	0
5/16/2002	0.47	1/17/2013	0
5/17/2002	0.72	1/18/2013	0
5/18/2002	0	1/19/2013	0
5/19/2002	0	1/20/2013	0
5/20/2002	0	1/21/2013	T
5/21/2002	0	1/22/2013	0.02
5/22/2002	0	1/23/2013	0
5/23/2002	0	1/24/2013	0
5/24/2002	0.19	1/25/2013	T
5/25/2002	0	1/26/2013	0
5/26/2002	0	1/27/2013	0.24
5/27/2002	0	1/28/2013	T
5/28/2002	0.57	1/29/2013	1.44
5/29/2002	0	1/30/2013	0.15
5/30/2002	0.01	1/31/2013	T
5/31/2002	0	2/1/2013	0
6/1/2002	0	2/2/2013	0.12
6/2/2002	0	2/3/2013	0.12
6/3/2002	0	2/4/2013	0
6/4/2002	0	2/5/2013	0
6/5/2002	1.14	2/6/2013	0
6/6/2002	0	2/7/2013	0.23
6/7/2002	0	2/8/2013	0
6/8/2002	0	2/9/2013	0.09
6/9/2002	0.15	2/10/2013	0.46
6/10/2002	0.44	2/11/2013	0
6/11/2002	1.53	2/12/2013	0
6/12/2002	0.96	2/13/2013	0

6/13/2002	0	2/14/2013	0
6/14/2002	0	2/15/2013	0
6/15/2002	0	2/16/2013	0
6/16/2002	0	2/17/2013	0
6/17/2002	0	2/18/2013	0.16
6/18/2002	0	2/19/2013	0
6/19/2002	0	2/20/2013	0
6/20/2002	0	2/21/2013	0.89
6/21/2002	0	2/22/2013	0.01
6/22/2002	0	2/23/2013	0
6/23/2002	0	2/24/2013	0
6/24/2002	0	2/25/2013	0.19
6/25/2002	0.03	2/26/2013	0.84
6/26/2002	0	2/27/2013	0.06
6/27/2002	0	2/28/2013	0.03
6/28/2002	0	3/1/2013	0.08
6/29/2002	0	3/2/2013 T	
6/30/2002	0	3/3/2013 T	
7/1/2002	0	3/4/2013	0.02
7/2/2002	0	3/5/2013	0.25
7/3/2002	0.47	3/6/2013 T	
7/4/2002	0	3/7/2013	0
7/5/2002	0	3/8/2013 T	
7/6/2002	0	3/9/2013	0.44
7/7/2002	0	3/10/2013	1.35
7/8/2002	0	3/11/2013	0.01
7/9/2002	0	3/12/2013 T	
7/10/2002	0.02	3/13/2013	0.01
7/11/2002	0	3/14/2013 T	
7/12/2002	0.02	3/15/2013	0
7/13/2002	0	3/16/2013	0.09
7/14/2002	0	3/17/2013	1.19
7/15/2002	0	3/18/2013	0.02
7/16/2002	0.26	3/19/2013	0
7/17/2002	0	3/20/2013 T	
7/18/2002	0.14	3/21/2013	0
7/19/2002	0	3/22/2013	0
7/20/2002	0	3/23/2013	0.06
7/21/2002	0	3/24/2013	1.25
7/22/2002	0.09	3/25/2013	0.03
7/23/2002	0.25	3/26/2013	0
7/24/2002	0	3/27/2013 T	
7/25/2002	0	3/28/2013 T	
7/26/2002	0.22	3/29/2013	0
7/27/2002	0	3/30/2013	0.15
7/28/2002	0	3/31/2013	0
7/29/2002	0	4/1/2013 T	

7/30/2002	0	4/2/2013	0
7/31/2002	0	4/3/2013	0
8/1/2002	0	4/4/2013	0
8/2/2002	0	4/5/2013	0
8/3/2002	0	4/6/2013	0
8/4/2002	0	4/7/2013	0.02
8/5/2002	0	4/8/2013	0
8/6/2002	2.68	4/9/2013	0
8/7/2002	0	4/10/2013	1.02
8/8/2002	0	4/11/2013	0.1
8/9/2002	0	4/12/2013	0
8/10/2002	0	4/13/2013	0
8/11/2002	0	4/14/2013	0
8/12/2002	0	4/15/2013	0.45
8/13/2002	0.11	4/16/2013	0.45
8/14/2002	0.21	4/17/2013	T
8/15/2002	0	4/18/2013	2.48
8/16/2002	0.03	4/19/2013	T
8/17/2002	0	4/20/2013	0
8/18/2002	0.85	4/21/2013	0
8/19/2002	0.02	4/22/2013	0
8/20/2002	0.02	4/23/2013	0.72
8/21/2002	0	4/24/2013	0.01
8/22/2002	0	4/25/2013	0
8/23/2002	0.2	4/26/2013	T
8/24/2002	0	4/27/2013	0.41
8/25/2002	0	4/28/2013	0.01
8/26/2002	0	4/29/2013	0
8/27/2002	0	4/30/2013	0
8/28/2002	0	5/1/2013	0
8/29/2002	0	5/2/2013	0.37
8/30/2002	0	5/3/2013	1.99
8/31/2002	0	5/4/2013	T
9/1/2002	0	5/5/2013	0.15
9/2/2002	0	5/6/2013	T
9/3/2002	0	5/7/2013	0
9/4/2002	0	5/8/2013	T
9/5/2002	0	5/9/2013	0.18
9/6/2002	0	5/10/2013	T
9/7/2002	0	5/11/2013	0
9/8/2002	0	5/12/2013	0
9/9/2002	0	5/13/2013	0
9/10/2002	0	5/14/2013	0
9/11/2002	0	5/15/2013	0
9/12/2002	0	5/16/2013	T
9/13/2002	0	5/17/2013	0.27
9/14/2002	0.05	5/18/2013	0

9/15/2002	0	5/19/2013	0
9/16/2002	0	5/20/2013	1.22
9/17/2002	0.41	5/21/2013	0.01
9/18/2002	0	5/22/2013	T
9/19/2002	1.64	5/23/2013	0.02
9/20/2002	0.34	5/24/2013	0
9/21/2002	0	5/25/2013	0.08
9/22/2002	0	5/26/2013	0.02
9/23/2002	0	5/27/2013	0.47
9/24/2002	0	5/28/2013	0.05
9/25/2002	0	5/29/2013	0
9/26/2002	0	5/30/2013	0.56
9/27/2002	0	5/31/2013	1.74
9/28/2002	0	6/1/2013	0.26
9/29/2002	0	6/2/2013	0
9/30/2002	0	6/3/2013	0
10/1/2002	0	6/4/2013	0
10/2/2002	1.67	6/5/2013	0.05
10/3/2002	0.2	6/6/2013	0
10/4/2002	0.24	6/7/2013	0
10/5/2002	0	6/8/2013	0
10/6/2002	0.22	6/9/2013	0.49
10/7/2002	0	6/10/2013	0.06
10/8/2002	0	6/11/2013	0
10/9/2002	0	6/12/2013	0
10/10/2002	0	6/13/2013	T
10/11/2002	0	6/14/2013	0
10/12/2002	0.11	6/15/2013	1.06
10/13/2002	0	6/16/2013	0.24
10/14/2002	0	6/17/2013	0.28
10/15/2002	0	6/18/2013	0
10/16/2002	0	6/19/2013	0
10/17/2002	0	6/20/2013	0
10/18/2002	0.44	6/21/2013	0
10/19/2002	0.13	6/22/2013	0.02
10/20/2002	0	6/23/2013	1.54
10/21/2002	0	6/24/2013	0
10/22/2002	0	6/25/2013	0
10/23/2002	0	6/26/2013	1.44
10/24/2002	0	6/27/2013	0
10/25/2002	0.84	6/28/2013	0.01
10/26/2002	0.03	6/29/2013	0.4
10/27/2002	0	6/30/2013	0.01
10/28/2002	0.05	7/1/2013	T
10/29/2002	0.78	7/2/2013	0.54
10/30/2002	0.05	7/3/2013	T
10/31/2002	0.01	7/4/2013	0

11/1/2002	0	7/5/2013	0
11/2/2002	0.2	7/6/2013	0.07
11/3/2002	0.08	7/7/2013	0
11/4/2002	0	7/8/2013	0
11/5/2002	0.35	7/9/2013	0
11/6/2002	0	7/10/2013	0.55
11/7/2002	0	7/11/2013	0
11/8/2002	0	7/12/2013	0
11/9/2002	0.02	7/13/2013	0
11/10/2002	0	7/14/2013	0.28
11/11/2002	0	7/15/2013 T	
11/12/2002	0	7/16/2013	0
11/13/2002	0	7/17/2013	0.05
11/14/2002	0.35	7/18/2013	0.28
11/15/2002	0.08	7/19/2013	0
11/16/2002	0	7/20/2013	0
11/17/2002	0	7/21/2013 T	
11/18/2002	0	7/22/2013 T	
11/19/2002	0	7/23/2013	0
11/20/2002	0	7/24/2013	0
11/21/2002	0	7/25/2013	0
11/22/2002	0	7/26/2013	0.05
11/23/2002	0	7/27/2013	0
11/24/2002	0.06	7/28/2013	0
11/25/2002	0	7/29/2013 T	
11/26/2002	0	7/30/2013	1.53
11/27/2002	0	7/31/2013 T	
11/28/2002	0	8/1/2013	0
11/29/2002	0	8/2/2013	0.42
11/30/2002	0	8/3/2013	0
12/1/2002	0	8/4/2013	0
12/2/2002	0	8/5/2013 T	
12/3/2002	0	8/6/2013 T	
12/4/2002	0.13	8/7/2013	0
12/5/2002	0	8/8/2013	0.42
12/6/2002	0	8/9/2013 T	
12/7/2002	0	8/10/2013	0
12/8/2002	0	8/11/2013	0
12/9/2002	0	8/12/2013	0.17
12/10/2002	0	8/13/2013	0
12/11/2002	0	8/14/2013	0
12/12/2002	0	8/15/2013	0
12/13/2002	0.03	8/16/2013	0
12/14/2002	0	8/17/2013	0
12/15/2002	0	8/18/2013	0
12/16/2002	0	8/19/2013	0
12/17/2002	0.01	8/20/2013	0

12/18/2002	1.18	8/21/2013	0
12/19/2002	0.01	8/22/2013	0
12/20/2002	0	8/23/2013	0
12/21/2002	0	8/24/2013	0
12/22/2002	0	8/25/2013	0
12/23/2002	0	8/26/2013	0
12/24/2002	0.24	8/27/2013	0
12/25/2002	0	8/28/2013	0
12/26/2002	0	8/29/2013	0
12/27/2002	0	8/30/2013	0
12/28/2002	0	8/31/2013	0.18
12/29/2002	0	9/1/2013	1.81
12/30/2002	0.06	9/2/2013	0
12/31/2002	0.09	9/3/2013	0
1/1/2003	0.17	9/4/2013	0
1/2/2003	0.3	9/5/2013	0
1/3/2003	0	9/6/2013	0
1/4/2003	0	9/7/2013 T	
1/5/2003	0	9/8/2013	0.41
1/6/2003	0	9/9/2013	0
1/7/2003	0	9/10/2013	0
1/8/2003	0	9/11/2013	0
1/9/2003	0	9/12/2013 T	
1/10/2003	0	9/13/2013	0
1/11/2003	0	9/14/2013	0
1/12/2003	0	9/15/2013	0.01
1/13/2003	0	9/16/2013 T	
1/14/2003	0	9/17/2013	0.03
1/15/2003	0	9/18/2013	0.17
1/16/2003	0.03	9/19/2013 T	
1/17/2003	0	9/20/2013	0.3
1/18/2003	0.02	9/21/2013	0
1/19/2003	0	9/22/2013	0
1/20/2003	0	9/23/2013	0
1/21/2003	0	9/24/2013	0
1/22/2003	0.01	9/25/2013	0
1/23/2003	0	9/26/2013	0
1/24/2003	0	9/27/2013	0
1/25/2003	0	9/28/2013	0.01
1/26/2003	0	9/29/2013 T	
1/27/2003	0	9/30/2013	0
1/28/2003	0	10/1/2013	0
1/29/2003	0.01	10/2/2013	0.18
1/30/2003	0	10/3/2013	0.13
1/31/2003	0.21	10/4/2013	0
2/1/2003	0	10/5/2013	0.23
2/2/2003	0	10/6/2013	0.01

2/3/2003	0.01	10/7/2013	0
2/4/2003	0	10/8/2013	0
2/5/2003	0	10/9/2013	0
2/6/2003	0.06	10/10/2013	0
2/7/2003	0	10/11/2013	0
2/8/2003	0	10/12/2013	0.02
2/9/2003	0.02	10/13/2013	0
2/10/2003	0	10/14/2013	T
2/11/2003	0	10/15/2013	0.48
2/12/2003	0	10/16/2013	T
2/13/2003	0	10/17/2013	0.02
2/14/2003	0.51	10/18/2013	0.1
2/15/2003	0.41	10/19/2013	0.17
2/16/2003	0.11	10/20/2013	0
2/17/2003	0	10/21/2013	0
2/18/2003	0.03	10/22/2013	0.1
2/19/2003	0.18	10/23/2013	0.02
2/20/2003	0	10/24/2013	T
2/21/2003	0	10/25/2013	0
2/22/2003	0.15	10/26/2013	0
2/23/2003	0.13	10/27/2013	0
2/24/2003	0	10/28/2013	0
2/25/2003	0	10/29/2013	0.13
2/26/2003	0	10/30/2013	0.02
2/27/2003	0.12	10/31/2013	0.74
2/28/2003	0.06	11/1/2013	0
3/1/2003	0.01	11/2/2013	0
3/2/2003	0	11/3/2013	0
3/3/2003	0	11/4/2013	0
3/4/2003	0	11/5/2013	0.21
3/5/2003	0.04	11/6/2013	0.23
3/6/2003	0	11/7/2013	0
3/7/2003	0	11/8/2013	0
3/8/2003	0	11/9/2013	0
3/9/2003	0	11/10/2013	0
3/10/2003	0	11/11/2013	0.06
3/11/2003	0.4	11/12/2013	T
3/12/2003	0.08	11/13/2013	0
3/13/2003	0.69	11/14/2013	0
3/14/2003	0	11/15/2013	T
3/15/2003	0	11/16/2013	0.08
3/16/2003	0	11/17/2013	T
3/17/2003	0	11/18/2013	0
3/18/2003	0.05	11/19/2013	0
3/19/2003	0.99	11/20/2013	0.07
3/20/2003	0.19	11/21/2013	0.37
3/21/2003	0.01	11/22/2013	T

3/22/2003	0	11/23/2013	0
3/23/2003	0	11/24/2013	0
3/24/2003	0	11/25/2013	T
3/25/2003	0.03	11/26/2013	0
3/26/2003	0	11/27/2013	0
3/27/2003	0	11/28/2013	0
3/28/2003	0.3	11/29/2013	0
3/29/2003	0	11/30/2013	0
3/30/2003	0	12/1/2013	0
3/31/2003	0	12/2/2013	0
4/1/2003	0	12/3/2013	0
4/2/2003	0	12/4/2013	T
4/3/2003	0	12/5/2013	0.11
4/4/2003	0.1	12/6/2013	T
4/5/2003	0	12/7/2013	0
4/6/2003	0.59	12/8/2013	0.05
4/7/2003	0.03	12/9/2013	T
4/8/2003	0.07	12/10/2013	0
4/9/2003	0	12/11/2013	0
4/10/2003	0	12/12/2013	0
4/11/2003	0	12/13/2013	0.36
4/12/2003	0	12/14/2013	0.41
4/13/2003	0	12/15/2013	0
4/14/2003	0	12/16/2013	0
4/15/2003	0	12/17/2013	0
4/16/2003	1.2	12/18/2013	0
4/17/2003	0.12	12/19/2013	0
4/18/2003	0	12/20/2013	0.03
4/19/2003	0.03	12/21/2013	0.9
4/20/2003	0.38	12/22/2013	0.1
4/21/2003	0	12/23/2013	T
4/22/2003	0	12/24/2013	0
4/23/2003	0	12/25/2013	0
4/24/2003	0.82	12/26/2013	0
4/25/2003	0.41	12/27/2013	0
4/26/2003	0	12/28/2013	0
4/27/2003	0	12/29/2013	0
4/28/2003	0.39	12/30/2013	0
4/29/2003	0.18	12/31/2013	0
4/30/2003	0	1/1/2014	0.11
5/1/2003	0.06	1/2/2014	0.09
5/2/2003	0	1/3/2014	0
5/3/2003	0	1/4/2014	T
5/4/2003	0.78	1/5/2014	0.64
5/5/2003	0.21	1/6/2014	0
5/6/2003	0.51	1/7/2014	0
5/7/2003	0	1/8/2014	0

5/8/2003	0	1/9/2014	0.07
5/9/2003	0	1/10/2014	0.55
5/10/2003	1.02	1/11/2014	0.02
5/11/2003	0	1/12/2014	0
5/12/2003	0	1/13/2014	0
5/13/2003	0	1/14/2014	0.01
5/14/2003	0	1/15/2014	T
5/15/2003	0.04	1/16/2014	0.03
5/16/2003	0.08	1/17/2014	T
5/17/2003	0.06	1/18/2014	0.06
5/18/2003	0.01	1/19/2014	0
5/19/2003	0.01	1/20/2014	0
5/20/2003	0.09	1/21/2014	0.09
5/21/2003	0	1/22/2014	T
5/22/2003	0	1/23/2014	T
5/23/2003	0	1/24/2014	0
5/24/2003	0.32	1/25/2014	T
5/25/2003	0.52	1/26/2014	T
5/26/2003	0	1/27/2014	0
5/27/2003	0	1/28/2014	0
5/28/2003	0	1/29/2014	0
5/29/2003	0	1/30/2014	0
5/30/2003	0.26	1/31/2014	T
5/31/2003	0	2/1/2014	0.53
6/1/2003	0	2/2/2014	T
6/2/2003	0.46	2/3/2014	0
6/3/2003	0.01	2/4/2014	0.37
6/4/2003	0	2/5/2014	0.11
6/5/2003	0	2/6/2014	T
6/6/2003	0.29	2/7/2014	0
6/7/2003	0.01	2/8/2014	0.04
6/8/2003	0	2/9/2014	0.02
6/9/2003	0	2/10/2014	T
6/10/2003	2.34	2/11/2014	0
6/11/2003	0.48	2/12/2014	0
6/12/2003	1.1	2/13/2014	0
6/13/2003	0.87	2/14/2014	0.09
6/14/2003	0	2/15/2014	0
6/15/2003	0	2/16/2014	0
6/16/2003	0	2/17/2014	0.09
6/17/2003	0	2/18/2014	0
6/18/2003	0	2/19/2014	T
6/19/2003	0.44	2/20/2014	0.23
6/20/2003	0	2/21/2014	0
6/21/2003	0	2/22/2014	0
6/22/2003	0	2/23/2014	0
6/23/2003	0	2/24/2014	0

6/24/2003	0	2/25/2014	T
6/25/2003	2.67	2/26/2014	0
6/26/2003	1.06	2/27/2014	0
6/27/2003	0	2/28/2014	0
6/28/2003	0	3/1/2014	T
6/29/2003	0	3/2/2014	0.32
6/30/2003	1.48	3/3/2014	0
7/1/2003	0	3/4/2014	0
7/2/2003	0.39	3/5/2014	0
7/3/2003	0	3/6/2014	0
7/4/2003	0	3/7/2014	0
7/5/2003	0	3/8/2014	0
7/6/2003	0	3/9/2014	0
7/7/2003	0	3/10/2014	0
7/8/2003	0	3/11/2014	0.68
7/9/2003	0	3/12/2014	0.34
7/10/2003	1.18	3/13/2014	0
7/11/2003	0	3/14/2014	0
7/12/2003	0	3/15/2014	0
7/13/2003	0	3/16/2014	T
7/14/2003	0	3/17/2014	0
7/15/2003	0	3/18/2014	0.01
7/16/2003	0	3/19/2014	0
7/17/2003	0	3/20/2014	0
7/18/2003	0.47	3/21/2014	0
7/19/2003	0	3/22/2014	0
7/20/2003	0	3/23/2014	0
7/21/2003	0	3/24/2014	T
7/22/2003	0.12	3/25/2014	T
7/23/2003	0	3/26/2014	0.02
7/24/2003	0	3/27/2014	0.17
7/25/2003	0	3/28/2014	0.01
7/26/2003	0	3/29/2014	0
7/27/2003	0	3/30/2014	0
7/28/2003	0.07	3/31/2014	T
7/29/2003	0	4/1/2014	0.07
7/30/2003	0	4/2/2014	2.53
7/31/2003	0	4/3/2014	2.23
8/1/2003	0.06	4/4/2014	T
8/2/2003	0.45	4/5/2014	0
8/3/2003	0	4/6/2014	0
8/4/2003	0	4/7/2014	0.66
8/5/2003	0	4/8/2014	T
8/6/2003	0.15	4/9/2014	0
8/7/2003	0.08	4/10/2014	0
8/8/2003	0	4/11/2014	0
8/9/2003	0	4/12/2014	0

8/10/2003	0	4/13/2014	0.49
8/11/2003	0	4/14/2014	0.07
8/12/2003	0	4/15/2014	0
8/13/2003	0	4/16/2014	0
8/14/2003	0	4/17/2014	0
8/15/2003	0	4/18/2014	0
8/16/2003	0	4/19/2014	0
8/17/2003	0	4/20/2014	0
8/18/2003	0	4/21/2014	0.09
8/19/2003	0	4/22/2014	0
8/20/2003	0	4/23/2014	0
8/21/2003	0	4/24/2014	0.5
8/22/2003	0	4/25/2014 T	
8/23/2003	0	4/26/2014 T	
8/24/2003	0	4/27/2014	0.59
8/25/2003	0	4/28/2014	1.15
8/26/2003	0	4/29/2014 T	
8/27/2003	0.37	4/30/2014 T	
8/28/2003	0	5/1/2014 T	
8/29/2003	0.24	5/2/2014	0
8/30/2003	0	5/3/2014	0
8/31/2003	1.17	5/4/2014	0
9/1/2003	2	5/5/2014	0
9/2/2003	0.27	5/6/2014	0
9/3/2003	0	5/7/2014	0
9/4/2003	0	5/8/2014	0.02
9/5/2003	0	5/9/2014 T	
9/6/2003	0	5/10/2014	0.32
9/7/2003	0	5/11/2014	0.17
9/8/2003	0	5/12/2014	0.17
9/9/2003	0	5/13/2014	0.15
9/10/2003	0	5/14/2014	0.53
9/11/2003	0	5/15/2014	0.35
9/12/2003	0.23	5/16/2014	0
9/13/2003	0.02	5/17/2014	0
9/14/2003	0.01	5/18/2014	0
9/15/2003	0	5/19/2014	0
9/16/2003	0	5/20/2014	0
9/17/2003	0	5/21/2014	0.13
9/18/2003	0	5/22/2014	0
9/19/2003	0	5/23/2014	0
9/20/2003	0	5/24/2014 T	
9/21/2003	0.04	5/25/2014	1.48
9/22/2003	0.01	5/26/2014	0.52
9/23/2003	0	5/27/2014	0
9/24/2003	0.03	5/28/2014	0
9/25/2003	0	5/29/2014	0

9/26/2003	1.34	5/30/2014	T
9/27/2003	0.01	5/31/2014	0.14
9/28/2003	0	6/1/2014	T
9/29/2003	0	6/2/2014	T
9/30/2003	0.2	6/3/2014	0
10/1/2003	0	6/4/2014	0.87
10/2/2003	0	6/5/2014	0
10/3/2003	0.03	6/6/2014	0
10/4/2003	0	6/7/2014	0.66
10/5/2003	0	6/8/2014	0
10/6/2003	0	6/9/2014	0.9
10/7/2003	0	6/10/2014	0.43
10/8/2003	0	6/11/2014	T
10/9/2003	1.13	6/12/2014	0.15
10/10/2003	0	6/13/2014	0
10/11/2003	0.07	6/14/2014	0
10/12/2003	0	6/15/2014	T
10/13/2003	0.05	6/16/2014	T
10/14/2003	0.28	6/17/2014	0
10/15/2003	0	6/18/2014	0
10/16/2003	0.69	6/19/2014	0
10/17/2003	0.15	6/20/2014	0
10/18/2003	0	6/21/2014	0.73
10/19/2003	0	6/22/2014	T
10/20/2003	0	6/23/2014	0.06
10/21/2003	0	6/24/2014	0.51
10/22/2003	0	6/25/2014	0
10/23/2003	0	6/26/2014	T
10/24/2003	0	6/27/2014	0.95
10/25/2003	0.2	6/28/2014	0
10/26/2003	0	6/29/2014	T
10/27/2003	0.03	6/30/2014	0
10/28/2003	0.18	7/1/2014	0.02
10/29/2003	0	7/2/2014	0
10/30/2003	0	7/3/2014	0
10/31/2003	0	7/4/2014	0
11/1/2003	0.63	7/5/2014	T
11/2/2003	0	7/6/2014	T
11/3/2003	0	7/7/2014	T
11/4/2003	0.06	7/8/2014	0.33
11/5/2003	0.42	7/9/2014	0
11/6/2003	0.15	7/10/2014	0
11/7/2003	0	7/11/2014	0
11/8/2003	0	7/12/2014	0
11/9/2003	0	7/13/2014	0.11
11/10/2003	0	7/14/2014	1.11
11/11/2003	0	7/15/2014	0

11/12/2003	0	7/16/2014	0
11/13/2003	0	7/17/2014	0
11/14/2003	0.25	7/18/2014	0
11/15/2003	0.05	7/19/2014	0
11/16/2003	0	7/20/2014	0
11/17/2003	1.34	7/21/2014	0
11/18/2003	1.86	7/22/2014	0
11/19/2003	0	7/23/2014	T
11/20/2003	0	7/24/2014	0
11/21/2003	0	7/25/2014	0.02
11/22/2003	0	7/26/2014	T
11/23/2003	0.58	7/27/2014	0
11/24/2003	0	7/28/2014	0
11/25/2003	0	7/29/2014	0
11/26/2003	0	7/30/2014	0
11/27/2003	0	7/31/2014	0
11/28/2003	0	8/1/2014	T
11/29/2003	0	8/2/2014	0
11/30/2003	0	8/3/2014	0
12/1/2003	0	8/4/2014	0
12/2/2003	0	8/5/2014	0.23
12/3/2003	0.1	8/6/2014	1.14
12/4/2003	0.08	8/7/2014	1.79
12/5/2003	0.1	8/8/2014	0.01
12/6/2003	0	8/9/2014	0.01
12/7/2003	0	8/10/2014	0
12/8/2003	0	8/11/2014	T
12/9/2003	0.29	8/12/2014	0
12/10/2003	0.38	8/13/2014	0
12/11/2003	0	8/14/2014	0
12/12/2003	0	8/15/2014	0.09
12/13/2003	0.11	8/16/2014	0.98
12/14/2003	0	8/17/2014	0.19
12/15/2003	0	8/18/2014	0
12/16/2003	0.01	8/19/2014	T
12/17/2003	0	8/20/2014	0.02
12/18/2003	0.03	8/21/2014	0
12/19/2003	0	8/22/2014	T
12/20/2003	0	8/23/2014	0
12/21/2003	0	8/24/2014	0
12/22/2003	0.76	8/25/2014	0
12/23/2003	0.24	8/26/2014	0.07
12/24/2003	0	8/27/2014	0.18
12/25/2003	0	8/28/2014	0.19
12/26/2003	0	8/29/2014	T
12/27/2003	0	8/30/2014	0.16
12/28/2003	0.15	8/31/2014	0

12/29/2003	0.07	9/1/2014	2.15
12/30/2003	0	9/2/2014	0.21
12/31/2003	0	9/3/2014	0
1/1/2004	0.03	9/4/2014	0
1/2/2004	0	9/5/2014	0.01
1/3/2004	0.11	9/6/2014	0.02
1/4/2004	2.21	9/7/2014	0
1/5/2004	0	9/8/2014	0
1/6/2004	0	9/9/2014	0.56
1/7/2004	0	9/10/2014	1.13
1/8/2004	0	9/11/2014	T
1/9/2004	0	9/12/2014	0.01
1/10/2004	0	9/13/2014	0
1/11/2004	0	9/14/2014	0
1/12/2004	0	9/15/2014	0.03
1/13/2004	0	9/16/2014	T
1/14/2004	0	9/17/2014	0.08
1/15/2004	0	9/18/2014	0
1/16/2004	0.1	9/19/2014	0
1/17/2004	1.02	9/20/2014	0
1/18/2004	0	9/21/2014	0
1/19/2004	0	9/22/2014	0
1/20/2004	0	9/23/2014	0
1/21/2004	0	9/24/2014	0
1/22/2004	0	9/25/2014	0
1/23/2004	0	9/26/2014	0
1/24/2004	0	9/27/2014	0
1/25/2004	0.44	9/28/2014	0
1/26/2004	0.02	9/29/2014	0
1/27/2004	0.03	9/30/2014	0
1/28/2004	0	10/1/2014	0.31
1/29/2004	0	10/2/2014	1.23
1/30/2004	0	10/3/2014	0.27
1/31/2004	0	10/4/2014	0
2/1/2004	0.06	10/5/2014	0
2/2/2004	0.64	10/6/2014	T
2/3/2004	0	10/7/2014	0.14
2/4/2004	0	10/8/2014	0
2/5/2004	0.05	10/9/2014	0.7
2/6/2004	0.02	10/10/2014	0.81
2/7/2004	0	10/11/2014	T
2/8/2004	0	10/12/2014	0.06
2/9/2004	0	10/13/2014	0.84
2/10/2004	0	10/14/2014	0.19
2/11/2004	0	10/15/2014	0.04
2/12/2004	0	10/16/2014	0
2/13/2004	0	10/17/2014	0

2/14/2004	0	10/18/2014	0
2/15/2004	0	10/19/2014	0
2/16/2004	0	10/20/2014	0
2/17/2004	0	10/21/2014	0
2/18/2004	0	10/22/2014	0
2/19/2004	0	10/23/2014	0
2/20/2004	0.01	10/24/2014	0
2/21/2004	0	10/25/2014	0
2/22/2004	0	10/26/2014	0
2/23/2004	0.03	10/27/2014	T
2/24/2004	0	10/28/2014	0.49
2/25/2004	0	10/29/2014	0
2/26/2004	0	10/30/2014	T
2/27/2004	0	10/31/2014	0
2/28/2004	0	11/1/2014	0
2/29/2004	0.03	11/2/2014	T
3/1/2004	0	11/3/2014	T
3/2/2004	0	11/4/2014	0.58
3/3/2004	0.25	11/5/2014	0
3/4/2004	1.26	11/6/2014	0
3/5/2004	0	11/7/2014	0
3/6/2004	0	11/8/2014	0
3/7/2004	0	11/9/2014	0
3/8/2004	0	11/10/2014	0
3/9/2004	0.01	11/11/2014	T
3/10/2004	0	11/12/2014	0
3/11/2004	0	11/13/2014	T
3/12/2004	0	11/14/2014	0
3/13/2004	0.05	11/15/2014	0.04
3/14/2004	0.06	11/16/2014	0.13
3/15/2004	0.01	11/17/2014	T
3/16/2004	0.08	11/18/2014	0
3/17/2004	0.05	11/19/2014	0
3/18/2004	0	11/20/2014	0
3/19/2004	0	11/21/2014	0.04
3/20/2004	0	11/22/2014	0.1
3/21/2004	0	11/23/2014	0.85
3/22/2004	0	11/24/2014	0.47
3/23/2004	0.06	11/25/2014	0
3/24/2004	0	11/26/2014	0.24
3/25/2004	0.46	11/27/2014	T
3/26/2004	1.57	11/28/2014	0
3/27/2004	0.07	11/29/2014	0
3/28/2004	0.31	11/30/2014	0.01
3/29/2004	0.02	12/1/2014	0.08
3/30/2004	0	12/2/2014	0
3/31/2004	0.01	12/3/2014	0

4/1/2004	0	12/4/2014	0.03
4/2/2004	0	12/5/2014	1.35
4/3/2004	0	12/6/2014 T	
4/4/2004	0	12/7/2014	0
4/5/2004	0	12/8/2014 T	
4/6/2004	0	12/9/2014	0
4/7/2004	0	12/10/2014	0
4/8/2004	0	12/11/2014 T	
4/9/2004	0	12/12/2014	0
4/10/2004	0.18	12/13/2014	0
4/11/2004	0	12/14/2014	0
4/12/2004	0	12/15/2014	0.33
4/13/2004	0	12/16/2014 T	
4/14/2004	0	12/17/2014	0
4/15/2004	0	12/18/2014	0.01
4/16/2004	0	12/19/2014	0
4/17/2004	0	12/20/2014	0
4/18/2004	0	12/21/2014 T	
4/19/2004	0	12/22/2014	0.68
4/20/2004	0	12/23/2014	0
4/21/2004	0.06	12/24/2014	0.02
4/22/2004	0.19	12/25/2014	0
4/23/2004	0	12/26/2014	0.08
4/24/2004	0.75	12/27/2014	0.14
4/25/2004	0	12/28/2014	0
4/26/2004	0	12/29/2014	0
4/27/2004	0	12/30/2014	0
4/28/2004	0	12/31/2014	0
4/29/2004	0.03	1/1/2015	0.02
4/30/2004	0.71	1/2/2015	0.03
5/1/2004	0.69	1/3/2015	0.51
5/2/2004	0.05	1/4/2015	0.01
5/3/2004	0	1/5/2015	0
5/4/2004	0	1/6/2015	0.02
5/5/2004	0	1/7/2015	0.01
5/6/2004	0	1/8/2015 T	
5/7/2004	0	1/9/2015 T	
5/8/2004	0	1/10/2015	0
5/9/2004	0	1/11/2015	0.29
5/10/2004	0.03	1/12/2015	0.03
5/11/2004	0	1/13/2015 T	
5/12/2004	0.05	1/14/2015	0
5/13/2004	1.5	1/15/2015	0
5/14/2004	0.65	1/16/2015	0
5/15/2004	0	1/17/2015	0
5/16/2004	0	1/18/2015	0
5/17/2004	0	1/19/2015	0

5/18/2004	0.36	1/20/2015	0
5/19/2004	1.1	1/21/2015	0
5/20/2004	0	1/22/2015	0
5/21/2004	0	1/23/2015	0
5/22/2004	0	1/24/2015	0
5/23/2004	0.02	1/25/2015	0.19
5/24/2004	0	1/26/2015	T
5/25/2004	0.93	1/27/2015	0
5/26/2004	0.95	1/28/2015	0
5/27/2004	1.98	1/29/2015	0
5/28/2004	0	1/30/2015	0
5/29/2004	0	1/31/2015	T
5/30/2004	1.18	2/1/2015	0.66
5/31/2004	0.15	2/2/2015	T
6/1/2004	0	2/3/2015	0
6/2/2004	0	2/4/2015	0.06
6/3/2004	0	2/5/2015	0
6/4/2004	0	2/6/2015	0
6/5/2004	0	2/7/2015	0
6/6/2004	0	2/8/2015	T
6/7/2004	0	2/9/2015	T
6/8/2004	0	2/10/2015	0
6/9/2004	0.31	2/11/2015	0
6/10/2004	0.02	2/12/2015	T
6/11/2004	0	2/13/2015	0
6/12/2004	0.01	2/14/2015	0.01
6/13/2004	0.03	2/15/2015	0.14
6/14/2004	0	2/16/2015	0.25
6/15/2004	0	2/17/2015	0.02
6/16/2004	0.23	2/18/2015	0.01
6/17/2004	0	2/19/2015	0
6/18/2004	0.11	2/20/2015	0.14
6/19/2004	0	2/21/2015	0.09
6/20/2004	0	2/22/2015	0
6/21/2004	0.09	2/23/2015	0
6/22/2004	0.01	2/24/2015	0
6/23/2004	0	2/25/2015	T
6/24/2004	0	2/26/2015	0.05
6/25/2004	0	2/27/2015	0
6/26/2004	0	2/28/2015	0.31
6/27/2004	0	3/1/2015	0.04
6/28/2004	0	3/2/2015	0
6/29/2004	0	3/3/2015	0.12
6/30/2004	0	3/4/2015	0.01
7/1/2004	0.03	3/5/2015	0
7/2/2004	0.22	3/6/2015	0
7/3/2004	0.41	3/7/2015	0

7/4/2004	0	3/8/2015	0
7/5/2004	1.48	3/9/2015 T	
7/6/2004	0.08	3/10/2015	0.2
7/7/2004	0	3/11/2015	0
7/8/2004	0	3/12/2015	0.02
7/9/2004	0	3/13/2015	1.1
7/10/2004	0	3/14/2015	0.15
7/11/2004	0.1	3/15/2015	0
7/12/2004	0	3/16/2015	0
7/13/2004	0	3/17/2015	0
7/14/2004	0	3/18/2015	0.03
7/15/2004	0	3/19/2015 T	
7/16/2004	0.02	3/20/2015	0
7/17/2004	0	3/21/2015	0
7/18/2004	0	3/22/2015	0
7/19/2004	0	3/23/2015	0.13
7/20/2004	0	3/24/2015	0.59
7/21/2004	0	3/25/2015	0.52
7/22/2004	0.09	3/26/2015	0.07
7/23/2004	0	3/27/2015 T	
7/24/2004	0.02	3/28/2015	0
7/25/2004	0.61	3/29/2015	0.02
7/26/2004	0	3/30/2015	0
7/27/2004	0	3/31/2015	0
7/28/2004	0	4/1/2015	0
7/29/2004	0.01	4/2/2015	0.58
7/30/2004	2.07	4/3/2015	0.33
7/31/2004	0.01	4/4/2015	0
8/1/2004	0	4/5/2015	0
8/2/2004	0	4/6/2015	0.01
8/3/2004	0.07	4/7/2015	1.76
8/4/2004	0.29	4/8/2015	0.48
8/5/2004	0	4/9/2015	1.14
8/6/2004	0	4/10/2015	0
8/7/2004	0	4/11/2015	0
8/8/2004	0	4/12/2015	0
8/9/2004	0	4/13/2015	0.06
8/10/2004	0	4/14/2015	0
8/11/2004	0	4/15/2015	0
8/12/2004	0	4/16/2015 T	
8/13/2004	0	4/17/2015	0
8/14/2004	0	4/18/2015	0
8/15/2004	0	4/19/2015	0.77
8/16/2004	0	4/20/2015 T	
8/17/2004	0	4/21/2015	0
8/18/2004	0	4/22/2015	0
8/19/2004	0.05	4/23/2015	0

8/20/2004	0.4	4/24/2015	0
8/21/2004	0.01	4/25/2015	0.29
8/22/2004	0	4/26/2015 T	
8/23/2004	0.45	4/27/2015	0
8/24/2004	0.32	4/28/2015	0
8/25/2004	1.3	4/29/2015	0
8/26/2004	0.09	4/30/2015	0
8/27/2004	0.09	5/1/2015	0
8/28/2004	0	5/2/2015	0
8/29/2004	0.02	5/3/2015 T	
8/30/2004	0	5/4/2015	0.01
8/31/2004	0	5/5/2015 T	
9/1/2004	0	5/6/2015	0
9/2/2004	0	5/7/2015 T	
9/3/2004	0	5/8/2015	0.3
9/4/2004	0	5/9/2015	0.32
9/5/2004	0	5/10/2015	0.55
9/6/2004	0	5/11/2015	0.55
9/7/2004	0	5/12/2015	0
9/8/2004	0	5/13/2015	0
9/9/2004	0	5/14/2015	0.05
9/10/2004	0	5/15/2015	0.35
9/11/2004	0	5/16/2015	0.09
9/12/2004	0	5/17/2015	0.15
9/13/2004	0	5/18/2015	0
9/14/2004	0	5/19/2015	0
9/15/2004	0.16	5/20/2015	0.24
9/16/2004	0.05	5/21/2015	0
9/17/2004	0	5/22/2015	0
9/18/2004	0	5/23/2015 T	
9/19/2004	0	5/24/2015	0.24
9/20/2004	0	5/25/2015 T	
9/21/2004	0	5/26/2015	0.15
9/22/2004	0	5/27/2015 T	
9/23/2004	0	5/28/2015 T	
9/24/2004	0	5/29/2015	0.08
9/25/2004	0	5/30/2015	0.54
9/26/2004	0	5/31/2015 T	
9/27/2004	0	6/1/2015 T	
9/28/2004	0	6/2/2015	0
9/29/2004	0	6/3/2015	0
9/30/2004	0	6/4/2015	0.1
10/1/2004	0.09	6/5/2015	1.9
10/2/2004	0	6/6/2015	0
10/3/2004	0	6/7/2015	0.06
10/4/2004	0	6/8/2015	1.32
10/5/2004	0	6/9/2015	0

10/6/2004	0	6/10/2015	0
10/7/2004	0	6/11/2015	0
10/8/2004	0.14	6/12/2015	0.07
10/9/2004	0	6/13/2015	0.02
10/10/2004	0	6/14/2015	2.43
10/11/2004	0.2	6/15/2015	0.11
10/12/2004	0.78	6/16/2015	0.7
10/13/2004	0.03	6/17/2015	0.08
10/14/2004	0.44	6/18/2015	0.87
10/15/2004	0	6/19/2015	1.33
10/16/2004	0	6/20/2015 T	
10/17/2004	0	6/21/2015	0.38
10/18/2004	0.65	6/22/2015 T	
10/19/2004	0.03	6/23/2015 T	
10/20/2004	0	6/24/2015	0
10/21/2004	0	6/25/2015	1.57
10/22/2004	0	6/26/2015	1.11
10/23/2004	0.19	6/27/2015 T	
10/24/2004	0	6/28/2015	1.02
10/25/2004	0	6/29/2015	0.02
10/26/2004	0.41	6/30/2015	0
10/27/2004	0.03	7/1/2015	0.07
10/28/2004	0	7/2/2015	0.04
10/29/2004	0	7/3/2015	0
10/30/2004	0	7/4/2015	0
10/31/2004	0.03	7/5/2015	0
11/1/2004	0.82	7/6/2015	0.14
11/2/2004	0.01	7/7/2015	0.06
11/3/2004	0.23	7/8/2015	1.01
11/4/2004	0.02	7/9/2015 T	
11/5/2004	0	7/10/2015	0.77
11/6/2004	0	7/11/2015	0
11/7/2004	0	7/12/2015	0
11/8/2004	0	7/13/2015 T	
11/9/2004	0	7/14/2015	0
11/10/2004	0	7/15/2015	0
11/11/2004	1.3	7/16/2015	0
11/12/2004	0	7/17/2015	0
11/13/2004	0	7/18/2015	0
11/14/2004	0	7/19/2015	0.45
11/15/2004	0	7/20/2015	0.56
11/16/2004	0.01	7/21/2015	0
11/17/2004	0	7/22/2015	0
11/18/2004	0.36	7/23/2015	0
11/19/2004	0.14	7/24/2015	0
11/20/2004	0	7/25/2015 T	
11/21/2004	0	7/26/2015	0.21

11/22/2004	0.28
11/23/2004	0.04
11/24/2004	0.62
11/25/2004	0
11/26/2004	0
11/27/2004	0.25
11/28/2004	0
11/29/2004	0.28
11/30/2004	0.46
12/1/2004	0
12/2/2004	0
12/3/2004	0
12/4/2004	0
12/5/2004	0.22
12/6/2004	0.58

7/27/2015	0.03
7/28/2015	0
7/29/2015	0
7/30/2015	0
7/31/2015	0
8/1/2015	0
8/2/2015	0
8/3/2015	0
8/4/2015	0
8/5/2015	3.25
8/6/2015 T	
8/7/2015	0
8/8/2015	0
8/9/2015	1.49
8/10/2015	0.05
8/11/2015	0
8/12/2015	0
8/13/2015	0
8/14/2015	0
8/15/2015	0
8/16/2015	0
8/17/2015	0.06
8/18/2015	0.45
8/19/2015	0.46
8/20/2015	0
8/21/2015	0
8/22/2015	0.91
8/23/2015 T	
8/24/2015	0
8/25/2015	0
8/26/2015	0
8/27/2015	0

Appendix D

Missouri Department of Natural Resources
Environmental Services Program
Landfill Monitoring Report

Landfill Monitoring Report

Bridgeton Sanitary Landfill
Permit 0118912
St. Louis County

August 17-21, 2015

Prepared For:

Missouri Department of Natural Resources
Missouri Solid Waste Management Program
and
Missouri Geological Survey

Prepared By:

Missouri Department of Natural Resources
Division of Environmental Quality
Environmental Services Program

State of MO v. Republic Services, Inc. et al
Price - 0000206

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APPENDIX A - QA/QC Water Sampling Checklist for Solid Waste Disposal Facilities

APPENDIX B– Field Meter Calibration and Calibration Verification Checks

APPENDIX C – Field Measurements and Sample Notes

APPENDIX D - Photographs

1.0 Introduction

At the request of the Solid Waste Management Program (SWMP) and the Missouri Geological Survey (MGS), groundwater monitoring was conducted during the week of August 17-21, 2015, at Bridgeton Sanitary Landfill in Bridgeton, Missouri. Lynn Milberg of the Division of Environmental Quality (DEQ), Environmental Services Program (ESP), Water Quality Monitoring Section observed sampling techniques and field analyses performed by John Regan and Ward Herst of Herst and Associates, Inc. (Herst).

2.0 Site Location and Description

The landfill is located at 13570 St. Charles Rock Road, Bridgeton, Missouri 63044.

The landfill is an inactive, permitted facility (permit #0118912). The landfill transfer station was accepting waste at the time of the sampling event. All monitored wells were around the perimeter of the landfill within the Republic Services property except for PZ-204-SS which is located on Materialogic's property along the south western side of the landfill.

3.0 Methods

3.1 Field Procedures

Static water levels were measured and well conditions observed at twenty-three wells on 8/17/2015.

Well purging and sampling techniques were observed at eighteen groundwater wells from 8/19-8/21. Thirteen wells were purged and sampled using low flow purging with dedicated bladder pumps and a QED Micropurge control box. Five wells were purged and sampled using an automated inertial lift pump system automated by a Waterra Hydrolift II. Initial water levels were recorded, pump tubing was purged and purging continued until field parameters stabilized. pH, conductivity, temperature, turbidity and water level were recorded every two minutes. Once pH, conductivity and temperature readings met criteria, sampling began.

The sampling techniques and field analyses of the contractor were critiqued using the "QA/QC Water Sampling Checklist for Solid Waste Disposal Facilities" (APPENDIX A).

3.2 Monitoring Well Samples

Samples were split between Herst and the state at wells PZ-209-SS, PZ-209-SD, PZ-210-

SS, PZ-210-SD, PZ-211-SS, PZ-211-SD, PZ-104-SS, PZ-104-SD, PZ-106-SS, PZ-106-SD, PZ-116-SS, PZ-105-SS, PZ-202-SS, PZ-107-SS, MW-1204, PZ-203-SS, PZ-103-SS and PZ-204-SS. Samples were split by alternating bottles until all bottles for each parameter were filled. All bottles were filled by Herst staff.

All state sample bottles were provided by the contract laboratory and were pre-preserved for the various parameters. Each bottle received a sample label containing, at a minimum, a unique identifying number, sample date/time, and collector's name or initials. Although Herst staff filled all bottles, ESP personnel took possession of the samples for label and chain-of-custody (COC) purposes. After all bottles were filled, the sample was placed in a cooler with ice.

Detailed notes for each well can be found in APPENDIX C.

3.3 Chain-of-Custody

Although COC information for Herst was verbally reviewed, completion of their COC's was not observed.

For state samples, personnel entered information onto laboratory provided COC forms. Information included location, corresponding label numbers, date and time of collection, and parameters to be analyzed. ESP field personnel maintained custody of the samples until relinquishing them to the contract laboratories. Copies of COC forms were retained by MGS staff.

3.4 Analyses Requested

Sample analysis for Herst was completed by Pace Analytical. State samples were submitted to Test America and Teklab (duplicates) laboratories for analysis. Analytical parameters were selected by MGS staff and were designated as "Appendix I" or "Appendix II" on the COC and in field notes. MGS staff also selected which wells would be analyzed for each set of parameters and which wells would be duplicated.

3.5 Quality Assurance/Quality Control (QA/QC)

3.5.1 QA/QC Methods

ESP personnel observed Mr. Regan as he calibrated the pH, specific conductivity, and turbidity meters; and as he conducted post sampling calibration verification checks. Meter calibrations and calibration verification checks were completed each day sampling was conducted. On 8/21/2015, after calibration, the state provided known

standards and a certified thermometer to verify Herst meter readings for pH, conductivity and temperature.

Results of the certified standard verification can be found in section IV of the checklist (APPENDIX A). Herst meter calibration and calibration verification check data can be found in APPENDIX B.

3.5.2 QA/QC Samples

3.5.2.1 Trip Blank

A trip blank is a sample consisting of analyte-free water prepared by the laboratory. It accompanies sample containers and samples in the field, and is returned to the laboratory for analysis.

Both Herst and the state carried and submitted trip blanks for analysis.

3.5.2.2 Duplicate Samples

The state duplicated samples at PZ-210-SD, PZ-211-SD and MW-1204. Herst duplicated samples at PZ-104-SS and MW-1204. Duplicate sample bottles were inserted in the bottle filling rotation for each parameter (e.g. state, Herst, state duplicated, Herst duplicate).

4.0 Observations

Weather conditions varied throughout the week. Monday, 8/17, consisted of sunny skies with high temperatures in the low 90's (°F). Heavy rain fell overnight (8/18-8/19). Wednesday, 8/19, consisted of light rain, mild winds and high temperatures in the low-70's (°F). Thursday and Friday, 8/20 and 8/21, consisted of sunny skies with high temperatures in the low 80's (°F).

Procedures were compared to recommendations provided in U.S. Environmental Protection Agency (USEPA), ASTM International (ASTM) and DNR, SWMP fact sheet documents. Specifically, USEPA Publication 540/S-95/504 *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures*; ASTM D6771 *Standard Practice for Low-Flow Purging and Sampling for Wells and Devices Used for Ground-Water Quality Investigations* and SWMP *Collection, Handling and Reporting Procedures for Groundwater Samples (PUB181, 05/2014)* were referenced. A few repeated observations or deviations from the above mentioned guidance will be discussed here. The landfill's site specific Quality Assurance Project Plan and/or Sampling Plan was not considered in documenting the discussed deviations.

It was noted that several wells had well number identification markings on the outside of the casings that were faded and not easily readable. Most of these wells did, however, have an identification number written on the internal PVC wellhead cap to verify the external markings. See photos in APPENDIX D of all well markings.
Most wells that could be impacted by traffic or mowing equipment were protected by steel and concrete bollards. However, well PZ-203-SS had two posts that had obviously been struck at some time. One post was completely knocked over and the other was leaning significantly; leaving the well unprotected from the roadway. See photos in APPENDIX D.

Depth to the bottom of the well is not measured on wells that have dedicated bladder pumps. Only those wells that were sampled with an inertial lift pump have total depth measured. Herst believed the last time total depth was measured on all wells was in 2013.

Both EPA/540/S-95/504 and ASTM D6771 do not recommend inertial lift pumps for low flow purging because of the potential for mixing of casing water with formation water due to the pumping action. A Waterra Hydrolift II was utilized on five wells and treated as a low-flow purging event.

Both EPA and ASTM documents recommend a stabilization criterion of +/- 3% for conductivity. During the sampling event a +/- 10% criterion was used. The stabilization parameters were collected at 2 minute intervals. This is shorter than any of the referenced guidance which ranged from 3-5 minutes.

The EPA document recommends drawdown goals be <0.1 meter, while the ASTM guidance recommends never exceeding the distance between the top of the well screen and the pump intake. Ideally pump rates would be equivalent to recharge rates. The <0.1 meter recommendation was exceeded. The more practical ASTM guidance could not be assessed because state personnel did not have well screen depths available. Although drawdown may have exceeded suggested levels the recommended 0.1-0.5 L/min range for flow rate was met throughout the sampling event.

Un-met recommendations specific to the SWMP fact sheet, included triple rinsing measuring devices with DI water after each use; placing plastic sheeting near the well to prevent contamination; containerizing purge water and transporting it to a permitted treatment facility or in accordance with a Missouri Clean Water Law permit for the facility; and allowing at least 24 hours after portable pumping device installation to allow the water column to equilibrate. Inertial lift pump tubing was installed at well MW-1204 just prior to purging and sampling.

It was noted that field meters are not checked against a secondary, certified standard. Although, meters are calibrated daily and calibration verifications checks are conducted periodically, precision and accuracy should be verified against a known standard. *Standard Methods for Determination of Water and Wastewater, 22nd Edition,* recommends a routine secondary standard analysis for pH, conductivity and turbidity. Temperature instruments should be checked against a NIST thermometer to ensure accuracy. Such practices should be considered part of a quality instrument maintenance plan.

Finally, while collecting samples it was noted that two additional, amber bottles were collected at the end of each "Appendix II" bottle set. Parameters are typically collected in order of volatilization sensitivity. *EPA/625/R-93/003a, May 1993, Subsurface Characterization and Monitoring Techniques, A desk Reference Guide, Volume1: Solids and Ground Water Appendices A and B*, recommends samples are collected in the following order: volatile organic compounds, total organic carbon, other organics, and inorganics. It appeared these additional containers were labelled for the same organic parameters as other, larger containers. It was unclear why these were collected at the end of the bottle set, instead of with the other containers for organic parameters.

Detailed notes regarding additional sampling techniques and field analyses of the contractor are documented in the "QA/QC Water Sampling Checklist for Solid Waste Disposal Facilities" (APPENDIX A).

5.0 Data Reporting

All analytical reports will be sent directly to the MGS and will not be addressed in this report.

Submitted by:

Lynn Milberg
Section Chief
Water Quality Monitoring Section
Environmental Services Program

Date: 9-1-15

Approved by:

Alan Reinkemeyer
Director
Environmental Services Program

AR:lmc

c: Brenda Ardrey, Environmental Manager, Solid Waste Management Program
Brenna McDonald, Environmental Geology Section, Missouri Geological Survey
Peter Price, Environmental Geology Section, Missouri Geological Survey

APPENDIX A

QA/QC Water Sampling Checklist for
Solid Waste Disposal Facilities

Landfill Monitoring Report
Bridgeton Sanitary Landfill
St. Louis County
August 17 – 21, 2015

QA/QC WATER MONITORING CHECKLIST FOR SOLID WASTE DISPOSAL FACILITIES

Facility Name: Bridgeton Sanitary Landfill

Permit #: 0118912 No. of Wells: 18*

Date of Sampling: August 17-21, 2015

Contractor Name: Herst and Associates, Inc.

Contractor Address: 4631 North St. Peters Parkway
St. Charles, MO 63304

Contractor Phone No: 636-939-9111

Participants	Name	Dates Participating
Republic Services:	Brian Powers	8/17
	Derek Bouchard	8/19-21
Dept. of Natural Resources:	Lynn Milberg (Environmental Services Program)	All
	Brenna McDonald (MO Geological Survey)	All
	Peter Price (MO Geological Survey)	8/17
Herst and Associates:	Ward Herst	All
	John Regan	All
Other:	Peter Daniel (Lathrop and Gage)	8/17-20
	Patty Lehtinen Silva (Lathrop and Gage)	8/21
	Peggy Whipple (MO Attorney General's Office)	All
	Andrew Blackwell (MO Attorney General's Office)	8/17

Yes No

I. General Review of Monitoring Well Sample Collection Procedures

A. Sampling Frequency/Guidelines

1. How often are monitoring wells sampled? *Quarterly*

2. Is the contractor familiar with the site's approved groundwater monitoring plan and relevant USEPA and industry sampling protocol for low-flow or bailer sampling? See EPA Publication 540/S-95/504 Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures and ASTM D6771. ☒ ☐

B. Monitoring Well Location and Security

1. Does the contractor have a map of the facility available to locate wells? ☒ ☐

2. Are the wells clearly marked with an identification numbering system? ☐ ☒
All wells were marked. However, several were not clearly readable on the outside of the casing and labeling needs remarking. Attached photos for PZ-103-SS, PZ-104-SD, PZ-104-SS, PZ-109-SS, and PZ-203-SS depict difficult to read markings. Wells PZ-104-SD, PZ-104-SS, and PZ-203-SS were clearly marked on the internal PVC cap (inside the casing) covering the wellhead.

3. Are monitoring well heads covered with protective caps? ☒ ☐

4. Are the caps locked to prevent unauthorized access? ☒ ☐

5. Are the monitoring wells protected from damage by mowers and other heavy equipment? ☐ ☒
Protective bollards were present at all wells that were in a location that could possibly be struck by vehicles or mowers. However, the two bollards for PZ-203-SS closest to the roadway had been struck at some point. One was leaning and the other was completely knocked over, leaving the northwestern side of the well unprotected.

Wells such as PZ-104-SD, PZ-104-SS, PZ-105-SS, PZ-116-SS, PZ-206-SS, and MW-1204 were not in locations that could easily be struck and did not have bollards. PZ-204-SS on the Materialogic property is recessed in the concrete pad to allowing mowers to pass over without causing damage to the well.

6. Do the wells show indication of damage (i.e., loose casings, leaning, ☐ ☒

Yes No

or crooked)?

7. Describe the overall condition of the wells.
   All wells observed appeared to be in good condition and did not show any signs of damage.

C. Measurement of Well Depths

1. What type/brand of measuring device is used?
   A Heron Instrument Dipper-t electronic tape was used to measure all water levels and top of pump or total depth measurements

2. Is there a permanent depth measurement reference point at each well? ☒ ☐

3. Are measurements taken to the nearest inch or 0.1 foot? ☒ ☐

4. Does the contractor measure both the depth to standing water and depth to the bottom of the well? ☐ ☒
   Standing water levels were measured at wells on 8/17. Any wells that were sampled had standing water levels measured again before purging began.

   If a well has a dedicated pump, a measurement to the top of the pump is made after sampling is completed. Total depth of the well is not routinely measured at wells with dedicated pumps. Herst believed pumps had been removed and total depth measurements recorded in 2013. If wells were purged and sampled using a Waterra pump, total depth was measured after sampling was completed.

5. Describe the method and materials used to clean the measuring device.
   Liquinox was squirted on one paper towel and deionized water was poured on another. The two towels were held, one in front of the other, around the tape as it was retrieved from the well. The sensor was then wiped clean before storing in the holder attached to the tape reel. Paper towels and gloves were then disposed of. See Appendix D for a photo of the cleaning process.

D. Well Evacuation/Sample Collection

1. Were measures taken to prevent equipment from contacting potentially contaminated surfaces? ☒ ☐
   Any disposable items were discarded and replaced at each new site. Meter probes and graduated measuring cup for field measurements were rinsed with purge water at each well. Sample bottles were kept in the cooler until they were ready to be filled and were put back into the cooler after they were filled. Although plastic sheeting was not placed on the ground, sampling equipment was never handled in

Yes No

a way that would lead to contamination.

2. What method (ex: micropurging) is used to evacuate/sample the wells?

   Herst utilized a low flow purge method at thirteen wells with dedicated bladder pumps installed. Five wells had tubing installed for use with an automated, inertial pumping system. Although flow rates were maintained at reduced rates, the inertial pump does not meet the definition of low flow purging due to the potential for pumping action causing mixing of the stagnant casing water with formation water

   During purging and sampling flow rates were controlled to keep rates between 200-500 mL/min. Flow rates were reduced while filling VOC vials and later increased to more quickly fill larger volume containers that were not aeration sensitive.

3. Describe the type(s) of equipment used to evacuate/sample the wells.

   A QED Micropurge Basic Controller box (#4319) powered by a gas powered generator was used on wells with a dedicated bladder pump.

   Wells PZ-107-SS, MW-1204, PZ-203-SS, PZ-103-SS and PZ-204-SS were purged by an inertial pump automated by a Waterra Hydrolift II and powered by a generator.

4. Describe the method used to determine the appropriate volume of water for purging.
   Pump tubing volumes are calculated and noted on field sheets, along with previous purge settings, for each well. This data was used to determine current purge volumes. Once the initial purge volume was reached, field parameters were checked every two minutes until at least three consecutive readings met the stabilization criteria.

5. Is the volume of evacuated well water measured? ☒ ☐

   Volumes were measured either by collecting in a 1000mL graduated cylinder or graduated bucket.

6. Are wells evacuated in accordance with established USEPA and industry standards? Note that flow-through cells are required for low-flow sampling. ☐ ☒

   An inertial lift pump was used for low flow purging on several well. Because of the potential for mixing of casing with formation waters due to the pumping action this is generally not recommended.

   A stabilization criterion of +/- 3% for conductivity is recommended instead of the 10% used during this sampling event. They also recommended 3-5 minute and

Yes No

"several minutes" intervals, respectively, instead of the 2 minute interval used.

Well drawdown was not required to be stable during purging and sampling. This exceeds the EPA recommendation and possibly the ASTM guidance. Ideally pump rates would be equivalent to recharge rates.

Recommendations given in the Missouri Department of Natural Resources, Solid Waste Management Program's fact sheet, were not met. These included triple rinsing measuring devices with DI water after each use (see question I.C.4); placing plastic sheeting near well to prevent contamination (see question I.D.1); containerizing purge water and transporting it to a permitted treatment facility or in accordance with a Missouri Clean Water Law permit for the facility (see question I.D.7); allowing at least 24 hours after portable pumping device installation to allow the water column to equilibrate (see question I.D.8 and I.E.1); and measuring stabilization parameters at 5 minute intervals (see comment above and question II.A.6).

These observations are made in direct reference to the above mentioned guidance documents and are in recognition that deviations may be approved in the site specific Quality Assurance Project Plan and/or Sampling Plan.

7. Describe the procedure used for the collection, management, and/or disposal of evacuated water.

   Purge volumes collected in the graduated cylinder were dumped into a 5-gallon bucket as the cylinder filled. Once sampling began the sample whip was held over the 5-gallon bucket to catch water between bottles. The bucket was then dumped, at least 10 feet away, on the ground or into the swale made by the liner. At well PZ-103-SS evacuated water was dumped into a trash can type collection container.

8. Does each well have dedicated evacuation equipment? ☒ ☐
   If no, describe materials and methods used to clean equipment in Section V.

   All wells except MW-1204 had dedicated bladder pumps or inertial pump tubing already installed. Well MW-1204 had recently been reconstructed and did not have tubing installed. Tubing was installed at the time of sampling and left after sampling was completed. It should be noted that the installation of the tubing just prior to purging/sampling may have added to the mixing effect already inherent with inertial lift devices. It was stated that installation of a dedicated bladder pump would be requested for MW-1204 for future use.

   On wells PZ-104-SS, PZ-104-SD and PZ-106-SS it was noted that the installed sample whip was a rigid tube. This tube was replaced with flexible tubing to ease filling bottles. After the sampling event the flexible tubing was disposed of and the rigid tube was replaced in the wellhead.

Yes No

E. Sample Collection

1. Does each well have dedicated/disposable sampling equipment? ☒ ☐
   If no, describe materials and methods used to clean equipment in Section V.
   See note for I.D.8.

2. Are equipment blanks, duplicate samples, and/or trip blanks collected as necessary? ☒ ☐

   Field blanks are collected during routine quarterly monitoring. For this event both duplicate samples and trip blanks (provided by lab) were submitted for analysis. See notes in Appendix C for wells that were duplicated.

3. Is care taken to avoid placing clean sampling equipment on the ground or other contaminated surfaces prior to sample collection? ☒ ☐

   Sample containers were kept in the cooler until needed and then returned to the cooler once the bottle was filled. Once removed from the cooler, the bottles remained capped until just before switching containers. If a cap was dropped it was thoroughly rinsed with purge water prior to replacing on the filled bottle.

4. Are samples collected in a manner that will minimize aeration and/or volatilization of the sample? ☒ ☐

   Flow rates were reduced (while keeping in the 200-500 mL/min range) while filling VOC vials. Once bottles for volatilization sensitive parameters were completed flow rates were increased (within the range) to expedite filling the larger volume containers.

   Several samples (see notes in Appendix C) were effervescent and removal of air bubbles was difficult. Per instructions by Herst's contract lab, they would rinse the preservative from the vials, eliminate air bubbles and submit unpreserved.

   Sample from well MW-1204 was so effervescent and foamy that elimination of air bubbles was not possible. The air bubble was reduced as much as possible and then the vial sealed and submitted with a note regarding the situation.

5. Are upgradient wells sampled first? ☐ ☒

   Contamination concerns due to sampling order were not considered a factor due to utilizing dedicated equipment and low flow techniques.

6. Describe the procedure used when splitting samples with the state.

   Bottles were filled by alternating bottles until all were filled. State bottles were filled first, followed by Herst bottles. If duplicates were collected the duplicate bottle was filled after each of the original bottles for each parameter (e.g. state,

Yes No

Herst, state dup., Herst dup).

II. Review of Field Measurements, Sample Handling and Preservation Procedures

A. Field Measurements

1. Are the following parameters measured in the field?

	Yes	No
pH	☒	☐
Temperature	☒	☐
Specific Conductivity	☒	☐
Dissolved Oxygen	☐	☒
Redox Potential	☐	☒

Turbidity was also collected at all wells.

2. Are field meters properly calibrated and maintained? ☐ ☒

Field meters are owned by Herst. Meters are calibrated at the beginning of each day. Calibration verification is run immediately after the calibration and at the end of each day. Calibration and calibration verification information is recorded in a field notebook dedicated to the site. pH is calibrated with two buffers. Conductivity is calibrated against a 1413 µS standard. Turbidity is calibrated to 0.02, 10.0 and 1000 NTU standards. If calibration verification checks do not compare to the standards as expected, it is noted in the field book.

Meters are stored in their protective cases except when in use at the wells. Caps are kept on the pH probe to ensure the probe does not dry out.

Although meters appeared to be kept in good repair and are calibrated routinely; Herst does not routinely check equipment against a certified, secondary standard. To document the precision and accuracy of instruments, checks against secondary standards should be considered part of a quality instrument maintenance plan.

See Appendix B for standards calibration verification check information.

3. Are field measurements within the acceptable limits of the certified standard? ☒ ☐

See table at the end of the checklist for comparison data.

4. Are field measurements made using a split portion of sample rather than in a container to be analyzed by the lab? ☒ ☐

A graduated measuring cup is used to take field measurements. The measuring cup is rinsed with purge water at each new well and then filled with ~200 mL of purge water. Probes for pH, conductivity and temperature are set in the cup and

Yes No

readings taken. After each reading the water is dumped into the collection bucket and then refilled just prior to the next reading. The aliquot for turbidity measurement was collected directly into the glass sample vial and inserted into the meter.

5. Describe the equipment used for field measurements (type, model, etc).

pH	*WTW pH/conductivity 3400i (SN: 09490969)*
Temperature	*WTW pH/conductivity 3400i (SN: 09490969)*
Specific Conductivity	*WTW pH/conductivity 3400i (SN: 09490969)*
Dissolved Oxygen	*N/A*
Redox Potential	*N/A*
Turbidity	*Hf Scientific, Inc. MicroTPW (SN: 201103400)*

A spare meter of each type is carried to the site, but not used or calibrated unless the other meter fails.

6. Describe the criterion used to determine purge parameter stability.

Purge parameter stabilization is determined on pH, conductivity and temperature. Although turbidity is recorded at each stabilization check it is not used to determine stability. Stability readings are checked every two minutes on the initial purge volume is reached. Readings will continue at this interval until at least three consecutive readings meet the criteria of 0.1 pH, 10% conductivity and 10% temperature.

B. Sample Containers

1. Are sample containers new? If not, explain in Section V. ☒ ☐

Sample containers are provided by the contract laboratory according to their test method and QA/QC requirements.

2. Are sample containers appropriate for each parameter? ☒ ☐

Sample containers are provided by the contract laboratory according to their test method and QA/QC requirements.

C. Sample Handling and Preservation

1. Are samples directly transferred from the sampling device to the sample container? ☒ ☐

2. Are samples containerized in order of their volatilization sensitivity? (VOA, TOC, ammonia, field measurements, chloride) ☐ ☒

Samples were collected for VOC, TOC, large volume organics, and then inorganic constituents. However, Herst had two additional containers (~250 mL amber bottles). According to the labels they were for the same organic parameters as the

Yes No

large amber bottles. It was unclear why the additional volume was needed. These containers were filled at the end after all other parameters were complete.

Although the sampling order generally followed the recommended order it is unclear why these were filled at the end instead of with the other, larger containers.

3. Are samples preserved appropriately for each parameter? ☒ ☐

   Bottles came pre-preserved from the laboratory according to their test method requirements.

4. Is a trip blank prepared for the VOC/TOC samples? ☒ ☐

   Any trip blanks carried through the sampling event are provided by the laboratory.

5. Was the headspace eliminated from the VOC containers? ☒ ☐

   Headspace was eliminated on all samples except for the sample at MW-1204. The sample was very effervescent and foamy and bubbles could not be eliminated after several attempts. The air bubble was reduced as much as possible but submitted the lab "as is" with a note documenting the problem.

6. Are samples put on ice immediately after collection? ☒ ☐

7. How long are samples in route to the analytical lab?

   For this sampling event, samples were held on ice in coolers until Friday. Once the event was complete the samples for the week were shipped to the laboratory for analysis.

III. Review of Field Documentation and Sample Chain-of-Custody Procedures

A. Sample Documentation

1. Are sample labels used? ☒ ☐
   Sample containers came pre-labeled from the laboratory.

2. Do they remain attached and legible even when wet? ☒ ☐

3. Is the following information provided on the label?

Sample number	☒	☐
Well number	☒	☐
Name of collector	☒	☐
Date and time of collection	☒	☐
Facility name	☒	☐

	Yes	No
Parameters to be analyzed	☒	☐
Preservative used	☒	☐

The sample number is also known as the Client Sample ID. The well number served as the unique sample identifier for each sample.

B. Site Information

1. Is field information recorded by the contractor? ☒ ☐

Individual field forms are prepared for each well and all field information is recorded on these forms.

2. Which of the following are recorded?

Time and date of sampling and evacuation	☒	☐
Weather conditions at time of sampling	☒	☐
Well identification number	☒	☐
Total depth of wells	☐	☒
Static water level depth	☒	☐
Well yield - high or low	☐	☒
Field measurements data	☒	☐
Field team members	☒	☐
Additional observations	☒	☐

Time and date information includes purge start time, time for each stability reading and sample time.
Total depth of well is not recorded for wells with dedicated pumps, rather depth to top of pump is recorded. For wells that do not have dedicated pumps the total depth is recorded after sampling is completed.
Field measurements include pH, conductivity, temperature, turbidity, total purge volume, and initial and ending water levels.
Additional observations include controller settings, sample observations (color, odor, effervescence, etc.), number of bottles, if the well is closed and locked, and if a full bottle set was collected.

C. Chain-of-Custody Records

1. Is each sample recorded on a chain-of-custody? ☒ ☐

2. What information is included on the chain-of-custody?

Date/time of samples except for blind duplicates, sample ID, matrix, parameters requested, total bottles, sample notes, sampler name, relinquished by, billing information, who should receive the report, lab disposal and turnaround time.

IV. Certified Standard Results

Parameter	Contractor Results	True Value	Acceptable limits Lot number/Expiration
pH (units)	6.13 21.2 °C	6.04	5.84-6.24 NSI Solutions Lot #032625 Exp.3/31/2017
Conductivity (µS/cm)	546	540	486-594 NSI Solutions Lot #N1014 Exp. 9/30/2016
Temperature (°C)	21.2	21.0	+/- 1 °C Values compared to ESP certified thermometer #1245908
Turbidity (NTU)*	10 20 100 800	14.55, 27.24, 115.8, 891.3	+/- 10%* Formazin Calibration Standards Lot# A4216 Exp. Nov. 2015

**pH, conductivity and temperature are the only parameters routinely checked during groundwater monitoring at solid waste disposal facilities. A true secondary standard for turbidity was not available. However, the Formazin calibration standards included with the state's turbidity meter were available and read to see how they compared to their stated values. Each of the standards read higher than the desired +/- 10%. Standard Methods recommends the use of secondary standards for turbidity as well as the other field parameters. Although turbidity is not used as a stability criterion, it is recommended that the meter be checked against a secondary standard to ensure accuracy and precision of the instrument.*

V. Additional Comments/Remarks

** 18 wells were sampled for this event. For routine quarterly monitoring 14 detection wells are sampled.*

Herst bottle set:
VOC – (3) 40 ml vials; HCl preserved
TOC – (1) ~250 ml amber bottle; H_2SO_4 preserved
PCB, Pest., Herb. PCB, Dioxin (8) ~1L amber and (2) ~250 ml amber; unpreserved
Sulfide – (1) plastic bottle; Zinc Acetate preserved
Cyanide – (1) plastic bottle; NaOH preserved
Metals – (1) plastic bottle; HNO_3 preserved
Sulfate – (1) plastic bottle; unpreserved
Well PZ-107-SS has water in the casing but below the wellhead opening. See photo.

APPENDIX B

Field Meter Calibration and Calibration Verification Checks

Landfill Monitoring Report
Bridgeton Sanitary Landfill
St. Louis County
August 17 – 21, 2015

State of MO v. Republic Services, Inc. et al
Price - 0000227

Field Meter Calibration and Calibration Verification Checks

Date	Parameter	Standard Value	Meter Reading	Date	Parameter	Standard Value	Meter Reading
8/19/2015	pH	4.00	4.06 @ 22.3°C	8/19/2015	pH	4.00	4.06 @ 24.4 °C
Calibration		7.00	7.03 @ 22.4°C	Post Sampling		7.00	7.07 @ 24.3°C
	Conductivity (µS)	1413	1450 @ 22.6°C		Conductivity (µS)	1413	1393 (temperature not recorded)
	Turbidity (NTU)	0.02	0.02		Turbidity (NTU)	0.02	0.01
		10.0	10.00			10.0	9.78
		1000	992.9			1000	991.0
8/20/2015	pH	4.00	4.04 @17.0 °C	8/20/2015	pH	4.00	4.15 @ 30 °C
Calibration		7.00	6.96 @17.8 °C	Post Sampling		7.00	6.98 @ 29.0 °C
	Conductivity (µS)	1413	1409 @19.1 °C		Conductivity (µS)	1413	1390 @29.5 °C
	Turbidity (NTU)	0.02	0.02		Turbidity (NTU)	0.02	0.10
		10.0	10.04			10.0	9.90
		1000	997.9			1000	1001
8/21/2015	pH	4.00	4.05 @19.7 °C	8/21/2015	pH	4.00	4.17 @ 28.0 °C
Calibration		7.00	7.00 @ 20.7 °C	Post Sampling		7.00	7.04 @ 28.0 °C
	Conductivity (µS)	1413	1383 @ 21.5 °C		Conductivity (µS)	1413	1380 @ 28.9 °C
	Turbidity (NTU)	0.02	0.02		Turbidity (NTU)	0.02	0.16
		10.0	9.99			10.0	9.97
		1000	1005			1000	1007

Calibration standard information

Standard	Standard Value	Expiration	Lot Number	Brand
pH	4.00	Oct. 2016	4AJ838	Pine Environmetal Services, LLC.
pH	7.00	Aug. 30, 2016	4AH570	Pine Environmetal Services, LLC.
Conductivity	1413 µS	Oct. 31, 2015	4AJ853	Pine Environmetal Services, LLC.
Turbidity	0.02, 10.0, 1000 NTU	Standards provided with instrument. Other info. not recorded.		

APPENDIX C

Field Measurements and Sample Notes

Landfill Monitoring Report
Bridgeton Sanitary Landfill
St. Louis County
August 17 – 21, 2015

State of MO v. Republic Services, Inc. et al
Price - 0000229

Well ID: PZ-209-SS
Date: 8/19/2015
Purge start time: 0930
Initial water level (feet): 21.08

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
0938	1800		7.10		738		15.9		6.24
0940	2500	26.67	7.17	0.07	736	0.27%	15.6	1.90%	6.27
0942	3100	27.35	7.18	0.01	737	0.14%	15.4	1.29%	4.18
0944	3900	28.68	7.23	0.05	736	0.14%	15.4	0.00%	5.89

Final water level (feet): 61.88
Depth to top of pump (feet): Not recorded by DNR

Sample time: 0946
Parameter set: Appendix II
Notes:
John Regan collected samples. Ward Herst took notes and labelled/handled bottles.

State of MO v. Republic Services, Inc. et al
Price - 0000230

Well ID: PZ-209-SD
Date: 8/19/2015
Purge start time: 1050
Initial water level (feet): 23.63

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
1102	1800		7.37		870		15.7		4.87
1104	2200		7.42	0.05	859	1.27%	15.2	3.24%	7.84
1106	3050	29.64	7.42	0	855	0.47%	14.9	1.99%	2.92
1108	3950	31.65	7.43	0.01	856	0.12%	14.9	0.00%	1.40

Final water level (feet): 63.45
Depth to top of pump (feet): 101.42

Sample time: 1110
Parameter set: Appendix II
Notes:
John Regan collected samples. Ward Herst took notes and labelled/handled bottles.

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Price - 0000231

Well ID: PZ-210-SS
Date: 8/19/2015
Purge start time: 1325
Initial water level (feet): 26.09

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
1331	1700	29.89	7.13		789		16.6		0.91
1333	2450	31.13	7.18	0.05	785	0.51%	16.4	1.21%	0.70
1335	3150	32.46	7.19	0.01	785	0.00%	16.3	0.61%	1.00
1337	3750	33.44	7.18	-0.01	787	0.25%	16.3	0.00%	0.21

Final water level (feet): 66.00
Depth to top of pump (feet): 101.53

Sample time: 1337
Parameter set: Appendix II
Notes:
John Regan collected samples. Ward Herst took notes and labelled/handled bottles.
VOC has some effervescence. Vials may develop air bubbles over time although they appeared eliminated at time of collection.
DNR samples collected as usual. Herst rinsed HCl from vials, filled without air bubble and will submit without preservation per lab instructions.

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Price - 0000232

Well ID: PZ-210-SD
Date: 8/19/2015
Purge start time: 1423
Initial water level (feet): 27.21

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)	
1428	1700		7.32		1078		16.5		6.40	
1430	2400	32.50	7.22	-0.1	1082	0.37%	16.0	3.08%	42.00	gray coloration, no odor
1432	3150	33.79	7.22	0	1083	0.09%	15.8	1.26%	14.23	light gray color
1434	3900	36.03	7.21	-0.01	1080	0.28%	15.8	0.00%	5.93	clear, colorless

Final water level (feet): 72.95
Depth to top of pump (feet): 101.81

Sample time: 1436
Parameter set: Appendix II
Notes:
John Regan collected samples. Ward Herst took notes and labelled/handled bottles.
DNR collected a duplicate sample at this site.

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Price - 0000233

Well ID: PZ-211-SS
Date: 8/19/2015
Purge start time: 1554
Initial water level (feet): 19.64

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
1601	1700	23.77	7.33		729		15.7		10.91
1603	2350	25.42	7.28	-0.05	730	0.14%	15.4	1.93%	26.60
1605	3050	26.66	7.26	-0.02	731	0.14%	15.3	0.65%	16.42
1607	3775	28.09	7.24	-0.02	733	0.27%	15.3	0.00%	19.19

Final water level (feet): 59.68
Depth to top of pump (feet): 98.18

Sample time: 1609
Parameter set: Appendix II
Notes:
John Regan collected samples. Ward Herst took notes and labelled/handled bottles.

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Well ID: PZ-211-SD
Date: 8/20/2015
Purge start time: 0901
Initial water level (feet): 22.94

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
0907	1700	26.65	7.11		950		15.7		6.68
0909	2500	28.05	7.24	0.13	949	0.11%	15.6	0.64%	6.80
0911	3200	29.32	7.26	0.02	950	0.11%	15.4	1.29%	8.26
0913	3800	30.60	7.28	0.02	951	0.11%	15.3	0.65%	2.23

Final water level (feet): 73.75
Depth to top of pump (feet): 99.41

Sample time: 0915
Parameter set: Appendix II
Notes:
John Regan collected samples. Derek Bouchard took notes. Peter Daniel labelled/handled bottles.
DNR collected a duplicate sample at this site.

State of MO v. Republic Services, Inc. et al
Price - 0000235

Well ID: PZ-104-SS
Date: 8/20/2015
Purge start time: 1019
Initial water level (feet): 18.63

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
1028	2700	24.60	6.86		820		27.9		0.70
1030	3400	25.56	6.84	-0.02	806	1.72%	27.7	0.72%	3.78
1032	4000	26.64	6.82	-0.02	801	0.62%	27.5	0.72%	4.29
1034	4650	28.23	6.85	0.03	799	0.25%	27.4	0.36%	0.95

Final water level (feet): 77.40
Depth to top of pump (feet): 140.61

Sample time: 1037
Parameter set: Appendix II
Notes:
John Regan collected samples. Derek Bouchard took notes. Peter Daniel labelled/handled bottles.
Herst collected a duplicate sample at this site.
Rigid sample tubing was replaced with disposable, flexible tubing for sampling event.

State of MO v. Republic Services, Inc. et al.
Price - 0000236

Well ID: PZ-104-SD
Date: 8/20/2015
Purge start time: 1149
Initial water level (feet): 21.38

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)	
1156	2200	24.57	6.80		1637		27.1		2.93	yellowish coloration at start
1158	3000	24.96	6.86	0.06	1696	3.54%	27.3	0.74%	2.25	
1200	3700	25.25	6.89	0.03	1699	0.18%	27.4	0.37%	2.15	
1202	4350	25.46	6.89	0	1700	0.06%	27.5	0.36%	2.61	
1204	5000	25.61	6.91	0.02	1702	0.12%	27.4	0.36%	3.10	

Final water level (feet): 31.05
Depth to top of pump (feet): 120.52

Sample time: 1206
Parameter set: Appendix II
Notes:
John Regan collected samples. Derek Bouchard took notes. Peter Daniel labelled/handled bottles.
Sample very aerated/effervescent throughout purging and collection. The effervescence did not appear to be from reacting with preservative in VOC vial.
Strong, sour odor.
Rigid sample tubing was replaced with disposable, flexible tubing for sampling event.

State of MO v. Republic Services, Inc. et al
Price - 0000237

Well ID: PZ-106-SS
Date: 8/20/2015
Purge start time: 1429
Initial water level (feet): 11.00

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
1438	3400	18.24	7.10		864		23.1		1.58
1440	4200	19.61	7.11	0.01	864	0.00%	22.7	1.75%	0.68
1442	4900	20.60	7.12	0.01	858	0.70%	22.7	0.00%	0.87
1444	5600	27.74	7.13	0.01	853	0.58%	22.6	0.44%	0.87

Final water level (feet): 24.29
Depth to top of pump (feet): 161.63

Sample time: 1445
Parameter set: Appendix I
Notes:
John Regan collected samples. Derek Bouchard took notes. Peter Daniel labelled/handled bottles and periodically assisted by holding sample tubing.

State of MO v. Republic Services, Inc. et al
Price - 0000238

Well ID: PZ-106-SD
Date: 8/20/2015
Purge start time: 1503
Initial water level (feet): 11.76

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)	
1513	4100	16.88	6.71		3500		22.8		1.39	slight yellow color.
1515	4800	17.32	6.71	0	3670	4.74%	22.5	1.32%	0.86	
1517	5600	17.73	6.70	-0.01	4290	15.58%	22.5	0.00%	1.43	
1519	6400	18.09	6.69	-0.01	5200	19.18%	22.4	0.45%	0.23	sample very aerated/effervescent with yellowish color.
1521	7200	18.40	6.67	-0.02	5790	10.74%	22.4	0.00%	1.50	
1523	8000	18.63	6.66	-0.01	5950	2.73%	22.5	0.45%	1.14	
1525	8700	18.73	6.68	0.02	5940	0.17%	22.4	0.45%	1.22	

Final water level (feet): 18.59
Depth to top of pump (feet): 196.24

Sample time: 1527
Parameter set: Appendix I
Notes:
John Regan collected samples. Ward Herst took notes and depth measurements. Peter Daniel labelled/handled bottles. Sample very effervescent. Appeared reactive with preservative. Air bubbles were removed as best as possible before sealing VOC sample vials. DNR collected VOC vials preserved. Herst rinsed HCl from vials and submitted unpreserved per lab instructions. Septic odor.

State of MO v. Republic Services, Inc. et al
Price - 0000239

Well ID: PZ-116-SS
Date: 8/20/2015
Purge start time: 1553
Initial water level (feet): 17.72

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
1603	3100	24.62	7.83		629		21.6		6.00
1605	4000	25.95	7.83	0	629	0.00%	21.4	0.93%	2.27
1607	4600	26.80	7.75	-0.08	627	0.32%	21.2	0.94%	2.97
1609	5200	28.05	7.76	0.01	622	0.80%	21.6	1.87%	1.60

Final water level (feet): 30.33
Depth to top of pump (feet): 149.89

Sample time: 1611
Parameter set: Appendix I
Notes:
John Regan collected samples. Ward Herst took notes and took depth measurements. Peter Daniel labelled/handled bottles.

State of MO v. Republic Services, Inc. et al
Price - 0000240

Well ID: PZ-105-SS
Date: 8/20/2015
Purge start time: 1635
Initial water level (feet): 25.45

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
1645	2700	30.89	7.55		986		19.1		2.99
1647	3400	33.08	7.56	0.01	981	0.51%	18.7	2.12%	3.05
1649	4000	34.21	7.52	-0.04	981	0.00%	18.9	1.06%	2.66
1651	4650	35.81	7.52	0	981	0.00%	18.6	1.60%	2.32

Final water level (feet): 39.75
Depth to top of pump (feet): 144.92

Sample time: 1654
Parameter set: Appendix I
Notes:
John Regan collected samples and some depth measurements. Derek Bouchard took some depth measurements. Peter Daniel labelled/handled bottles and took notes.

State of MO v. Republic Services, Inc. et al
Price - 0000241

Well ID: PZ-202-SS
Date: 8/20/2015
Purge start time: 1717
Initial water level (feet): 11.15

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
1722	1700	11.21	6.69		3720		16.9		31.23
1724	2400	11.21	6.68	-0.01	4000	7.25%	16.6	1.79%	16.23
1726	3100	11.21	6.69	0.01	4100	2.47%	16.5	0.60%	15.74
1728	3800	11.21	6.68	-0.01	4120	0.49%	16.5	0.00%	10.91

Final water level (feet): 11.21
Depth to top of pump (feet): 85.23

Sample time: 1730
Parameter set: Appendix I
Notes:
Ward Herst collected samples, took notes and depth measurements. John Regan controlled purging. Peter Daniel labelled/handled bottles.
One Herst VOC was thrown out due to a repeated air bubble that could not be eliminated.

State of MO v. Republic Services, Inc. et al
Price - 0000242

Well ID: PZ-107-SS
Date: 8/21/2015
Purge start time: 0853
Initial water level (feet): 30.32

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)	
0859	3000	*	6.69		2240		18.9		132.7	Gray color and very cloudy
0901	3900	*	6.68	-0.01	2200	1.80%	18.7	1.06%	68.59	
0903	4500	*	6.75	0.07	2190	0.46%	19.2	2.64%	50.32	
0905	5100	*	6.81	0.06	2190	0.00%	19.4	1.04%	36.66	
0907	5600	*	6.84	0.03	2190	0.00%	19.2	1.04%	30.11	

Final water level (feet): 49.23
Total Depth (feet):** 104.00

Sample time: 0910
Parameter set: Appendix I

Notes:

John Regan collected field measurements. Ward Herst took notes and collected samples.

Samples were collected using a Waterra Hydrolift II pump. Dedicated pump tubing was already installed.

Sample was slightly effervescent. DNR collected VOC vials preserved. Herst rinsed HCl from vials and submitted unpreserved per lab instructions.

Standing water was noted in the well casing, but it was below the wellhead opening.

Gray coloration dissipated as well was purged. The sample remained slightly turbid with slight effervescence.

* Depth measurements could not be collected during purging due to pump action.

**Since dedicated pumps are not installed, total depth to the bottom of the well can be measured.

State of MO v. Republic Services, Inc. et al
Price - 0000243

Well ID: MW-1204
Date: 8/21/2015
Purge start time: (not recorded)
Initial water level (feet): 14.25

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)	
1000	4000	*	6.79		3600		21.4		18.08	Black and foamy at start of purge
1002	4400	*	6.71	-0.08	3820	5.93%	20.9	2.36%	22.17	
1004	4800	*	6.63	-0.08	4070	6.34%	20.9	0.00%	32.86	More brown in color and foamy
1006	5300	*	6.64	0.01	4170	2.43%	21.0	0.48%	40.92	

Final water level (feet): 24.57
Total Depth (feet):** 223.98

Sample time: 1010
Parameter set: Appendix I

Notes:
Ward Herst installed pump tubing prior to sampling and collected samples. John Regan collected field measurements and controlled pump.
Samples were collected using a Waterra Hydrolift II pump. New HDPE tubing was installed by inserting until bottom of well was felt and then pulling tubing back up ~5-10 feet.
Due to larger purge volumes, purge water was collected in graduated bucket instead of the graduated cylinder used at all other wells.
Both DNR and Herst collected duplicate samples at this site.
Sample was very foamy. Air bubbles could not be eliminated for VOC sample in either DNR or Herst VOC vials. VOC's were submitted noting the inability to remove all air bubbles.
Numerous black particles were observed floating in the sample. These particles did not react or dissolve due to preservation.
Sample had a strong septic and sour odor.
* Depth measurements could not be collected during purging due to pump action.
**Since dedicated pumps are not installed, total depth to the bottom of the well can be measured.

State of MO v. Republic Services, Inc. et al
Price - 0000244

Well ID: PZ-203-SS
Date: 8/21/2015
Purge start time: 1059
Initial water level (feet): 26.24

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)	
1101	3500	*	7.52		757		16.7		22.95	Clear and colorless
1103	3800	*	7.49	-0.03	763	0.79%	18.1	8.05%	23.25	
1105	4200	*	7.45	-0.04	756	0.92%	18.1	0.00%	16.41	
1107	4700	*	7.42	-0.03	752	0.53%	18.1	0.00%	17.44	
1109	5250	*	7.42	0	753	0.13%	18.1	0.00%	10.50	

Final water level (feet): 26.74
Total Depth (feet):** 111.36

Sample time: 1112
Parameter set: Appendix I
Notes:
Ward Herst labelled/handled bottles and collected samples. John Regan collected field measurements.
Samples were collected using a Waterra Hydrolift II pump. Dedicated pump tubing was already installed.
* Depth measurements could not be collected during purging due to pump action.
**Since dedicated pumps are not installed, total depth to the bottom of the well can be measured.

State of MO v. Republic Services, Inc. et al
Price - 0000245

Well ID: PZ-103-SS
Date: 8/21/2015
Purge start time: 1136
Initial water level (feet): 9.53

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
1143	7000	*	6.44		2660		27.7		568.9
1145	7600	*	6.53	0.09	2640	0.75%	27.6	0.36%	350.2
1147	8300	*	6.57	0.04	2560	3.08%	28.1	1.80%	161.2
1149	9100	*	6.60	0.03	2280	11.57%	28.0	0.36%	101.4
1151	9900	*	6.50	-0.1	2000	13.08%	28.2	0.71%	121.2
1153	10700	*	6.49	-0.01	1805	10.25%	28.6	1.41%	138.6
1155	11500	*	6.48	-0.01	1671	7.71%	28.2	1.41%	186.5
1157	12300	*	6.50	0.02	1631	2.42%	28.4	0.71%	278.8
1159	13100	*	6.53	0.03	1612	1.17%	28.4	0.00%	432.5

Final water level (feet): 45.93
Total Depth (feet):** 149.88

Sample time: 1202
Parameter set: Appendix I
Notes:
Ward Herst collected samples. John Regan took field measurements.
Samples were collected using a Waterra Hydrolift II pump. Dedicated pump tubing was already installed.
Purge began gray and turbid, cleared then a black slug began at ~6000 mLs. Sample was gray and turbid.
* Depth measurements could not be collected during purging due to pump action.
**Since dedicated pumps are not installed, total depth to the bottom of the well can be measured.

State of MO v. Republic Services, Inc. et al
Price - 0000246

Well ID: PZ-204-SS Located on Materialogic property
Date: 8/21/2015
Purge start time: 1246
Initial water level (feet): 9.81

Time	Volume (mL)	Water level (feet)	pH	pH Difference	Conductivity (µS)	Cond. Difference	Temperature (°C)	Temp. Difference	Turbidity (NTU)
1251	3100	*	7.72		754		18.4		371.0
1253	3900	*	7.71	-0.01	750	0.53%	18.4	0.00%	24.00
1255	4650	*	7.73	0.02	748	0.27%	18.7	1.62%	31.40
1257	5250	*	7.75	0.02	749	0.13%	19.1	2.12%	19.28

Final water level (feet): 24.45
Total Depth (feet):** 88.03

Sample time: 1300
Parameter set: Appendix I
Notes:
Ward Herst collected samples. John Regan collected field measurements.
Samples were collected using a Waterra Hydrolift II pump. Dedicated pump tubing was already installed.
Water was clear and colorless throughout purge and sample.
* Depth measurements could not be collected during purging due to pump action.
**Since dedicated pumps are not installed, total depth to the bottom of the well can be measured.

APPENDIX D

Photographs

Landfill Monitoring Report
Bridgeton Sanitary Landfill
St. Louis County
August 17 – 21, 2015



PZ-103-SS



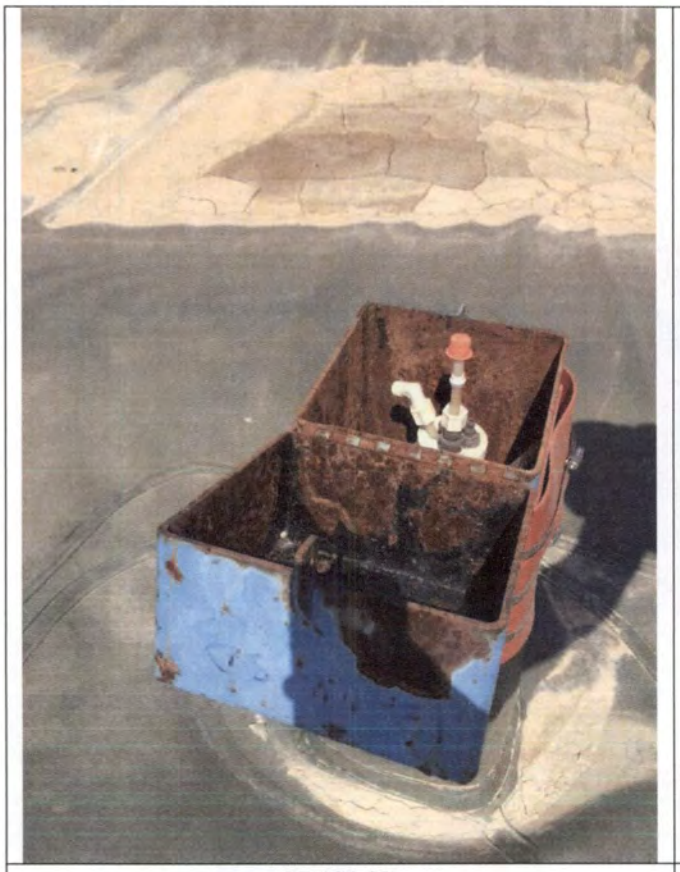
PZ-103-SS Label



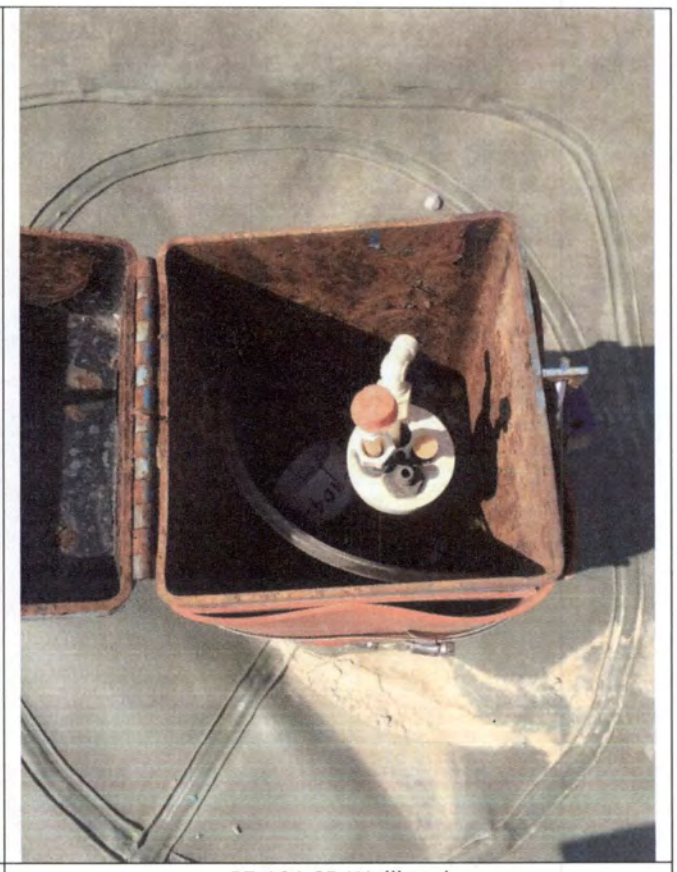
PZ-103-SS Wellhead



PZ-103-SS Waterra pump set-up



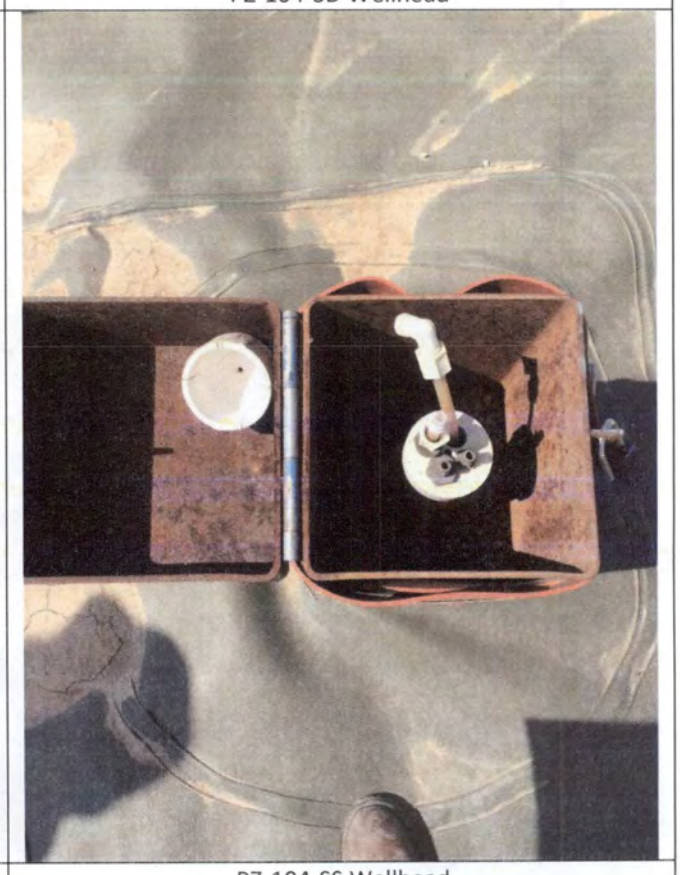
PZ-104-SD



PZ-104-SD Wellhead



PZ-104-SS



PZ-104-SS Wellhead



PZ-105-SS



PZ-105-SS Wellhead



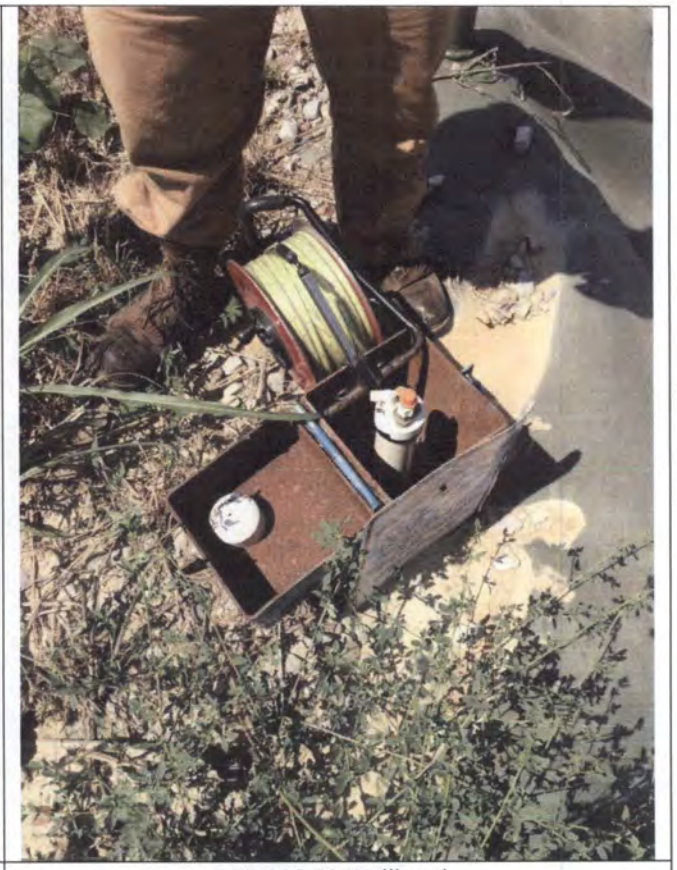
PZ-106-SD



PZ-106-SD Wellhead



PZ-106-SS



PZ-106-SS Wellhead



PZ-107-SS



PZ-107-SS Wellhead



PZ-107-SS Waterra pump set-up



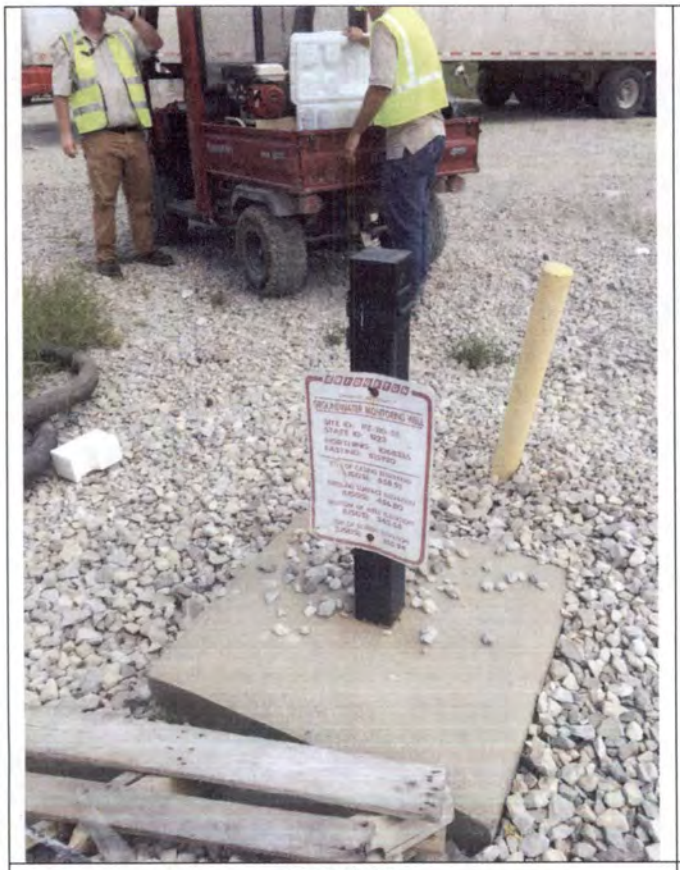
Water level measurement method (PZ-105-SS)



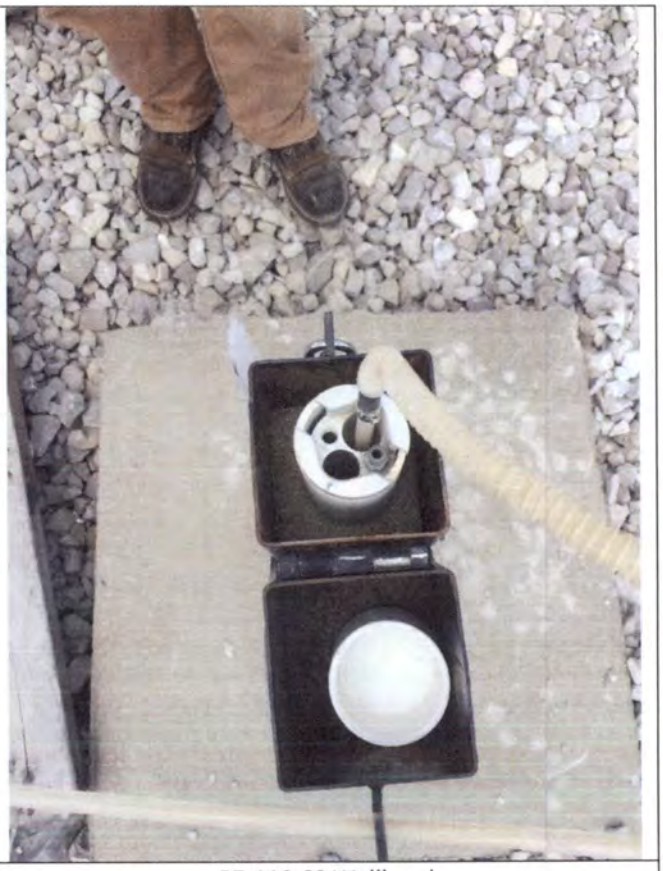
PZ-109-SS



PZ-109-SS Wellhead



PZ-110-SS



PZ-110-SS Wellhead



PZ-116-SS



PZ-116-SS Wellhead



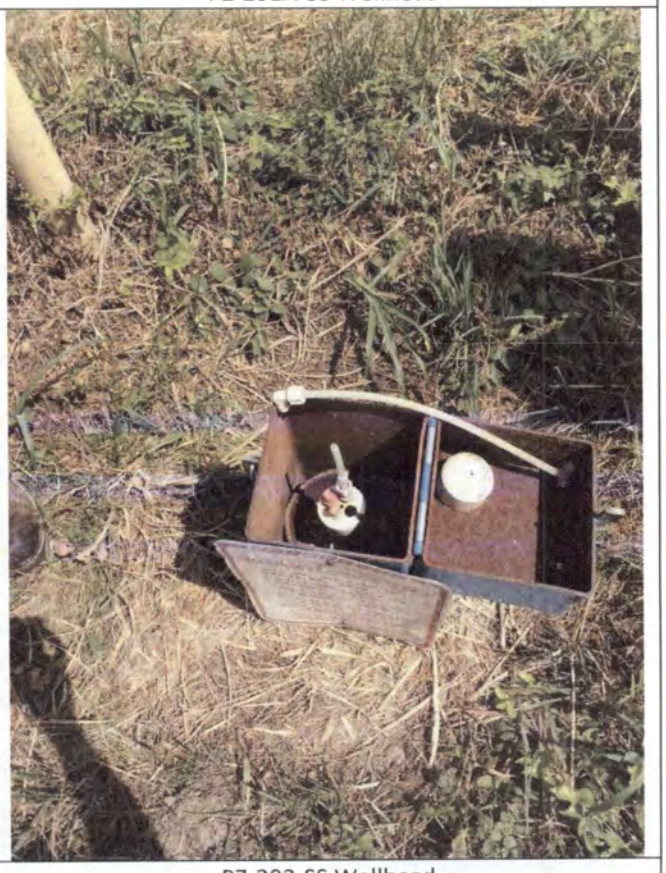
PZ-201A-SS



PZ-201A-SS Wellhead



PZ-202-SS



PZ-202-SS Wellhead



PZ-203SS



PZ-203-SS label



PZ-203-SS Wellhead with well ID on cap



PZ-203-SS Waterra pump set-up

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Price - 0000255



PZ-204-SS



PZ-204-SS Wellhead



PZ-204-SS Waterra pump set-up



Electronic tape decontamination procedure



PZ-206-SS



PZ-206-SS Wellhead



PZ-209-SD (foreground)



PZ-209-SD Wellhead



PZ-209-SS



PZ-209-SS Wellhead



PZ-210-SD



PZ-210-SD Wellhead



PZ-210-SS



PZ-210-SS Wellhead



PZ-211-SD



PZ-211-SD Wellhead



PZ-211-SS



PZ-211-SS Wellhead



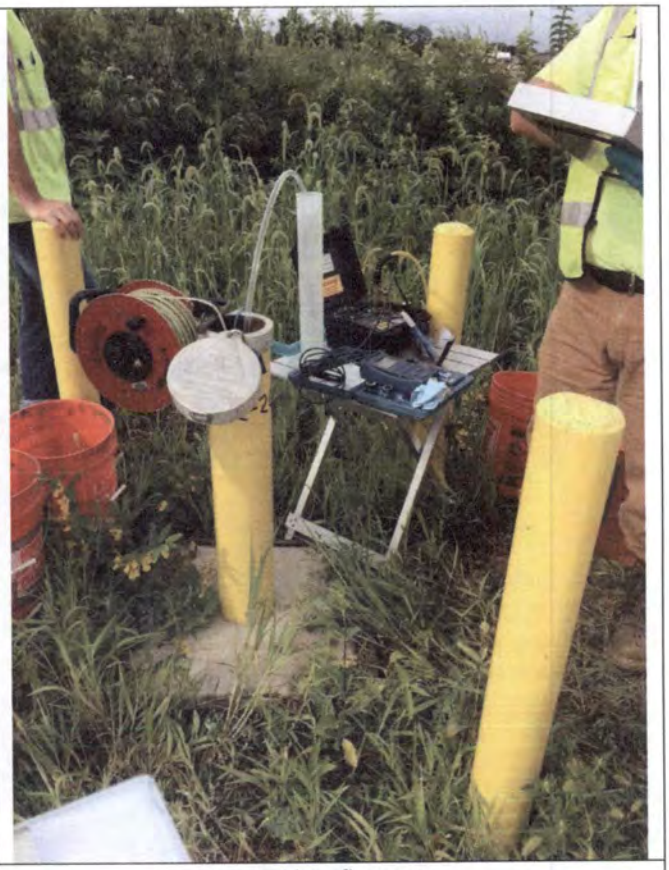
PZ-212-SD (foreground) and PZ-212-SS (background)



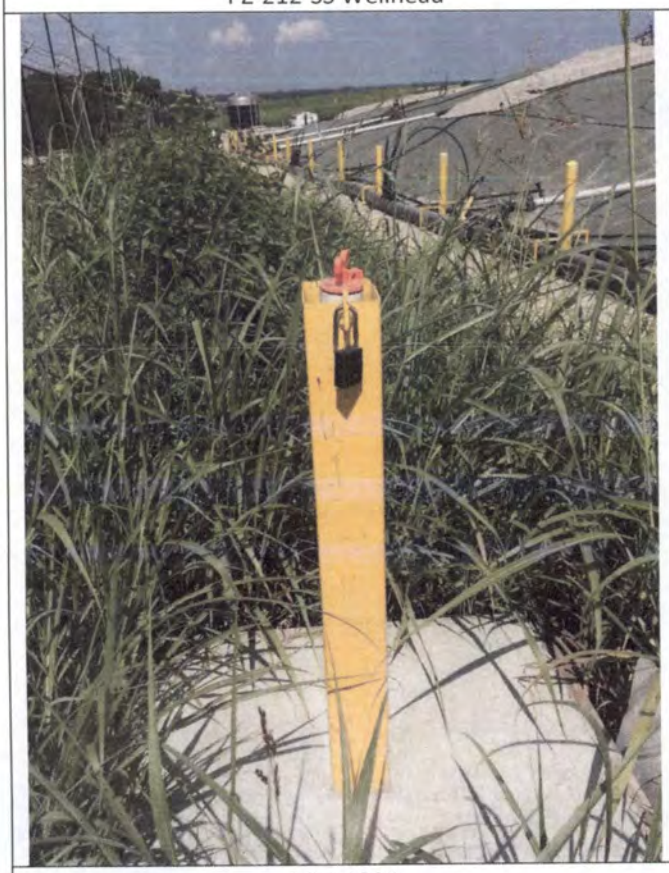
PZ-212-SS



PZ-212-SS Wellhead



General low flow set-up



MW-1204



MW-1204 Wellhead



MW-1204 Labeling



MW-1204 Pump tubing installation



MW-1204 Waterra pump set-up

Appendix E

Groundwater Analytical Results
TestAmerica Laboratories, Inc.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-13471-1
Client Project/Site: Groundwater Samples

For:
Missouri Attorney General's Office
PO Box 899
Jefferson City, Missouri 65102

Attn: Brenna McDonald

Authorized for release by:
8/31/2015 11:13:30 AM

Chenise Lambert-Sykes, Project Manager I
(314)298-8566
chenise.lambert-sykes@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

State of MO v. Republic Services, Inc. et al
Price - 0000264

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QC Association Summary 35
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Job ID: 160-13471-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Missouri Department of Natural Resources

Project: Groundwater Samples

Report Number: 160-13471-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica St. Louis attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 08/20/2015; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 8.6 C.

Receipt Exceptions

The volume received was sufficient for VOA and Metals analysis. the samples arrived on ice.
MO-3-SS (160-13471-1), MO-2-SD (160-13471-2), MO-3-SDR (160-13471-3) and MO-3-SDR-DUP (160-13471-4)

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples MO-3-SS (160-13471-1), MO-2-SD (160-13471-2), MO-3-SDR (160-13471-3) and MO-3-SDR-DUP (160-13471-4) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 08/22/2015 and 08/23/2015.

Analytical Batch: 207022

The following compounds did not meet the minimum relative response factor limits in the continuing calibration verification (CCV) associated with batch 160-207022: Acetone, 2-Hexanone and 2-Butanone. A low-level LOQV was analyzed at the reporting limit (5ug/L) and the affected analytes were detected. Target analytes recovering above the reporting limit will be qualified and reported.

Job ID: 160-13471-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

(CCVIS 160-207022/3)

The method blank for analytical batch 160-207022 contained Trichloroethene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-analysis of samples was not performed. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.
(MB 160-207022/7)

The laboratory control sample duplicate (LCSD) for batch analytical batch 160-207022 recovered outside control limits for the following analyte: trans-1,3-Dichloropropene. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported.
(LCSD 160-207022/5)

Surrogate (4-BFB) recovery for the following samples was outside the upper control limit: MO-3-SS (160-13471-1), MO-2-SD (160-13471-2) and (MB 160-207022/7). The samples did not contain any target analytes associated with the affected surrogate and above the Reporting Limit; therefore, re-analysis was not performed.

Analytical Batch: 207165
The following compounds did not meet the minimum relative response factor limits in the continuing calibration verification (CCV) associated with batch 160-207165: Acetone and 2-Butanone. A low-level LOQV was analyzed at the reporting limit (5ug/L) and the affected analytes were detected. Target analytes recovering above the reporting limit will be qualified and reported.
(CCVIS 160-207165/3)

The following samples were analyzed at reduced volume due to high concentrations of target analytes: MO-3-SDR (160-13471-3) and MO-3-SDR-DUP (160-13471-4). The calculation was done using an initial volume adjustment. The reporting limits have been elevated by the appropriate factor.

The method blank for analytical batch 160-207165 contained Trichloroethene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-analysis of samples was not performed. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details. (MB 160-207165/6)

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 160-207165 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.
(160-13506-B-11 MS) and (160-13506-B-11 MSD)

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

TOTAL METALS (ICP)
Samples MO-3-SS (160-13471-1), MO-2-SD (160-13471-2), MO-3-SDR (160-13471-3) and MO-3-SDR-DUP (160-13471-4) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 08/21/2015 and analyzed on 08/25/2015.

Analytical Batch: 207754
The following samples from preparation batch 160-206994 and analytical batch 160-207754 were diluted to bring the concentration of target analytes within the calibration range: MO-3-SS (160-13471-1), MO-2-SD (160-13471-2), MO-3-SDR (160-13471-3), MO-3-SDR-DUP (160-13471-4), (160-13471-D-1-C MS), (160-13471-D-1-D MSD) and (160-13471-D-1-B SD). Elevated reporting limits (RLs) are provided.

Phosphorus, Sodium and Vanadium were detected in method blank MB 160-206994/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Due to the high concentration of calcium and sodium, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 160-206994 and analytical batch 160-207754 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four

Job ID: 160-13471-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

times the spiking amount. Refer to the QC report for details. (160-13471-D-1-C MS) and (160-13471-D-1-D MSD)

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

TOTAL MERCURY

Samples MO-3-SS (160-13471-1), MO-2-SD (160-13471-2), MO-3-SDR (160-13471-3) and MO-3-SDR-DUP (160-13471-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 08/21/2015.

Analytical Batch: 207322

Milky White precipitate formed during digestion and noticed after addition of Sodium Chloride Hydroxylamine Sulfate. Sample was shaken vigorously moments before pouring aliquot for analysis.
Rinse sample placed immediately after to aid in expulsion of any remaining sample.
MO-2-SD (160-13471-2)

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

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8/31/2015

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: Brenna McDonald
Company: Missouri Department of Natural Resources
Address: 111 Fairgounds Road PO BOX 250
City: Rolla
State, Zip: MO, 65402
Phone:
Email: brenna.mcdonald@dnr.mo.gov
Project Name: Groundwater Samples
Site:

Sampler: Vince Epps
Phone:
Lab PM: Lambert-Sykes, Chenise Y
E-Mail: chenise.lambert-sykes@testamericainc.com
Carrier Tracking No(s):

COC No: 160-3116-1450.1
Page: Page 1 of 3
Job #:

Due Date Requested:
TAT Requested (days): 48 hour
PO #: Purchase Order not required
WO #:
Project #: 16004530
SSOW#:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D - Sulfate	415.1 - Total Organic Carbon	6010C, 7470A	8260C - (MOD) OLM 4.2	8081B, 8082A, 8151A, 8270D	335.4 - Cyanide, Total	376.1 - Sulfide	1613B_Tetras - TCDD only	6010C - (MOD) Standard List	Total Number of containers
			Preservation Code:				N	S	D	A	N	B	CB	N	D	
MO-3-SS	8/20/15	1000	G	Water			X	X	X	X	X	X	X	X	X	
MO-2-SD	8/20/15	1600	G	Water			X	X	X	X	X	X	X	X	X	
MO-3-SDR	8/20/15	1245	G	Water			X	X	X	X	X	X	X	X	X	
MO-3-SDR-DUP	8/20/15	~~1245~~ 1245	G	Water			X	X	X	X	X	X	X	X	X	
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Special Instructions/Note:

160-13471 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)
Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 8/20/15 1700	Company	Received by: [signature]	Date/Time: 8.20.15 1700	Company TA STL	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 8.20.15	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: △ Yes △ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-13471-1

Login Number: 13471
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	Refer to Job Narrative for details.
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Definitions/Glossary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13471-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13471-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SL
6010C	Metals (ICP)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL

Protocol References:

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

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13471-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-13471-1	MO-3-SS	Water	08/20/15 10:00	08/20/15 17:00
160-13471-2	MO-2-SD	Water	08/20/15 16:00	08/20/15 17:00
160-13471-3	MO-3-SDR	Water	08/20/15 12:45	08/20/15 17:00
160-13471-4	MO-3-SDR-DUP	Water	08/20/15 12:45	08/20/15 17:00

Detection Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13471-1

Client Sample ID: MO-3-SS

Lab Sample ID: 160-13471-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	39		20	6.7	ug/L	1		8260C	Total/NA
Benzene	33		5.0	0.25	ug/L	1		8260C	Total/NA
Carbon disulfide	0.74	J	5.0	0.37	ug/L	1		8260C	Total/NA
Chlorobenzene	1.6	J	5.0	0.38	ug/L	1		8260C	Total/NA
Ethylbenzene	1.5	J	5.0	0.30	ug/L	1		8260C	Total/NA
Methyl ethyl ketone (MEK)	19	J	20	0.39	ug/L	1		8260C	Total/NA
Toluene	9.0		5.0	1.0	ug/L	1		8260C	Total/NA
Trichloroethene	1.0	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Xylenes, Total	2.5	J	10	0.85	ug/L	1		8260C	Total/NA
Arsenic	20	J	100	18	ug/L	10		6010C	Total/NA
Barium	340	J	500	21	ug/L	10		6010C	Total/NA
Boron	230	J	500	72	ug/L	10		6010C	Total/NA
Calcium	240000		10000	540	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	910000		50000	17000	ug/L	10		6010C	Total/NA
Magnesium	75		10	0.51	mg/L	10		6010C	Total/NA
Mn	1200		150	10	ug/L	10		6010C	Total/NA
Nickel	0.034	J	0.40	0.026	mg/L	10		6010C	Total/NA
Phosphorus	600	J B	2500	140	ug/L	10		6010C	Total/NA
Sodium	57000	B	10000	1100	ug/L	10		6010C	Total/NA
Zinc	85	J	200	83	ug/L	10		6010C	Total/NA

Client Sample ID: MO-2-SD

Lab Sample ID: 160-13471-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.83	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Arsenic	30	J	100	18	ug/L	10		6010C	Total/NA
Barium	470	J	500	21	ug/L	10		6010C	Total/NA
Beryllium	6.0	J	50	2.8	ug/L	10		6010C	Total/NA
Boron	160	J	500	72	ug/L	10		6010C	Total/NA
Calcium	200000		10000	540	ug/L	10		6010C	Total/NA
Chromium	85	J	100	34	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	750000		50000	17000	ug/L	10		6010C	Total/NA
Lead	110		100	6.0	ug/L	10		6010C	Total/NA
Magnesium	60		10	0.51	mg/L	10		6010C	Total/NA
Mn	2100		150	10	ug/L	10		6010C	Total/NA
Nickel	0.13	J	0.40	0.026	mg/L	10		6010C	Total/NA
Phosphorus	2500	B	2500	140	ug/L	10		6010C	Total/NA
Sodium	100000	B	10000	1100	ug/L	10		6010C	Total/NA
Vanadium	57	J B	500	44	ug/L	10		6010C	Total/NA
Zinc	260		200	83	ug/L	10		6010C	Total/NA
Mercury	0.11	J	0.20	0.060	ug/L	1		7470A	Total/NA

Client Sample ID: MO-3-SDR

Lab Sample ID: 160-13471-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	32		5.0	0.25	ug/L	1		8260C	Total/NA
Carbon disulfide	0.83	J	5.0	0.37	ug/L	1		8260C	Total/NA
Chloroform	0.97	J	5.0	0.15	ug/L	1		8260C	Total/NA
Ethylbenzene	0.54	J	5.0	0.30	ug/L	1		8260C	Total/NA
2-Hexanone	20		20	0.59	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13471-1

Client Sample ID: MO-3-SDR (Continued)

Lab Sample ID: 160-13471-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4-Methyl-2-pentanone (MIBK)	37		20	0.33	ug/L	1		8260C	Total/NA
Toluene	2.7	J	5.0	1.0	ug/L	1		8260C	Total/NA
Trichloroethene	0.84	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Xylenes, Total	2.1	J	10	0.85	ug/L	1		8260C	Total/NA
Acetone - DL	1900		400	130	ug/L	20		8260C	Total/NA
Methyl ethyl ketone (MEK) - DL	1000		400	7.8	ug/L	20		8260C	Total/NA
Barium	340	J	500	21	ug/L	10		6010C	Total/NA
Boron	390	J	500	72	ug/L	10		6010C	Total/NA
Calcium	140000		10000	540	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	550000		50000	17000	ug/L	10		6010C	Total/NA
Lead	18	J	100	6.0	ug/L	10		6010C	Total/NA
Magnesium	52		10	0.51	mg/L	10		6010C	Total/NA
Mn	700		150	10	ug/L	10		6010C	Total/NA
Nickel	0.037	J	0.40	0.026	mg/L	10		6010C	Total/NA
Sodium	290000	B	10000	1100	ug/L	10		6010C	Total/NA

Client Sample ID: MO-3-SDR-DUP

Lab Sample ID: 160-13471-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	34		5.0	0.25	ug/L	1		8260C	Total/NA
Carbon disulfide	1.1	J	5.0	0.37	ug/L	1		8260C	Total/NA
Chloroform	1.1	J	5.0	0.15	ug/L	1		8260C	Total/NA
Ethylbenzene	0.56	J	5.0	0.30	ug/L	1		8260C	Total/NA
2-Hexanone	33		20	0.59	ug/L	1		8260C	Total/NA
4-Methyl-2-pentanone (MIBK)	52		20	0.33	ug/L	1		8260C	Total/NA
Toluene	2.4	J	5.0	1.0	ug/L	1		8260C	Total/NA
Trichloroethene	0.97	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Xylenes, Total	2.2	J	10	0.85	ug/L	1		8260C	Total/NA
Acetone - DL	1700		400	130	ug/L	20		8260C	Total/NA
Methyl ethyl ketone (MEK) - DL	940		400	7.8	ug/L	20		8260C	Total/NA
Barium	330	J	500	21	ug/L	10		6010C	Total/NA
Boron	380	J	500	72	ug/L	10		6010C	Total/NA
Calcium	130000		10000	540	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	540000		50000	17000	ug/L	10		6010C	Total/NA
Lead	12	J	100	6.0	ug/L	10		6010C	Total/NA
Magnesium	52		10	0.51	mg/L	10		6010C	Total/NA
Mn	690		150	10	ug/L	10		6010C	Total/NA
Nickel	0.033	J	0.40	0.026	mg/L	10		6010C	Total/NA
Sodium	280000	B	10000	1100	ug/L	10		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13471-1

Client Sample ID: MO-3-SS

Date Collected: 08/20/15 10:00
Date Received: 08/20/15 17:00

Lab Sample ID: 160-13471-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	39		20	6.7	ug/L			08/22/15 15:52	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 15:52	1
Benzene	33		5.0	0.25	ug/L			08/22/15 15:52	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 15:52	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 15:52	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 15:52	1
Carbon disulfide	0.74	J	5.0	0.37	ug/L			08/22/15 15:52	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 15:52	1
Chlorobenzene	1.6	J	5.0	0.38	ug/L			08/22/15 15:52	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 15:52	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 15:52	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 15:52	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 15:52	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 15:52	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 15:52	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 15:52	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 15:52	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 15:52	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 15:52	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 15:52	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 15:52	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 15:52	1
Ethylbenzene	1.5	J	5.0	0.30	ug/L			08/22/15 15:52	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 15:52	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 15:52	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 15:52	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 15:52	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 15:52	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 15:52	1
Methyl ethyl ketone (MEK)	19	J	20	0.39	ug/L			08/22/15 15:52	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 15:52	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 15:52	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 15:52	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 15:52	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 15:52	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 15:52	1
Toluene	9.0		5.0	1.0	ug/L			08/22/15 15:52	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 15:52	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 15:52	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 15:52	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 15:52	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 15:52	1
Trichloroethene	1.0	J B	5.0	0.29	ug/L			08/22/15 15:52	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 15:52	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 15:52	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 15:52	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 15:52	1
Xylenes, Total	2.5	J	10	0.85	ug/L			08/22/15 15:52	1

Client Sample ID: MO-3-SS

Date Collected: 08/20/15 10:00
Date Received: 08/20/15 17:00

Lab Sample ID: 160-13471-1

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*129*	*X*	*75 - 123*		*08/22/15 15:52*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/22/15 15:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*		*08/22/15 15:52*	*1*
Toluene-d8 (Surr)	*111*		*80 - 120*		*08/22/15 15:52*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		100	37	ug/L		08/21/15 15:53	08/25/15 12:44	10
Arsenic	**20**	**J**	100	18	ug/L		08/21/15 15:53	08/25/15 12:44	10
Barium	**340**	**J**	500	21	ug/L		08/21/15 15:53	08/25/15 12:44	10
Beryllium	ND		50	2.8	ug/L		08/21/15 15:53	08/25/15 12:44	10
Boron	**230**	**J**	500	72	ug/L		08/21/15 15:53	08/25/15 12:44	10
Cadmium	ND		50	3.4	ug/L		08/21/15 15:53	08/25/15 12:44	10
Calcium	**240000**		10000	540	ug/L		08/21/15 15:53	08/25/15 12:44	10
Chromium	ND		100	34	ug/L		08/21/15 15:53	08/25/15 12:44	10
Cobalt	ND		500	27	ug/L		08/21/15 15:53	08/25/15 12:44	10
Copper	ND		250	21	ug/L		08/21/15 15:53	08/25/15 12:44	10
Hardness (as CaCO3)	**910000**		50000	17000	ug/L		08/21/15 15:53	08/25/15 12:44	10
Lead	ND		100	6.0	ug/L		08/21/15 15:53	08/25/15 12:44	10
Magnesium	**75**		10	0.51	mg/L		08/21/15 15:53	08/25/15 12:44	10
Mn	**1200**		150	10	ug/L		08/21/15 15:53	08/25/15 12:44	10
Nickel	**0.034**	**J**	0.40	0.026	mg/L		08/21/15 15:53	08/25/15 12:44	10
Phosphorus	**600**	**J B**	2500	140	ug/L		08/21/15 15:53	08/25/15 12:44	10
Selenium	ND		150	21	ug/L		08/21/15 15:53	08/25/15 12:44	10
Silver	ND		100	9.9	ug/L		08/21/15 15:53	08/25/15 12:44	10
Sodium	**57000**	**B**	10000	1100	ug/L		08/21/15 15:53	08/25/15 12:44	10
Thallium	ND		200	24	ug/L		08/21/15 15:53	08/25/15 12:44	10
Vanadium	ND		500	44	ug/L		08/21/15 15:53	08/25/15 12:44	10
Zinc	**85**	**J**	200	83	ug/L		08/21/15 15:53	08/25/15 12:44	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/21/15 13:49	08/21/15 19:22	1

Client Sample ID: MO-2-SD

Date Collected: 08/20/15 16:00
Date Received: 08/20/15 17:00

Lab Sample ID: 160-13471-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 16:16	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 16:16	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 16:16	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 16:16	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 16:16	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 16:16	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 16:16	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 16:16	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 16:16	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 16:16	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 16:16	1

Client Sample ID: MO-2-SD

Date Collected: 08/20/15 16:00
Date Received: 08/20/15 17:00

Lab Sample ID: 160-13471-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 16:16	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 16:16	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 16:16	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 16:16	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 16:16	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 16:16	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 16:16	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 16:16	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 16:16	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 16:16	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 16:16	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 16:16	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 16:16	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 16:16	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 16:16	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 16:16	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 16:16	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 16:16	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/22/15 16:16	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 16:16	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 16:16	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 16:16	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 16:16	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 16:16	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 16:16	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 16:16	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 16:16	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 16:16	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 16:16	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 16:16	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 16:16	1
Trichloroethene	0.83	J B	5.0	0.29	ug/L			08/22/15 16:16	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 16:16	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 16:16	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 16:16	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 16:16	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 16:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*	*X*	*75 - 123*		*08/22/15 16:16*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/22/15 16:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*78 - 127*		*08/22/15 16:16*	*1*
Toluene-d8 (Surr)	*110*		*80 - 120*		*08/22/15 16:16*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		100	37	ug/L		08/21/15 15:53	08/25/15 13:00	10
Arsenic	30	J	100	18	ug/L		08/21/15 15:53	08/25/15 13:00	10
Barium	470	J	500	21	ug/L		08/21/15 15:53	08/25/15 13:00	10
Beryllium	6.0	J	50	2.8	ug/L		08/21/15 15:53	08/25/15 13:00	10

Client Sample ID: MO-2-SD

Date Collected: 08/20/15 16:00
Date Received: 08/20/15 17:00

Lab Sample ID: 160-13471-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	160	J	500	72	ug/L		08/21/15 15:53	08/25/15 13:00	10
Cadmium	ND		50	3.4	ug/L		08/21/15 15:53	08/25/15 13:00	10
Calcium	200000		10000	540	ug/L		08/21/15 15:53	08/25/15 13:00	10
Chromium	85	J	100	34	ug/L		08/21/15 15:53	08/25/15 13:00	10
Cobalt	ND		500	27	ug/L		08/21/15 15:53	08/25/15 13:00	10
Copper	ND		250	21	ug/L		08/21/15 15:53	08/25/15 13:00	10
Hardness (as CaCO3)	750000		50000	17000	ug/L		08/21/15 15:53	08/25/15 13:00	10
Lead	110		100	6.0	ug/L		08/21/15 15:53	08/25/15 13:00	10
Magnesium	60		10	0.51	mg/L		08/21/15 15:53	08/25/15 13:00	10
Mn	2100		150	10	ug/L		08/21/15 15:53	08/25/15 13:00	10
Nickel	0.13	J	0.40	0.026	mg/L		08/21/15 15:53	08/25/15 13:00	10
Phosphorus	2500	B	2500	140	ug/L		08/21/15 15:53	08/25/15 13:00	10
Selenium	ND		150	21	ug/L		08/21/15 15:53	08/25/15 13:00	10
Silver	ND		100	9.9	ug/L		08/21/15 15:53	08/25/15 13:00	10
Sodium	100000	B	10000	1100	ug/L		08/21/15 15:53	08/25/15 13:00	10
Thallium	ND		200	24	ug/L		08/21/15 15:53	08/25/15 13:00	10
Vanadium	57	J B	500	44	ug/L		08/21/15 15:53	08/25/15 13:00	10
Zinc	260		200	83	ug/L		08/21/15 15:53	08/25/15 13:00	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11	J	0.20	0.060	ug/L		08/21/15 13:49	08/21/15 19:24	1

Client Sample ID: MO-3-SDR

Date Collected: 08/20/15 12:45
Date Received: 08/20/15 17:00

Lab Sample ID: 160-13471-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 16:41	1
Benzene	32		5.0	0.25	ug/L			08/22/15 16:41	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 16:41	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 16:41	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 16:41	1
Carbon disulfide	0.83	J	5.0	0.37	ug/L			08/22/15 16:41	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 16:41	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 16:41	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 16:41	1
Chloroform	0.97	J	5.0	0.15	ug/L			08/22/15 16:41	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 16:41	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 16:41	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 16:41	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 16:41	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 16:41	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 16:41	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 16:41	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 16:41	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 16:41	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 16:41	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 16:41	1

Client Sample ID: MO-3-SDR

Date Collected: 08/20/15 12:45
Date Received: 08/20/15 17:00

Lab Sample ID: 160-13471-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	0.54	J	5.0	0.30	ug/L			08/22/15 16:41	1
2-Hexanone	20		20	0.59	ug/L			08/22/15 16:41	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 16:41	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 16:41	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 16:41	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 16:41	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 16:41	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 16:41	1
4-Methyl-2-pentanone (MIBK)	37		20	0.33	ug/L			08/22/15 16:41	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 16:41	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 16:41	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 16:41	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 16:41	1
Toluene	2.7	J	5.0	1.0	ug/L			08/22/15 16:41	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 16:41	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 16:41	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 16:41	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 16:41	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 16:41	1
Trichloroethene	0.84	J B	5.0	0.29	ug/L			08/22/15 16:41	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 16:41	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 16:41	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 16:41	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 16:41	1
Xylenes, Total	2.1	J	10	0.85	ug/L			08/22/15 16:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*75 - 123*		*08/22/15 16:41*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*08/22/15 16:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*78 - 127*		*08/22/15 16:41*	*1*
Toluene-d8 (Surr)	*112*		*80 - 120*		*08/22/15 16:41*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1900		400	130	ug/L			08/23/15 20:09	20
Methyl ethyl ketone (MEK)	1000		400	7.8	ug/L			08/23/15 20:09	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*75 - 123*		*08/23/15 20:09*	*20*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*08/23/15 20:09*	*20*
1,2-Dichloroethane-d4 (Surr)	*97*		*78 - 127*		*08/23/15 20:09*	*20*
Toluene-d8 (Surr)	*106*		*80 - 120*		*08/23/15 20:09*	*20*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		100	37	ug/L		08/21/15 15:53	08/25/15 13:04	10
Arsenic	ND		100	18	ug/L		08/21/15 15:53	08/25/15 13:04	10
Barium	340	J	500	21	ug/L		08/21/15 15:53	08/25/15 13:04	10
Beryllium	ND		50	2.8	ug/L		08/21/15 15:53	08/25/15 13:04	10
Boron	390	J	500	72	ug/L		08/21/15 15:53	08/25/15 13:04	10

Client Sample ID: MO-3-SDR

Date Collected: 08/20/15 12:45
Date Received: 08/20/15 17:00

Lab Sample ID: 160-13471-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		50	3.4	ug/L		08/21/15 15:53	08/25/15 13:04	10
Calcium	**140000**		10000	540	ug/L		08/21/15 15:53	08/25/15 13:04	10
Chromium	ND		100	34	ug/L		08/21/15 15:53	08/25/15 13:04	10
Cobalt	ND		500	27	ug/L		08/21/15 15:53	08/25/15 13:04	10
Copper	ND		250	21	ug/L		08/21/15 15:53	08/25/15 13:04	10
Hardness (as CaCO3)	**550000**		50000	17000	ug/L		08/21/15 15:53	08/25/15 13:04	10
Lead	**18**	J	100	6.0	ug/L		08/21/15 15:53	08/25/15 13:04	10
Magnesium	**52**		10	0.51	mg/L		08/21/15 15:53	08/25/15 13:04	10
Mn	**700**		150	10	ug/L		08/21/15 15:53	08/25/15 13:04	10
Nickel	**0.037**	J	0.40	0.026	mg/L		08/21/15 15:53	08/25/15 13:04	10
Phosphorus	ND		2500	140	ug/L		08/21/15 15:53	08/25/15 13:04	10
Selenium	ND		150	21	ug/L		08/21/15 15:53	08/25/15 13:04	10
Silver	ND		100	9.9	ug/L		08/21/15 15:53	08/25/15 13:04	10
Sodium	**290000**	B	10000	1100	ug/L		08/21/15 15:53	08/25/15 13:04	10
Thallium	ND		200	24	ug/L		08/21/15 15:53	08/25/15 13:04	10
Vanadium	ND		500	44	ug/L		08/21/15 15:53	08/25/15 13:04	10
Zinc	ND		200	83	ug/L		08/21/15 15:53	08/25/15 13:04	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/21/15 13:49	08/21/15 19:28	1

Client Sample ID: MO-3-SDR-DUP

Date Collected: 08/20/15 12:45
Date Received: 08/20/15 17:00

Lab Sample ID: 160-13471-4

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 17:06	1
Benzene	**34**		5.0	0.25	ug/L			08/22/15 17:06	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 17:06	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 17:06	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 17:06	1
Carbon disulfide	**1.1**	J	5.0	0.37	ug/L			08/22/15 17:06	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 17:06	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 17:06	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 17:06	1
Chloroform	**1.1**	J	5.0	0.15	ug/L			08/22/15 17:06	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 17:06	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 17:06	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 17:06	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 17:06	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 17:06	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 17:06	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 17:06	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 17:06	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 17:06	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 17:06	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 17:06	1
Ethylbenzene	**0.56**	J	5.0	0.30	ug/L			08/22/15 17:06	1

Client Sample ID: MO-3-SDR-DUP

Date Collected: 08/20/15 12:45
Date Received: 08/20/15 17:00

Lab Sample ID: 160-13471-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	33		20	0.59	ug/L			08/22/15 17:06	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 17:06	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 17:06	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 17:06	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 17:06	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 17:06	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 17:06	1
4-Methyl-2-pentanone (MIBK)	52		20	0.33	ug/L			08/22/15 17:06	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 17:06	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 17:06	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 17:06	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 17:06	1
Toluene	2.4	J	5.0	1.0	ug/L			08/22/15 17:06	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 17:06	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 17:06	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 17:06	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 17:06	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 17:06	1
Trichloroethene	0.97	J B	5.0	0.29	ug/L			08/22/15 17:06	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 17:06	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 17:06	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 17:06	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 17:06	1
Xylenes, Total	2.2	J	10	0.85	ug/L			08/22/15 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*75 - 123*		*08/22/15 17:06*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*08/22/15 17:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*78 - 127*		*08/22/15 17:06*	*1*
Toluene-d8 (Surr)	*110*		*80 - 120*		*08/22/15 17:06*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1700		400	130	ug/L			08/23/15 20:35	20
Methyl ethyl ketone (MEK)	940		400	7.8	ug/L			08/23/15 20:35	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*75 - 123*		*08/23/15 20:35*	*20*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/23/15 20:35*	*20*
1,2-Dichloroethane-d4 (Surr)	*93*		*78 - 127*		*08/23/15 20:35*	*20*
Toluene-d8 (Surr)	*106*		*80 - 120*		*08/23/15 20:35*	*20*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		100	37	ug/L		08/21/15 15:53	08/25/15 13:08	10
Arsenic	ND		100	18	ug/L		08/21/15 15:53	08/25/15 13:08	10
Barium	330	J	500	21	ug/L		08/21/15 15:53	08/25/15 13:08	10
Beryllium	ND		50	2.8	ug/L		08/21/15 15:53	08/25/15 13:08	10
Boron	380	J	500	72	ug/L		08/21/15 15:53	08/25/15 13:08	10
Cadmium	ND		50	3.4	ug/L		08/21/15 15:53	08/25/15 13:08	10

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13471-1

Client Sample ID: MO-3-SDR-DUP
Date Collected: 08/20/15 12:45
Date Received: 08/20/15 17:00

Lab Sample ID: 160-13471-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	130000		10000	540	ug/L		08/21/15 15:53	08/25/15 13:08	10
Chromium	ND		100	34	ug/L		08/21/15 15:53	08/25/15 13:08	10
Cobalt	ND		500	27	ug/L		08/21/15 15:53	08/25/15 13:08	10
Copper	ND		250	21	ug/L		08/21/15 15:53	08/25/15 13:08	10
Hardness (as CaCO3)	540000		50000	17000	ug/L		08/21/15 15:53	08/25/15 13:08	10
Lead	12	J	100	6.0	ug/L		08/21/15 15:53	08/25/15 13:08	10
Magnesium	52		10	0.51	mg/L		08/21/15 15:53	08/25/15 13:08	10
Mn	690		150	10	ug/L		08/21/15 15:53	08/25/15 13:08	10
Nickel	0.033	J	0.40	0.026	mg/L		08/21/15 15:53	08/25/15 13:08	10
Phosphorus	ND		2500	140	ug/L		08/21/15 15:53	08/25/15 13:08	10
Selenium	ND		150	21	ug/L		08/21/15 15:53	08/25/15 13:08	10
Silver	ND		100	9.9	ug/L		08/21/15 15:53	08/25/15 13:08	10
Sodium	280000	B	10000	1100	ug/L		08/21/15 15:53	08/25/15 13:08	10
Thallium	ND		200	24	ug/L		08/21/15 15:53	08/25/15 13:08	10
Vanadium	ND		500	44	ug/L		08/21/15 15:53	08/25/15 13:08	10
Zinc	ND		200	83	ug/L		08/21/15 15:53	08/25/15 13:08	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/21/15 13:49	08/21/15 19:35	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 160-207022/7
Matrix: Water
Analysis Batch: 207022

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 13:23	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 13:23	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 13:23	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 13:23	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 13:23	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 13:23	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 13:23	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 13:23	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 13:23	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 13:23	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 13:23	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 13:23	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 13:23	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 13:23	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 13:23	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 13:23	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 13:23	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 13:23	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 13:23	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 13:23	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 13:23	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 13:23	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 13:23	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 13:23	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 13:23	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 13:23	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 13:23	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 13:23	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/22/15 13:23	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 13:23	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 13:23	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 13:23	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 13:23	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 13:23	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 13:23	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 13:23	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 13:23	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 13:23	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 13:23	1
Trichloroethene	0.589	J	5.0	0.29	ug/L			08/22/15 13:23	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 13:23	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 13:23	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 13:23	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 13:23	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 13:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129	X	75 - 123		08/22/15 13:23	1
Dibromofluoromethane (Surr)	104		80 - 120		08/22/15 13:23	1
1,2-Dichloroethane-d4 (Surr)	101		78 - 127		08/22/15 13:23	1
Toluene-d8 (Surr)	113		80 - 120		08/22/15 13:23	1

Lab Sample ID: LCS 160-207022/4
Matrix: Water
Analysis Batch: 207022

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	50.1		ug/L		100	72 - 139
Acrylonitrile	500	489		ug/L		98	80 - 120
Benzene	50.0	52.2		ug/L		104	80 - 120
Bromochloromethane	50.0	48.6		ug/L		97	80 - 120
Bromodichloromethane	50.0	50.1		ug/L		100	80 - 120
Bromoform	50.0	49.7		ug/L		99	80 - 120
Carbon disulfide	50.0	51.2		ug/L		102	79 - 120
Carbon tetrachloride	50.0	52.0		ug/L		104	74 - 128
Chlorobenzene	50.0	50.0		ug/L		100	80 - 120
Chloroethane	50.0	46.6		ug/L		93	55 - 140
Chloroform	50.0	47.9		ug/L		96	80 - 120
cis-1,2-Dichloroethene	50.0	50.4		ug/L		101	80 - 120
cis-1,3-Dichloropropene	50.0	54.1		ug/L		108	80 - 120
Dibromochloromethane	50.0	49.1		ug/L		98	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	46.8		ug/L		94	69 - 135
1,2-Dibromoethane (EDB)	50.0	49.7		ug/L		99	80 - 120
1,2-Dichlorobenzene	50.0	54.2		ug/L		108	76 - 122
1,4-Dichlorobenzene	50.0	51.7		ug/L		103	80 - 120
1,1-Dichloroethane	50.0	51.3		ug/L		103	80 - 120
1,2-Dichloroethane	50.0	53.0		ug/L		106	80 - 120
1,1-Dichloroethene	50.0	52.3		ug/L		105	77 - 121
1,2-Dichloropropane	50.0	51.2		ug/L		102	80 - 120
Ethylbenzene	50.0	56.1		ug/L		112	80 - 120
2-Hexanone	50.0	48.1		ug/L		96	64 - 136
Methacrylonitrile	500	509		ug/L		102	78 - 123
Methyl bromide	50.0	45.3		ug/L		91	48 - 140
Methyl chloride	50.0	54.0		ug/L		108	72 - 123
Methylene bromide	50.0	49.2		ug/L		98	80 - 120
Methylene Chloride	50.0	48.8		ug/L		98	79 - 115
Methyl ethyl ketone (MEK)	50.0	52.5		ug/L		105	68 - 128
Methyl iodide	50.0	52.7		ug/L		105	72 - 130
4-Methyl-2-pentanone (MIBK)	50.0	53.0		ug/L		106	74 - 129
Styrene	50.0	57.0		ug/L		114	80 - 120
1,1,1,2-Tetrachloroethane	50.0	51.1		ug/L		102	80 - 120
1,1,2,2-Tetrachloroethane	50.0	50.0		ug/L		100	80 - 120
Tetrachloroethene	50.0	49.4		ug/L		99	80 - 120
Toluene	50.0	53.1		ug/L		106	80 - 120
trans-1,4-Dichloro-2-butene	50.0	48.9		ug/L		98	80 - 123
trans-1,2-Dichloroethene	50.0	51.3		ug/L		103	80 - 120
trans-1,3-Dichloropropene	50.0	52.5		ug/L		105	80 - 120
1,1,1-Trichloroethane	50.0	52.5		ug/L		105	75 - 127
1,1,2-Trichloroethane	50.0	46.2		ug/L		92	80 - 120
Trichloroethene	50.0	51.7		ug/L		103	80 - 120
Trichlorofluoromethane	50.0	49.2		ug/L		98	72 - 132

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

Lab Sample ID: LCS 160-207022/4
Matrix: Water
Analysis Batch: 207022

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	50.0	47.0		ug/L		94	80 - 120
Vinyl acetate	50.0	54.6		ug/L		109	43 - 140
Vinyl chloride	50.0	46.7		ug/L		93	68 - 120
Xylenes, Total	100	107		ug/L		107	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*75 - 123*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*
Toluene-d8 (Surr)	*105*		*80 - 120*

Lab Sample ID: LCSD 160-207022/5
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	46.8		ug/L		94	72 - 139	7	20
Acrylonitrile	500	487		ug/L		97	80 - 120	1	20
Benzene	50.0	52.6		ug/L		105	80 - 120	1	20
Bromochloromethane	50.0	47.3		ug/L		95	80 - 120	3	20
Bromodichloromethane	50.0	52.1		ug/L		104	80 - 120	4	20
Bromoform	50.0	47.4		ug/L		95	80 - 120	5	20
Carbon disulfide	50.0	50.3		ug/L		101	79 - 120	2	20
Carbon tetrachloride	50.0	52.8		ug/L		106	74 - 128	2	20
Chlorobenzene	50.0	50.4		ug/L		101	80 - 120	1	20
Chloroethane	50.0	46.2		ug/L		92	55 - 140	1	20
Chloroform	50.0	50.8		ug/L		102	80 - 120	6	20
cis-1,2-Dichloroethene	50.0	51.8		ug/L		104	80 - 120	3	20
cis-1,3-Dichloropropene	50.0	55.0		ug/L		110	80 - 120	2	20
Dibromochloromethane	50.0	51.8		ug/L		104	80 - 120	5	20
1,2-Dibromo-3-Chloropropane	50.0	52.7		ug/L		105	69 - 135	12	20
1,2-Dibromoethane (EDB)	50.0	50.0		ug/L		100	80 - 120	1	20
1,2-Dichlorobenzene	50.0	53.3		ug/L		107	76 - 122	2	20
1,4-Dichlorobenzene	50.0	52.3		ug/L		105	80 - 120	1	20
1,1-Dichloroethane	50.0	50.4		ug/L		101	80 - 120	2	20
1,2-Dichloroethane	50.0	50.6		ug/L		101	80 - 120	5	20
1,1-Dichloroethene	50.0	52.1		ug/L		104	77 - 121	0	20
1,2-Dichloropropane	50.0	53.3		ug/L		107	80 - 120	4	20
Ethylbenzene	50.0	57.0		ug/L		114	80 - 120	2	20
2-Hexanone	50.0	57.0		ug/L		114	64 - 136	17	20
Methacrylonitrile	500	525		ug/L		105	78 - 123	3	20
Methyl bromide	50.0	45.4		ug/L		91	48 - 140	0	20
Methyl chloride	50.0	54.7		ug/L		109	72 - 123	1	20
Methylene bromide	50.0	51.2		ug/L		102	80 - 120	4	20
Methylene Chloride	50.0	47.6		ug/L		95	79 - 115	2	20
Methyl ethyl ketone (MEK)	50.0	53.5		ug/L		107	68 - 128	2	20
Methyl iodide	50.0	51.1		ug/L		102	72 - 130	3	20
4-Methyl-2-pentanone (MIBK)	50.0	57.2		ug/L		114	74 - 129	8	20

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

Lab Sample ID: LCSD 160-207022/5
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Styrene	50.0	57.9		ug/L		116	80 - 120	1	20
1,1,1,2-Tetrachloroethane	50.0	51.6		ug/L		103	80 - 120	1	20
1,1,2,2-Tetrachloroethane	50.0	50.7		ug/L		101	80 - 120	1	20
Tetrachloroethene	50.0	50.1		ug/L		100	80 - 120	2	20
Toluene	50.0	54.2		ug/L		108	80 - 120	2	20
trans-1,4-Dichloro-2-butene	50.0	50.1		ug/L		100	80 - 123	2	20
trans-1,2-Dichloroethene	50.0	49.2		ug/L		98	80 - 120	4	20
trans-1,3-Dichloropropene	50.0	60.3	*	ug/L		121	80 - 120	14	20
1,1,1-Trichloroethane	50.0	52.0		ug/L		104	75 - 127	1	20
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	80 - 120	9	20
Trichloroethene	50.0	50.8		ug/L		102	80 - 120	2	20
Trichlorofluoromethane	50.0	47.8		ug/L		96	72 - 132	3	20
1,2,3-Trichloropropane	50.0	47.8		ug/L		96	80 - 120	2	20
Vinyl acetate	50.0	54.2		ug/L		108	43 - 140	1	20
Vinyl chloride	50.0	46.2		ug/L		92	68 - 120	1	20
Xylenes, Total	100	109		ug/L		109	80 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*75 - 123*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*
Toluene-d8 (Surr)	*107*		*80 - 120*

Lab Sample ID: 160-13506-A-4 MS
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		50.0	58.9		ug/L		118	54 - 140
Acrylonitrile	ND		500	554		ug/L		111	80 - 125
Benzene	ND		50.0	56.7		ug/L		113	72 - 123
Bromochloromethane	ND		50.0	52.2		ug/L		104	80 - 120
Bromodichloromethane	ND		50.0	57.0		ug/L		114	80 - 120
Bromoform	ND		50.0	50.4		ug/L		101	78 - 122
Carbon disulfide	ND		50.0	52.9		ug/L		106	80 - 120
Carbon tetrachloride	ND		50.0	53.1		ug/L		106	80 - 124
Chlorobenzene	ND		50.0	53.3		ug/L		107	80 - 120
Chloroethane	ND		50.0	53.5		ug/L		107	53 - 148
Chloroform	ND		50.0	52.1		ug/L		104	80 - 120
cis-1,2-Dichloroethene	ND		50.0	55.3		ug/L		111	80 - 120
cis-1,3-Dichloropropene	ND		50.0	54.9		ug/L		110	80 - 120
Dibromochloromethane	ND		50.0	54.0		ug/L		108	80 - 120
1,2-Dibromo-3-Chloropropane	ND		50.0	51.7		ug/L		103	59 - 144
1,2-Dibromoethane (EDB)	ND		50.0	55.4		ug/L		111	80 - 120
1,2-Dichlorobenzene	ND		50.0	55.7		ug/L		111	77 - 117
1,4-Dichlorobenzene	ND		50.0	53.1		ug/L		106	80 - 120
1,1-Dichloroethane	ND		50.0	52.6		ug/L		105	80 - 120
1,2-Dichloroethane	ND		50.0	55.8		ug/L		112	80 - 120

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

Lab Sample ID: 160-13506-A-4 MS
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	ND		50.0	52.9		ug/L		106	80 - 120
1,2-Dichloropropane	ND		50.0	55.3		ug/L		111	80 - 120
Ethylbenzene	ND		50.0	58.2		ug/L		116	80 - 120
2-Hexanone	ND		50.0	59.5		ug/L		119	65 - 136
Methacrylonitrile	ND		500	605		ug/L		121	78 - 121
Methyl bromide	ND		50.0	51.0		ug/L		102	51 - 146
Methyl chloride	ND		50.0	50.7		ug/L		101	80 - 120
Methylene bromide	ND		50.0	57.6		ug/L		115	80 - 120
Methylene Chloride	ND		50.0	51.7		ug/L		103	80 - 120
Methyl ethyl ketone (MEK)	ND		50.0	57.3		ug/L		115	62 - 135
Methyl iodide	ND		50.0	52.3		ug/L		105	77 - 125
4-Methyl-2-pentanone (MIBK)	ND		50.0	59.5		ug/L		119	74 - 132
Styrene	ND		50.0	59.7		ug/L		119	80 - 120
1,1,1,2-Tetrachloroethane	ND		50.0	54.4		ug/L		109	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	54.9		ug/L		110	72 - 125
Tetrachloroethene	ND		50.0	50.5		ug/L		101	80 - 120
Toluene	ND		50.0	53.9		ug/L		108	80 - 120
trans-1,4-Dichloro-2-butene	ND		50.0	45.6		ug/L		91	73 - 125
trans-1,2-Dichloroethene	ND		50.0	48.7		ug/L		97	80 - 120
trans-1,3-Dichloropropene	ND	*	50.0	58.2		ug/L		116	77 - 122
1,1,1-Trichloroethane	ND		50.0	52.1		ug/L		104	81 - 123
1,1,2-Trichloroethane	ND		50.0	54.2		ug/L		108	76 - 119
Trichloroethene	ND		50.0	53.3		ug/L		107	80 - 120
Trichlorofluoromethane	ND		50.0	55.1		ug/L		110	79 - 128
1,2,3-Trichloropropane	ND		50.0	49.9		ug/L		100	72 - 120
Vinyl acetate	ND		50.0	57.9		ug/L		116	47 - 150
Vinyl chloride	ND		50.0	48.1		ug/L		96	75 - 118
Xylenes, Total	ND		100	109		ug/L		109	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*75 - 123*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*107*		*78 - 127*
Toluene-d8 (Surr)	*106*		*80 - 120*

Lab Sample ID: 160-13506-A-4 MSD
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		50.0	56.0		ug/L		112	54 - 140	5	20
Acrylonitrile	ND		500	507		ug/L		101	80 - 125	9	20
Benzene	ND		50.0	52.3		ug/L		105	72 - 123	8	20
Bromochloromethane	ND		50.0	49.6		ug/L		99	80 - 120	5	20
Bromodichloromethane	ND		50.0	55.6		ug/L		111	80 - 120	2	20
Bromoform	ND		50.0	54.1		ug/L		108	78 - 122	7	20
Carbon disulfide	ND		50.0	48.8		ug/L		98	80 - 120	8	20
Carbon tetrachloride	ND		50.0	51.5		ug/L		103	80 - 124	3	20

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

Lab Sample ID: 160-13506-A-4 MSD
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene	ND		50.0	52.4		ug/L		105	80 - 120	2	20
Chloroethane	ND		50.0	48.3		ug/L		97	53 - 148	10	20
Chloroform	ND		50.0	50.2		ug/L		100	80 - 120	4	20
cis-1,2-Dichloroethene	ND		50.0	51.3		ug/L		103	80 - 120	8	20
cis-1,3-Dichloropropene	ND		50.0	54.9		ug/L		110	80 - 120	0	20
Dibromochloromethane	ND		50.0	54.7		ug/L		109	80 - 120	1	20
1,2-Dibromo-3-Chloropropane	ND		50.0	49.8		ug/L		100	59 - 144	4	20
1,2-Dibromoethane (EDB)	ND		50.0	55.5		ug/L		111	80 - 120	0	20
1,2-Dichlorobenzene	ND		50.0	53.8		ug/L		108	77 - 117	4	20
1,4-Dichlorobenzene	ND		50.0	52.8		ug/L		106	80 - 120	1	20
1,1-Dichloroethane	ND		50.0	50.1		ug/L		100	80 - 120	5	20
1,2-Dichloroethane	ND		50.0	56.0		ug/L		112	80 - 120	0	20
1,1-Dichloroethene	ND		50.0	49.4		ug/L		99	80 - 120	7	20
1,2-Dichloropropane	ND		50.0	55.3		ug/L		111	80 - 120	0	20
Ethylbenzene	ND		50.0	56.1		ug/L		112	80 - 120	4	20
2-Hexanone	ND		50.0	54.7		ug/L		109	65 - 136	8	20
Methacrylonitrile	ND		500	558		ug/L		112	78 - 121	8	20
Methyl bromide	ND		50.0	46.3		ug/L		93	51 - 146	10	20
Methyl chloride	ND		50.0	50.0		ug/L		100	80 - 120	1	20
Methylene bromide	ND		50.0	54.1		ug/L		108	80 - 120	6	20
Methylene Chloride	ND		50.0	49.2		ug/L		98	80 - 120	5	20
Methyl ethyl ketone (MEK)	ND		50.0	53.0		ug/L		106	62 - 135	8	20
Methyl iodide	ND		50.0	49.0		ug/L		98	77 - 125	7	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	57.9		ug/L		116	74 - 132	3	20
Styrene	ND		50.0	57.1		ug/L		114	80 - 120	5	20
1,1,1,2-Tetrachloroethane	ND		50.0	52.0		ug/L		104	80 - 120	4	20
1,1,2,2-Tetrachloroethane	ND		50.0	54.5		ug/L		109	72 - 125	1	20
Tetrachloroethene	ND		50.0	49.1		ug/L		98	80 - 120	3	20
Toluene	ND		50.0	53.9		ug/L		108	80 - 120	0	20
trans-1,4-Dichloro-2-butene	ND		50.0	53.2		ug/L		106	73 - 125	15	20
trans-1,2-Dichloroethene	ND		50.0	49.1		ug/L		98	80 - 120	1	20
trans-1,3-Dichloropropene	ND	*	50.0	60.1		ug/L		120	77 - 122	3	20
1,1,1-Trichloroethane	ND		50.0	52.2		ug/L		104	81 - 123	0	20
1,1,2-Trichloroethane	ND		50.0	52.8		ug/L		106	76 - 119	3	20
Trichloroethene	ND		50.0	50.9		ug/L		102	80 - 120	5	20
Trichlorofluoromethane	ND		50.0	50.1		ug/L		100	79 - 128	10	20
1,2,3-Trichloropropane	ND		50.0	50.6		ug/L		101	72 - 120	1	20
Vinyl acetate	ND		50.0	57.1		ug/L		114	47 - 150	1	20
Vinyl chloride	ND		50.0	47.5		ug/L		95	75 - 118	1	20
Xylenes, Total	ND		100	106		ug/L		106	80 - 120	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*75 - 123*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*
Toluene-d8 (Surr)	*108*		*80 - 120*

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

Lab Sample ID: MB 160-207165/6
Matrix: Water
Analysis Batch: 207165

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/23/15 19:19	1
Acrylonitrile	ND		50	1.7	ug/L			08/23/15 19:19	1
Benzene	ND		5.0	0.25	ug/L			08/23/15 19:19	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/23/15 19:19	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/23/15 19:19	1
Bromoform	ND		5.0	0.37	ug/L			08/23/15 19:19	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/23/15 19:19	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/23/15 19:19	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/23/15 19:19	1
Chloroethane	ND		10	0.38	ug/L			08/23/15 19:19	1
Chloroform	ND		5.0	0.15	ug/L			08/23/15 19:19	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/23/15 19:19	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/23/15 19:19	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/23/15 19:19	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/23/15 19:19	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/23/15 19:19	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/23/15 19:19	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/23/15 19:19	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/23/15 19:19	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/23/15 19:19	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/23/15 19:19	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/23/15 19:19	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/23/15 19:19	1
2-Hexanone	ND		20	0.59	ug/L			08/23/15 19:19	1
Methacrylonitrile	ND		50	2.1	ug/L			08/23/15 19:19	1
Methyl bromide	ND		10	0.40	ug/L			08/23/15 19:19	1
Methyl chloride	ND		10	0.55	ug/L			08/23/15 19:19	1
Methylene bromide	ND		5.0	0.41	ug/L			08/23/15 19:19	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/23/15 19:19	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/23/15 19:19	1
Methyl iodide	ND		5.0	1.5	ug/L			08/23/15 19:19	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/23/15 19:19	1
Styrene	ND		5.0	0.35	ug/L			08/23/15 19:19	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/23/15 19:19	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/23/15 19:19	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/23/15 19:19	1
Toluene	ND		5.0	1.0	ug/L			08/23/15 19:19	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/23/15 19:19	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/23/15 19:19	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/23/15 19:19	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/23/15 19:19	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/23/15 19:19	1
Trichloroethene	0.783	J	5.0	0.29	ug/L			08/23/15 19:19	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/23/15 19:19	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/23/15 19:19	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/23/15 19:19	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/23/15 19:19	1
Xylenes, Total	ND		10	0.85	ug/L			08/23/15 19:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 123		08/23/15 19:19	1
Dibromofluoromethane (Surr)	96		80 - 120		08/23/15 19:19	1
1,2-Dichloroethane-d4 (Surr)	88		78 - 127		08/23/15 19:19	1
Toluene-d8 (Surr)	104		80 - 120		08/23/15 19:19	1

Lab Sample ID: LCS 160-207165/4
Matrix: Water
Analysis Batch: 207165

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	51.4		ug/L		103	72 - 139
Acrylonitrile	500	494		ug/L		99	80 - 120
Benzene	50.0	49.6		ug/L		99	80 - 120
Bromochloromethane	50.0	49.1		ug/L		98	80 - 120
Bromodichloromethane	50.0	45.4		ug/L		91	80 - 120
Bromoform	50.0	49.5		ug/L		99	80 - 120
Carbon disulfide	50.0	52.3		ug/L		105	79 - 120
Carbon tetrachloride	50.0	44.6		ug/L		89	74 - 128
Chlorobenzene	50.0	48.7		ug/L		97	80 - 120
Chloroethane	50.0	43.7		ug/L		87	55 - 140
Chloroform	50.0	46.0		ug/L		92	80 - 120
cis-1,2-Dichloroethene	50.0	49.5		ug/L		99	80 - 120
cis-1,3-Dichloropropene	50.0	48.8		ug/L		98	80 - 120
Dibromochloromethane	50.0	49.2		ug/L		98	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	51.3		ug/L		103	69 - 135
1,2-Dibromoethane (EDB)	50.0	49.6		ug/L		99	80 - 120
1,2-Dichlorobenzene	50.0	48.8		ug/L		98	76 - 122
1,4-Dichlorobenzene	50.0	49.3		ug/L		99	80 - 120
1,1-Dichloroethane	50.0	47.5		ug/L		95	80 - 120
1,2-Dichloroethane	50.0	42.2		ug/L		84	80 - 120
1,1-Dichloroethene	50.0	52.7		ug/L		105	77 - 121
1,2-Dichloropropane	50.0	48.3		ug/L		97	80 - 120
Ethylbenzene	50.0	45.1		ug/L		90	80 - 120
2-Hexanone	50.0	49.8		ug/L		100	64 - 136
Methacrylonitrile	500	446		ug/L		89	78 - 123
Methyl bromide	50.0	43.9		ug/L		88	48 - 140
Methyl chloride	50.0	47.4		ug/L		95	72 - 123
Methylene bromide	50.0	46.1		ug/L		92	80 - 120
Methylene Chloride	50.0	50.6		ug/L		101	79 - 115
Methyl ethyl ketone (MEK)	50.0	49.0		ug/L		98	68 - 128
Methyl iodide	50.0	50.0		ug/L		100	72 - 130
4-Methyl-2-pentanone (MIBK)	50.0	50.8		ug/L		102	74 - 129
Styrene	50.0	51.0		ug/L		102	80 - 120
1,1,1,2-Tetrachloroethane	50.0	48.3		ug/L		97	80 - 120
1,1,2,2-Tetrachloroethane	50.0	51.8		ug/L		104	80 - 120
Tetrachloroethene	50.0	49.0		ug/L		98	80 - 120
Toluene	50.0	50.5		ug/L		101	80 - 120
trans-1,4-Dichloro-2-butene	50.0	48.9		ug/L		98	80 - 123
trans-1,2-Dichloroethene	50.0	50.6		ug/L		101	80 - 120
trans-1,3-Dichloropropene	50.0	49.9		ug/L		100	80 - 120
1,1,1-Trichloroethane	50.0	44.6		ug/L		89	75 - 127
1,1,2-Trichloroethane	50.0	50.3		ug/L		101	80 - 120
Trichloroethene	50.0	43.2		ug/L		86	80 - 120
Trichlorofluoromethane	50.0	49.6		ug/L		99	72 - 132

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

Lab Sample ID: LCS 160-207165/4
Matrix: Water
Analysis Batch: 207165

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	50.0	46.9		ug/L		94	80 - 120
Vinyl acetate	50.0	52.0		ug/L		104	43 - 140
Vinyl chloride	50.0	46.7		ug/L		93	68 - 120
Xylenes, Total	100	99.6		ug/L		100	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*75 - 123*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*92*		*78 - 127*
Toluene-d8 (Surr)	*105*		*80 - 120*

Lab Sample ID: 160-13506-B-11 MS
Matrix: Water
Analysis Batch: 207165

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrylonitrile	ND		500	500		ug/L		100	80 - 125
Benzene	9.9		50.0	61.8		ug/L		104	72 - 123
Bromochloromethane	ND		50.0	52.0		ug/L		104	80 - 120
Bromodichloromethane	ND		50.0	48.5		ug/L		97	80 - 120
Bromoform	ND		50.0	50.6		ug/L		101	78 - 122
Carbon disulfide	0.98	J	50.0	56.5		ug/L		111	80 - 120
Carbon tetrachloride	ND		50.0	45.0		ug/L		90	80 - 124
Chlorobenzene	1.3	J	50.0	52.1		ug/L		102	80 - 120
Chloroethane	ND		50.0	46.2		ug/L		92	53 - 148
Chloroform	ND		50.0	49.5		ug/L		99	80 - 120
cis-1,2-Dichloroethene	ND		50.0	52.9		ug/L		106	80 - 120
cis-1,3-Dichloropropene	ND		50.0	52.6		ug/L		105	80 - 120
Dibromochloromethane	ND		50.0	50.4		ug/L		101	80 - 120
1,2-Dibromo-3-Chloropropane	ND		50.0	53.2		ug/L		106	59 - 144
1,2-Dibromoethane (EDB)	ND		50.0	52.1		ug/L		104	80 - 120
1,2-Dichlorobenzene	ND		50.0	51.5		ug/L		103	77 - 117
1,4-Dichlorobenzene	ND		50.0	51.0		ug/L		102	80 - 120
1,1-Dichloroethane	ND		50.0	51.2		ug/L		102	80 - 120
1,2-Dichloroethane	ND		50.0	44.5		ug/L		89	80 - 120
1,1-Dichloroethene	ND		50.0	55.5		ug/L		111	80 - 120
1,2-Dichloropropane	ND		50.0	52.0		ug/L		104	80 - 120
Ethylbenzene	ND		50.0	46.9		ug/L		94	80 - 120
2-Hexanone	16	J	50.0	62.5		ug/L		93	65 - 136
Methacrylonitrile	ND		500	458		ug/L		92	78 - 121
Methyl bromide	ND		50.0	40.6		ug/L		81	51 - 146
Methyl chloride	ND	F1	50.0	39.4	F1	ug/L		79	80 - 120
Methylene bromide	ND		50.0	48.7		ug/L		97	80 - 120
Methylene Chloride	ND		50.0	55.0		ug/L		110	80 - 120
Methyl iodide	ND		50.0	53.3		ug/L		107	77 - 125
4-Methyl-2-pentanone (MIBK)	19	J	50.0	70.7		ug/L		102	74 - 132
Styrene	ND		50.0	52.5		ug/L		105	80 - 120
1,1,1,2-Tetrachloroethane	ND		50.0	52.4		ug/L		105	80 - 120

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

Lab Sample ID: 160-13506-B-11 MS
Matrix: Water
Analysis Batch: 207165

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	ND		50.0	52.9		ug/L		106	72 - 125
Tetrachloroethene	ND		50.0	50.3		ug/L		101	80 - 120
Toluene	140	F1	50.0	170	F1	ug/L		68	80 - 120
trans-1,4-Dichloro-2-butene	ND		50.0	44.5		ug/L		89	73 - 125
trans-1,2-Dichloroethene	ND		50.0	52.9		ug/L		106	80 - 120
trans-1,3-Dichloropropene	ND		50.0	51.1		ug/L		102	77 - 122
1,1,1-Trichloroethane	ND		50.0	47.4		ug/L		95	81 - 123
1,1,2-Trichloroethane	ND		50.0	50.9		ug/L		102	76 - 119
Trichloroethene	0.96	J B	50.0	46.6		ug/L		91	80 - 120
Trichlorofluoromethane	ND		50.0	49.3		ug/L		99	79 - 128
1,2,3-Trichloropropane	ND		50.0	47.5		ug/L		95	72 - 120
Vinyl acetate	ND		50.0	56.8		ug/L		114	47 - 150
Vinyl chloride	ND		50.0	44.6		ug/L		89	75 - 118
Xylenes, Total	ND		100	106		ug/L		106	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*75 - 123*
Dibromofluoromethane (Surr)	*103*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*95*		*78 - 127*
Toluene-d8 (Surr)	*104*		*80 - 120*

Lab Sample ID: 160-13506-B-11 MSD
Matrix: Water
Analysis Batch: 207165

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acrylonitrile	ND		500	476		ug/L		95	80 - 125	5	20
Benzene	9.9		50.0	60.0		ug/L		100	72 - 123	3	20
Bromochloromethane	ND		50.0	51.0		ug/L		102	80 - 120	2	20
Bromodichloromethane	ND		50.0	46.9		ug/L		94	80 - 120	3	20
Bromoform	ND		50.0	50.3		ug/L		101	78 - 122	0	20
Carbon disulfide	0.98	J	50.0	56.5		ug/L		111	80 - 120	0	20
Carbon tetrachloride	ND		50.0	43.2		ug/L		86	80 - 124	4	20
Chlorobenzene	1.3	J	50.0	51.3		ug/L		100	80 - 120	2	20
Chloroethane	ND		50.0	42.1		ug/L		84	53 - 148	9	20
Chloroform	ND		50.0	47.0		ug/L		94	80 - 120	5	20
cis-1,2-Dichloroethene	ND		50.0	51.9		ug/L		104	80 - 120	2	20
cis-1,3-Dichloropropene	ND		50.0	50.0		ug/L		100	80 - 120	5	20
Dibromochloromethane	ND		50.0	50.2		ug/L		100	80 - 120	0	20
1,2-Dibromo-3-Chloropropane	ND		50.0	52.2		ug/L		104	59 - 144	2	20
1,2-Dibromoethane (EDB)	ND		50.0	51.6		ug/L		103	80 - 120	1	20
1,2-Dichlorobenzene	ND		50.0	51.3		ug/L		103	77 - 117	0	20
1,4-Dichlorobenzene	ND		50.0	50.4		ug/L		101	80 - 120	1	20
1,1-Dichloroethane	ND		50.0	48.5		ug/L		97	80 - 120	5	20
1,2-Dichloroethane	ND		50.0	41.0		ug/L		82	80 - 120	8	20
1,1-Dichloroethene	ND		50.0	55.4		ug/L		111	80 - 120	0	20
1,2-Dichloropropane	ND		50.0	50.0		ug/L		100	80 - 120	4	20
Ethylbenzene	ND		50.0	45.2		ug/L		90	80 - 120	4	20

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

Lab Sample ID: 160-13506-B-11 MSD
Matrix: Water
Analysis Batch: 207165

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	16	J	50.0	63.6		ug/L		96	65 - 136	2	20
Methacrylonitrile	ND		500	420		ug/L		84	78 - 121	8	20
Methyl bromide	ND		50.0	41.2		ug/L		82	51 - 146	1	20
Methyl chloride	ND	F1	50.0	37.0	F1	ug/L		74	80 - 120	6	20
Methylene bromide	ND		50.0	46.6		ug/L		93	80 - 120	4	20
Methylene Chloride	ND		50.0	54.9		ug/L		110	80 - 120	0	20
Methyl iodide	ND		50.0	54.1		ug/L		108	77 - 125	1	20
4-Methyl-2-pentanone (MIBK)	19	J	50.0	67.0		ug/L		95	74 - 132	5	20
Styrene	ND		50.0	50.9		ug/L		102	80 - 120	3	20
1,1,1,2-Tetrachloroethane	ND		50.0	50.8		ug/L		102	80 - 120	3	20
1,1,2,2-Tetrachloroethane	ND		50.0	53.5		ug/L		107	72 - 125	1	20
Tetrachloroethene	ND		50.0	49.8		ug/L		100	80 - 120	1	20
Toluene	140	F1	50.0	166	F1	ug/L		60	80 - 120	2	20
trans-1,4-Dichloro-2-butene	ND		50.0	42.8		ug/L		86	73 - 125	4	20
trans-1,2-Dichloroethene	ND		50.0	54.1		ug/L		108	80 - 120	2	20
trans-1,3-Dichloropropene	ND		50.0	49.9		ug/L		100	77 - 122	2	20
1,1,1-Trichloroethane	ND		50.0	45.2		ug/L		90	81 - 123	5	20
1,1,2-Trichloroethane	ND		50.0	50.1		ug/L		100	76 - 119	2	20
Trichloroethene	0.96	J B	50.0	44.6		ug/L		87	80 - 120	5	20
Trichlorofluoromethane	ND		50.0	45.8		ug/L		92	79 - 128	7	20
1,2,3-Trichloropropane	ND		50.0	48.4		ug/L		97	72 - 120	2	20
Vinyl acetate	ND		50.0	52.6		ug/L		105	47 - 150	8	20
Vinyl chloride	ND		50.0	40.9		ug/L		82	75 - 118	9	20
Xylenes, Total	ND		100	104		ug/L		104	80 - 120	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*75 - 123*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*90*		*78 - 127*
Toluene-d8 (Surr)	*108*		*80 - 120*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-206994/1-A
Matrix: Water
Analysis Batch: 207754

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	3.7	ug/L		08/21/15 15:53	08/25/15 12:24	1
Arsenic	ND		10	1.8	ug/L		08/21/15 15:53	08/25/15 12:24	1
Barium	ND		50	2.1	ug/L		08/21/15 15:53	08/25/15 12:24	1
Beryllium	ND		5.0	0.28	ug/L		08/21/15 15:53	08/25/15 12:24	1
Boron	ND		50	7.2	ug/L		08/21/15 15:53	08/25/15 12:24	1
Cadmium	ND		5.0	0.34	ug/L		08/21/15 15:53	08/25/15 12:24	1
Calcium	ND		1000	54	ug/L		08/21/15 15:53	08/25/15 12:24	1
Chromium	ND		10	3.4	ug/L		08/21/15 15:53	08/25/15 12:24	1
Cobalt	ND		50	2.7	ug/L		08/21/15 15:53	08/25/15 12:24	1
Copper	ND		25	2.1	ug/L		08/21/15 15:53	08/25/15 12:24	1

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

Lab Sample ID: MB 160-206994/1-A
Matrix: Water
Analysis Batch: 207754

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness (as CaCO3)	ND		5000	1700	ug/L		08/21/15 15:53	08/25/15 12:24	1
Lead	ND		10	0.60	ug/L		08/21/15 15:53	08/25/15 12:24	1
Magnesium	ND		1.0	0.051	mg/L		08/21/15 15:53	08/25/15 12:24	1
Mn	ND		15	1.0	ug/L		08/21/15 15:53	08/25/15 12:24	1
Nickel	ND		0.040	0.0026	mg/L		08/21/15 15:53	08/25/15 12:24	1
Phosphorus	69.5	J	250	14	ug/L		08/21/15 15:53	08/25/15 12:24	1
Selenium	ND		15	2.1	ug/L		08/21/15 15:53	08/25/15 12:24	1
Silver	ND		10	0.99	ug/L		08/21/15 15:53	08/25/15 12:24	1
Sodium	239	J	1000	110	ug/L		08/21/15 15:53	08/25/15 12:24	1
Thallium	ND		20	2.4	ug/L		08/21/15 15:53	08/25/15 12:24	1
Vanadium	5.70	J	50	4.4	ug/L		08/21/15 15:53	08/25/15 12:24	1
Zinc	ND		20	8.3	ug/L		08/21/15 15:53	08/25/15 12:24	1

Lab Sample ID: LCS 160-206994/2-A
Matrix: Water
Analysis Batch: 207754

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 206994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	491		ug/L		98	80 - 120
Arsenic	1000	955		ug/L		95	80 - 120
Barium	1000	1020		ug/L		102	80 - 120
Beryllium	1000	991		ug/L		99	80 - 120
Boron	2000	1850		ug/L		92	80 - 120
Cadmium	1000	965		ug/L		96	80 - 120
Calcium	10000	10600		ug/L		106	80 - 120
Chromium	1000	1030		ug/L		103	80 - 120
Cobalt	1000	1040		ug/L		104	80 - 120
Copper	1000	1010		ug/L		101	80 - 120
Lead	1000	1020		ug/L		102	80 - 120
Magnesium	10.0	8.91		mg/L		89	80 - 120
Mn	1000	919		ug/L		92	80 - 120
Nickel	1.00	1.03		mg/L		103	80 - 120
Phosphorus	1000	1080		ug/L		108	80 - 120
Selenium	500	493		ug/L		99	80 - 120
Silver	200	203		ug/L		102	80 - 120
Sodium	10000	10100		ug/L		101	80 - 120
Thallium	200	207		ug/L		104	80 - 120
Vanadium	1000	900		ug/L		90	80 - 120
Zinc	1000	979		ug/L		98	80 - 120

Lab Sample ID: 160-13471-1 MS
Matrix: Water
Analysis Batch: 207754

Client Sample ID: MO-3-SS
Prep Type: Total/NA
Prep Batch: 206994

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		500	529		ug/L		106	75 - 125
Arsenic	20	J	1000	1020		ug/L		100	75 - 125
Barium	340	J	1000	1470		ug/L		113	75 - 125
Beryllium	ND		1000	1030		ug/L		103	75 - 125

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

Lab Sample ID: 160-13471-1 MS
Matrix: Water
Analysis Batch: 207754

Client Sample ID: MO-3-SS
Prep Type: Total/NA
Prep Batch: 206994

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	230	J	2000	2100		ug/L		93	75 - 125
Cadmium	ND		1000	1030		ug/L		103	75 - 125
Calcium	240000		10000	258000	4	ug/L		168	75 - 125
Chromium	ND		1000	1120		ug/L		112	75 - 125
Cobalt	ND		1000	1100		ug/L		110	75 - 125
Copper	ND		1000	1020		ug/L		102	75 - 125
Lead	ND		1000	1090		ug/L		109	75 - 125
Magnesium	75		10.0	85.7	4	mg/L		104	75 - 125
Mn	1200		1000	2180		ug/L		97	75 - 125
Nickel	0.034	J	1.00	1.13		mg/L		109	75 - 125
Phosphorus	600	J B	1000	1690	J	ug/L		109	75 - 125
Selenium	ND		500	492		ug/L		98	75 - 125
Silver	ND		200	204		ug/L		102	75 - 125
Sodium	57000	B	10000	70100	4	ug/L		126	75 - 125
Thallium	ND		200	212		ug/L		106	75 - 125
Vanadium	ND		1000	927		ug/L		93	75 - 125
Zinc	85	J	1000	1130		ug/L		104	75 - 125

Lab Sample ID: 160-13471-1 MSD
Matrix: Water
Analysis Batch: 207754

Client Sample ID: MO-3-SS
Prep Type: Total/NA
Prep Batch: 206994

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		500	516		ug/L		103	75 - 125	2	20
Arsenic	20	J	1000	1030		ug/L		101	75 - 125	0	20
Barium	340	J	1000	1490		ug/L		115	75 - 125	1	20
Beryllium	ND		1000	1030		ug/L		103	75 - 125	0	20
Boron	230	J	2000	2130		ug/L		95	75 - 125	1	20
Cadmium	ND		1000	1040		ug/L		104	75 - 125	1	20
Calcium	240000		10000	262000	4	ug/L		206	75 - 125	1	20
Chromium	ND		1000	1120		ug/L		112	75 - 125	0	20
Cobalt	ND		1000	1120		ug/L		112	75 - 125	2	20
Copper	ND		1000	1090		ug/L		109	75 - 125	7	20
Lead	ND		1000	1100		ug/L		110	75 - 125	0	20
Magnesium	75		10.0	87.5	4	mg/L		122	75 - 125	2	20
Mn	1200		1000	2230		ug/L		102	75 - 125	2	20
Nickel	0.034	J	1.00	1.14		mg/L		110	75 - 125	1	20
Phosphorus	600	J B	1000	1710	J	ug/L		111	75 - 125	1	20
Selenium	ND		500	503		ug/L		101	75 - 125	2	20
Silver	ND		200	212		ug/L		106	75 - 125	4	20
Sodium	57000	B	10000	70100	4	ug/L		127	75 - 125	0	20
Thallium	ND		200	220		ug/L		110	75 - 125	4	20
Vanadium	ND		1000	1020		ug/L		102	75 - 125	9	20
Zinc	85	J	1000	1140		ug/L		105	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-206978/1-A
Matrix: Water
Analysis Batch: 207322

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/21/15 13:49	08/21/15 19:18	1

Lab Sample ID: LCS 160-206978/2-A
Matrix: Water
Analysis Batch: 207322

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 206978

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.65		ug/L		93	80 - 120

Lab Sample ID: 160-13471-3 MS
Matrix: Water
Analysis Batch: 207322

Client Sample ID: MO-3-SDR
Prep Type: Total/NA
Prep Batch: 206978

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		5.00	4.53		ug/L		91	80 - 120

Lab Sample ID: 160-13471-3 MSD
Matrix: Water
Analysis Batch: 207322

Client Sample ID: MO-3-SDR
Prep Type: Total/NA
Prep Batch: 206978

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		5.00	4.60		ug/L		92	80 - 120	1	20

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13471-1

GC/MS VOA

Analysis Batch: 207022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13471-1	MO-3-SS	Total/NA	Water	8260C	
160-13471-2	MO-2-SD	Total/NA	Water	8260C	
160-13471-3	MO-3-SDR	Total/NA	Water	8260C	
160-13471-4	MO-3-SDR-DUP	Total/NA	Water	8260C	
160-13506-A-4 MS	Matrix Spike	Total/NA	Water	8260C	
160-13506-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 160-207022/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-207022/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-207022/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 207165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13471-3 - DL	MO-3-SDR	Total/NA	Water	8260C	
160-13471-4 - DL	MO-3-SDR-DUP	Total/NA	Water	8260C	
160-13506-B-11 MS	Matrix Spike	Total/NA	Water	8260C	
160-13506-B-11 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 160-207165/4	Lab Control Sample	Total/NA	Water	8260C	
MB 160-207165/6	Method Blank	Total/NA	Water	8260C	

Metals

Prep Batch: 206978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13471-1	MO-3-SS	Total/NA	Water	7470A	
160-13471-2	MO-2-SD	Total/NA	Water	7470A	
160-13471-3	MO-3-SDR	Total/NA	Water	7470A	
160-13471-3 MS	MO-3-SDR	Total/NA	Water	7470A	
160-13471-3 MSD	MO-3-SDR	Total/NA	Water	7470A	
160-13471-4	MO-3-SDR-DUP	Total/NA	Water	7470A	
LCS 160-206978/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 160-206978/1-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 206994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13471-1	MO-3-SS	Total/NA	Water	3010A	
160-13471-1 MS	MO-3-SS	Total/NA	Water	3010A	
160-13471-1 MSD	MO-3-SS	Total/NA	Water	3010A	
160-13471-2	MO-2-SD	Total/NA	Water	3010A	
160-13471-3	MO-3-SDR	Total/NA	Water	3010A	
160-13471-4	MO-3-SDR-DUP	Total/NA	Water	3010A	
LCS 160-206994/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-206994/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 207322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13471-1	MO-3-SS	Total/NA	Water	7470A	206978
160-13471-2	MO-2-SD	Total/NA	Water	7470A	206978
160-13471-3	MO-3-SDR	Total/NA	Water	7470A	206978
160-13471-3 MS	MO-3-SDR	Total/NA	Water	7470A	206978
160-13471-3 MSD	MO-3-SDR	Total/NA	Water	7470A	206978

Metals (Continued)

Analysis Batch: 207322 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13471-4	MO-3-SDR-DUP	Total/NA	Water	7470A	206978
LCS 160-206978/2-A	Lab Control Sample	Total/NA	Water	7470A	206978
MB 160-206978/1-A	Method Blank	Total/NA	Water	7470A	206978

Analysis Batch: 207754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13471-1	MO-3-SS	Total/NA	Water	6010C	206994
160-13471-1 MS	MO-3-SS	Total/NA	Water	6010C	206994
160-13471-1 MSD	MO-3-SS	Total/NA	Water	6010C	206994
160-13471-2	MO-2-SD	Total/NA	Water	6010C	206994
160-13471-3	MO-3-SDR	Total/NA	Water	6010C	206994
160-13471-4	MO-3-SDR-DUP	Total/NA	Water	6010C	206994
LCS 160-206994/2-A	Lab Control Sample	Total/NA	Water	6010C	206994
MB 160-206994/1-A	Method Blank	Total/NA	Water	6010C	206994

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13471-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	12DCE	TOL
Lab Sample ID	Client Sample ID	(75-123)	(80-120)	(78-127)	(80-120)
160-13471-1	MO-3-SS	129 X	104	100	111
160-13471-2	MO-2-SD	126 X	104	104	110
160-13471-3	MO-3-SDR	121	96	95	112
160-13471-3 - DL	MO-3-SDR	99	102	97	106
160-13471-4	MO-3-SDR-DUP	117	109	106	110
160-13471-4 - DL	MO-3-SDR-DUP	98	101	93	106
160-13506-A-4 MS	Matrix Spike	111	101	107	106
160-13506-A-4 MSD	Matrix Spike Duplicate	118	97	100	108
160-13506-B-11 MS	Matrix Spike	102	103	95	104
160-13506-B-11 MSD	Matrix Spike Duplicate	105	102	90	108
LCS 160-207022/4	Lab Control Sample	113	95	100	105
LCS 160-207165/4	Lab Control Sample	99	99	92	105
LCSD 160-207022/5	Lab Control Sample Dup	119	95	100	107
MB 160-207022/7	Method Blank	129 X	104	101	113
MB 160-207165/6	Method Blank	97	96	88	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT



TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-13457-1
Client Project/Site: Groundwater Samples

For:
Missouri Attorney General's Office
PO Box 899
Jefferson City, Missouri 65102

Attn: Brenna McDonald

Authorized for release by:
8/31/2015 1:02:09 PM

Chenise Lambert-Sykes, Project Manager I
(314)298-8566
chenise.lambert-sykes@testamericainc.com

Preliminary Data

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Preliminary Data

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8/31/2015

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: Brenna McDonald
Company: Missoun Department of Natural Resources
Address: 111 Fairgounds Road PO BOX 250
City: Rolla
State, Zip: MO, 65402
Phone: 573-368-2163
Email: brenna.mcdonald@dnr.mo.gov
Project Name: Groundwater Samples
Site: Bridgeton Landfill

Sampler: Lynn Milberg
Phone: 573-522-4481
Lab PM: Lambert-Sykes, Chenise Y
E-Mail: chenise.lambert-sykes@testamericainc.com
Carrier Tracking No(s):
COC No: 160-3116-1450.2
Page: Page 2 of 3
Job #:

Due Date Requested:
TAT Requested (days): ASAP
PO #: Purchase Order not required
WO #:
Project #: 16004530
SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D - Sulfate	415.1 - Total Organic Carbon	6010C, 7470A	8260C - (MOD) OLM 4.2	8081B, 8082A, 8151A, 8270D	335.4 - Cyanide, Total	376.1 - Sulfide	1613B_Tetras - TCDD only	6010C - (MOD) Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	N	B	CB	N	D		
PZ-209-SS	8/19/15	0946	G	Water	N	N	X	X	X	X	X	X	X	X	X	13	State Missouri App II
PZ-209-SD	8/19/15	1110	G	Water	N	N	X								X	13	"
PZ-210-SS	8/19/15	1337	G	Water	N	N	X								X	13	"
PZ-210-SD	8/19/15	1436	G	Water	N	Y	X								X	13	"
PZ-211-SS	8/19/15	1609	G	Water	N	N	X								X	13	"
				Water													
				Water													
				Water													
				Water													
				Water													

160-13457 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Deliverable Requested: I, II, III, IV, Other (specify)

Method of Shipment:

Empty Kit Relinquished by: Date: Time:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	8/19/2015 1740	DNR			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 8/19/2015 17:45	Company TASL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-13457-1

Login Number: 13457
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Preliminary Data

State of MO v. Republic Services, Inc. et al
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Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-13457-1

Login Number: 13457
List Number: 2
Creator: Kester, Richard

List Source: TestAmerica Sacramento
List Creation: 08/21/15 04:58 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Preliminary Data

State of MO v. Republic Services, Inc. et al
Price - 0000305

Definitions/Glossary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Preliminary Data

Method Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SL
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SL
8081B	Organochlorine Pesticides (GC)	SW846	TAL SL
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SL
8151A	Herbicides (GC)	SW846	TAL SL
300.0	Anions, Ion Chromatography	MCAWW	TAL SL
1613B	Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS	40CFR136A	TAL SAC
6010C	Metals (ICP)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL
335.4	Cyanide, Total	MCAWW	TAL SL

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Preliminary Data

Sample Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-13457-1	PZ-209-SS	Water	08/19/15 09:46	08/19/15 17:45
160-13457-2	PZ-209-SD	Water	08/19/15 11:10	08/19/15 17:45
160-13457-3	PZ-210-SS	Water	08/19/15 13:37	08/19/15 17:45
160-13457-4	PZ-210-SD	Water	08/19/15 14:36	08/19/15 17:45
160-13457-5	PZ-211-SS	Water	08/19/15 16:09	08/19/15 17:45

Preliminary Data

Detection Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-209-SS — **Lab Sample ID: 160-13457-1**

Sample Analysis Not Complete.

Client Sample ID: PZ-209-SD — **Lab Sample ID: 160-13457-2**

Sample Analysis Not Complete.

Client Sample ID: PZ-210-SS — **Lab Sample ID: 160-13457-3**

Sample Analysis Not Complete.

Client Sample ID: PZ-210-SD — **Lab Sample ID: 160-13457-4**

Sample Analysis Not Complete.

Client Sample ID: PZ-211-SS — **Lab Sample ID: 160-13457-5**

Sample Analysis Not Complete.

Preliminary Data

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-209-SS

Date Collected: 08/19/15 09:46
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 13:48	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 13:48	1
Acrolein	ND		50	3.1	ug/L			08/22/15 13:48	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 13:48	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 13:48	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 13:48	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 13:48	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 13:48	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 13:48	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 13:48	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 13:48	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 13:48	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 13:48	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 13:48	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 13:48	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 13:48	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 13:48	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 13:48	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 13:48	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 13:48	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 13:48	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 13:48	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 13:48	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 13:48	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 13:48	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 13:48	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 13:48	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 13:48	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 13:48	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 13:48	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 13:48	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 13:48	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 13:48	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 13:48	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 13:48	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 13:48	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 13:48	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 13:48	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 13:48	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 13:48	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 13:48	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 13:48	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 13:48	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 13:48	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 13:48	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 13:48	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 13:48	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 13:48	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 13:48	1

Preliminary Data

Client Sample ID: PZ-209-SS

Date Collected: 08/19/15 09:46
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 13:48	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 13:48	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 13:48	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 13:48	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 13:48	1
Trichloroethene	ND		5.0	0.29	ug/L			08/22/15 13:48	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 13:48	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 13:48	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 13:48	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 13:48	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*75 - 123*		*08/22/15 13:48*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/22/15 13:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*78 - 127*		*08/22/15 13:48*	*1*
Toluene-d8 (Surr)	*110*		*80 - 120*		*08/22/15 13:48*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Acenaphthylene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Acetophenone	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2-Acetylaminofluorene	ND		95	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
alpha,alpha-Dimethyl phenethylamine	ND		47	21	ug/L		08/21/15 12:04	08/25/15 19:09	1
4-Aminobiphenyl	ND		47	1.0	ug/L		08/21/15 12:04	08/25/15 19:09	1
Anthracene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Benzo[a]anthracene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Benzo[a]pyrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Benzo[b]fluoranthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Benzo[g,h,i]perylene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Benzo[k]fluoranthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Benzyl alcohol	ND		9.5	2.8	ug/L		08/21/15 12:04	08/25/15 19:09	1
Bis(2-chloroethoxy)methane	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Bis(2-chloroethyl)ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
bis(2 chloro-1-methylethyl) ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Bis(2-ethylhexyl) phthalate	ND		9.5	1.8	ug/L		08/21/15 12:04	08/25/15 19:09	1
4-Bromophenyl phenyl ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Butyl benzyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
4-Chloroaniline	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 19:09	1
Chlorobenzilate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
4-Chloro-3-methylphenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2-Chloronaphthalene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2-Chlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
4-Chlorophenyl phenyl ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Chrysene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Diallate	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 19:09	1
Dibenz(a,h)anthracene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Dibenzofuran	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
3,3'-Dichlorobenzidine	ND		47	1.2	ug/L		08/21/15 12:04	08/25/15 19:09	1

Preliminary Data

Client Sample ID: PZ-209-SS

Date Collected: 08/19/15 09:46
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2,6-Dichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Diethyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Dimethoate	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
3,3'-Dimethylbenzidine	ND		47	2.5	ug/L		08/21/15 12:04	08/25/15 19:09	1
2,4-Dimethylphenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Dimethyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Di-n-butyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
1,3-Dinitrobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
1,4-Dinitrobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
4,6-Dinitro-2-methylphenol	ND		9.5	1.2	ug/L		08/21/15 12:04	08/25/15 19:09	1
2,4-Dinitrophenol	ND		47	1.9	ug/L		08/21/15 12:04	08/25/15 19:09	1
2,4-Dinitrotoluene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2,6-Dinitrotoluene	ND		9.5	2.0	ug/L		08/21/15 12:04	08/25/15 19:09	1
Di-n-octyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Dinoseb	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 19:09	1
Diphenylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Disulfoton	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Ethyl methanesulfonate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Famphur	ND		95	1.6	ug/L		08/21/15 12:04	08/25/15 19:09	1
Fluoranthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Fluorene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Hexachlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Hexachlorobutadiene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Hexachlorocyclopentadiene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Hexachloroethane	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Hexachlorophene	ND		240	9.5	ug/L		08/21/15 12:04	08/26/15 17:02	1
Hexachloropropene	ND		95	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Indeno[1,2,3-cd]pyrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Isodrin	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Isophorone	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Isosafrole	ND		19	4.7	ug/L		08/21/15 12:04	08/25/15 19:09	1
Kepone	ND		95	19	ug/L		08/21/15 12:04	08/26/15 17:02	1
Methapyrilene	ND		47	1.2	ug/L		08/21/15 12:04	08/25/15 19:09	1
3-Methylcholanthrene	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Methyl methanesulfonate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2-Methylnaphthalene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Methyl parathion	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2-Methylphenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
3 & 4 Methylphenol	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 19:09	1
Naphthalene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
1,4-Naphthoquinone	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
1-Naphthylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2-Naphthylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2-Nitroaniline	ND		9.5	1.0	ug/L		08/21/15 12:04	08/25/15 19:09	1
3-Nitroaniline	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
4-Nitroaniline	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Nitrobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1

Preliminary Data

Client Sample ID: PZ-209-SS

Date Collected: 08/19/15 09:46
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
5-Nitro-o-toluidine	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2-Nitrophenol	ND		9.5	1.4	ug/L		08/21/15 12:04	08/25/15 19:09	1
4-Nitrophenol	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 19:09	1
N-Nitrosodiethylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
N-Nitrosodimethylamine	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 19:09	1
N-Nitrosodi-n-butylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
N-Nitrosodi-n-propylamine	ND		9.5	1.4	ug/L		08/21/15 12:04	08/25/15 19:09	1
N-Nitrosomethylethylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
N-Nitrosomorpholine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
N-Nitrosopiperidine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
N-Nitrosopyrrolidine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
o,o',o''-Triethylphosphorothioate	ND		47	1.1	ug/L		08/21/15 12:04	08/25/15 19:09	1
o-Toluidine	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Parathion	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
p-Dimethylamino azobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Pentachlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Pentachloroethane	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Pentachloronitrobenzene	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Pentachlorophenol	ND		9.5	1.2	ug/L		08/21/15 12:04	08/25/15 19:09	1
Phenacetin	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Phenanthrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Phenol	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 19:09	1
Phorate	ND		47	1.9	ug/L		08/21/15 12:04	08/25/15 19:09	1
p-Phenylene diamine	ND		95	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Pronamide	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Pyrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
Pyridine	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 19:09	1
Safrole	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
1,2,4,5-Tetrachlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2,3,4,6-Tetrachlorophenol	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
1,2,4-Trichlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2,4,5-Trichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
2,4,6-Trichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1
1,3,5-Trinitrobenzene	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*79*		*43 - 108*	*08/21/15 12:04*	*08/25/15 19:09*	*1*
2-Fluorophenol (Surr)	*36*		*15 - 59*	*08/21/15 12:04*	*08/25/15 19:09*	*1*
Nitrobenzene-d5 (Surr)	*78*		*50 - 101*	*08/21/15 12:04*	*08/25/15 19:09*	*1*
Phenol-d5 (Surr)	*22*		*10 - 50*	*08/21/15 12:04*	*08/25/15 19:09*	*1*
Terphenyl-d14 (Surr)	*52*		*21 - 97*	*08/21/15 12:04*	*08/25/15 19:09*	*1*
2,4,6-Tribromophenol (Surr)	*95*		*37 - 120*	*08/21/15 12:04*	*08/25/15 19:09*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1
alpha-BHC	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1
beta-BHC	ND		0.048	0.012	ug/L		08/24/15 14:06	08/25/15 15:10	1
delta-BHC	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1
gamma-BHC (Lindane)	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1

Preliminary Data

Client Sample ID: PZ-209-SS

Date Collected: 08/19/15 09:46
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-1

Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.048	0.014	ug/L		08/24/15 14:06	08/25/15 15:10	1
gamma-Chlordane	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1
4,4'-DDD	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1
4,4'-DDE	ND		0.048	0.013	ug/L		08/24/15 14:06	08/25/15 15:10	1
4,4'-DDT	ND		0.048	0.022	ug/L		08/24/15 14:06	08/25/15 15:10	1
Dieldrin	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1
Endosulfan I	ND		0.048	0.018	ug/L		08/24/15 14:06	08/25/15 15:10	1
Endosulfan II	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1
Endosulfan sulfate	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1
Endrin	ND		0.048	0.017	ug/L		08/24/15 14:06	08/25/15 15:10	1
Endrin aldehyde	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1
Endrin ketone	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1
Heptachlor	ND		0.048	0.0095	ug/L		08/24/15 14:06	08/25/15 15:10	1
Heptachlor epoxide	ND		0.048	0.016	ug/L		08/24/15 14:06	08/25/15 15:10	1
Methoxychlor	ND		0.48	0.012	ug/L		08/24/15 14:06	08/25/15 15:10	1
Toxaphene	ND		1.9	0.26	ug/L		08/24/15 14:06	08/25/15 15:10	1
Technical Chlordane	ND		0.48	0.095	ug/L		08/24/15 14:06	08/25/15 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*53*		*44 - 112*	*08/24/15 14:06*	*08/25/15 15:10*	*1*
Tetrachloro-m-xylene	*82*		*49 - 104*	*08/24/15 14:06*	*08/25/15 15:10*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.95	0.33	ug/L		08/25/15 13:16	08/27/15 10:14	1
PCB-1221	ND		0.95	0.33	ug/L		08/25/15 13:16	08/27/15 10:14	1
PCB-1232	ND		0.95	0.33	ug/L		08/25/15 13:16	08/27/15 10:14	1
PCB-1242	ND		0.95	0.33	ug/L		08/25/15 13:16	08/27/15 10:14	1
PCB-1248	ND		0.95	0.33	ug/L		08/25/15 13:16	08/27/15 10:14	1
PCB-1254	ND		0.95	0.16	ug/L		08/25/15 13:16	08/27/15 10:14	1
PCB-1260	ND		0.95	0.16	ug/L		08/25/15 13:16	08/27/15 10:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*87*		*52 - 150*	*08/25/15 13:16*	*08/27/15 10:14*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.26	ug/L		08/24/15 12:55	08/26/15 20:20	1
2,4-D	ND		7.6	4.0	ug/L		08/24/15 12:55	08/26/15 20:20	1
Silvex (2,4,5-TP)	ND		0.95	0.18	ug/L		08/24/15 12:55	08/26/15 20:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*92*		*60 - 128*	*08/24/15 12:55*	*08/26/15 20:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	29		1.0	0.10	mg/L			08/25/15 00:27	2

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.26	pg/L		08/26/15 08:47	08/28/15 00:06	1

Preliminary Data

Client Sample ID: PZ-209-SS

Date Collected: 08/19/15 09:46
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-1

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	79		31 - 137	08/26/15 08:47	08/28/15 00:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	102		42 - 164	08/26/15 08:47	08/28/15 00:06	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	4.7	J ^	10	3.7	ug/L		08/21/15 15:55	08/26/15 21:05	1
Arsenic	2.0	J	10	1.8	ug/L		08/21/15 15:55	08/26/15 21:05	1
Barium	87		50	2.1	ug/L		08/21/15 15:55	08/26/15 21:05	1
Beryllium	ND		5.0	0.28	ug/L		08/21/15 15:55	08/26/15 21:05	1
Boron	270	^	50	7.2	ug/L		08/21/15 15:55	08/26/15 21:05	1
Cadmium	ND		5.0	0.34	ug/L		08/21/15 15:55	08/26/15 21:05	1
Chromium	5.1	J	10	3.4	ug/L		08/21/15 15:55	08/26/15 21:05	1
Cobalt	ND		50	2.7	ug/L		08/21/15 15:55	08/26/15 21:05	1
Copper	ND		25	2.1	ug/L		08/21/15 15:55	08/26/15 21:05	1
Lead	1.7	J	10	0.60	ug/L		08/21/15 15:55	08/26/15 21:05	1
Magnesium	50		1.0	0.051	mg/L		08/21/15 15:55	08/26/15 21:05	1
Manganese	66		15	1.0	ug/L		08/21/15 15:55	08/26/15 21:05	1
Nickel	0.0037	J	0.040	0.0026	mg/L		08/21/15 15:55	08/26/15 21:05	1
Selenium	ND		15	2.1	ug/L		08/21/15 15:55	08/26/15 21:05	1
Silver	ND		10	0.99	ug/L		08/21/15 15:55	08/26/15 21:05	1
Thallium	ND		20	2.4	ug/L		08/21/15 15:55	08/26/15 21:05	1
Tin	ND		100	5.0	ug/L		08/21/15 15:55	08/26/15 21:05	1
Vanadium	ND		50	4.4	ug/L		08/21/15 15:55	08/26/15 21:05	1
Zinc	ND		20	8.3	ug/L		08/21/15 15:55	08/26/15 21:05	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/21/15 14:30	08/21/15 19:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.6	J	10	2.9	ug/L		08/25/15 15:15	08/26/15 19:17	1

Client Sample ID: PZ-209-SD

Date Collected: 08/19/15 11:10
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 14:13	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 14:13	1
Acrolein	ND		50	3.1	ug/L			08/22/15 14:13	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 14:13	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 14:13	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 14:13	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 14:13	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 14:13	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 14:13	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 14:13	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 14:13	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-209-SD
Date Collected: 08/19/15 11:10
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	**0.44**	**J**	5.0	0.37	ug/L			08/22/15 14:13	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 14:13	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 14:13	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 14:13	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 14:13	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 14:13	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 14:13	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 14:13	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 14:13	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 14:13	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 14:13	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 14:13	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 14:13	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 14:13	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 14:13	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 14:13	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 14:13	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 14:13	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 14:13	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 14:13	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 14:13	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 14:13	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 14:13	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 14:13	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 14:13	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 14:13	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 14:13	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 14:13	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 14:13	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 14:13	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 14:13	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 14:13	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 14:13	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 14:13	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 14:13	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 14:13	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 14:13	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 14:13	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 14:13	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 14:13	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 14:13	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 14:13	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 14:13	1
Trichloroethene	ND		5.0	0.29	ug/L			08/22/15 14:13	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 14:13	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 14:13	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 14:13	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 14:13	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 14:13	1

Preliminary Data

Client Sample ID: PZ-209-SD

Date Collected: 08/19/15 11:10
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-2

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126	X	75 - 123		08/22/15 14:13	1
Dibromofluoromethane (Surr)	108		80 - 120		08/22/15 14:13	1
1,2-Dichloroethane-d4 (Surr)	102		78 - 127		08/22/15 14:13	1
Toluene-d8 (Surr)	112		80 - 120		08/22/15 14:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Acenaphthylene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Acetophenone	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2-Acetylaminofluorene	ND		95	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
alpha,alpha-Dimethyl phenethylamine	ND		47	21	ug/L		08/21/15 12:04	08/25/15 19:42	1
4-Aminobiphenyl	ND		47	1.0	ug/L		08/21/15 12:04	08/25/15 19:42	1
Anthracene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Benzo[a]anthracene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Benzo[a]pyrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Benzo[b]fluoranthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Benzo[g,h,i]perylene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Benzo[k]fluoranthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Benzyl alcohol	ND		9.5	2.8	ug/L		08/21/15 12:04	08/25/15 19:42	1
Bis(2-chloroethoxy)methane	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Bis(2-chloroethyl)ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
bis(2 chloro-1-methylethyl) ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Bis(2-ethylhexyl) phthalate	ND		9.5	1.8	ug/L		08/21/15 12:04	08/25/15 19:42	1
4-Bromophenyl phenyl ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Butyl benzyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
4-Chloroaniline	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 19:42	1
Chlorobenzilate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
4-Chloro-3-methylphenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2-Chloronaphthalene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2-Chlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
4-Chlorophenyl phenyl ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Chrysene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Diallate	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 19:42	1
Dibenz(a,h)anthracene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Dibenzofuran	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
3,3'-Dichlorobenzidine	ND		47	1.2	ug/L		08/21/15 12:04	08/25/15 19:42	1
2,4-Dichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2,6-Dichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Diethyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Dimethoate	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
3,3'-Dimethylbenzidine	ND		47	2.5	ug/L		08/21/15 12:04	08/25/15 19:42	1
2,4-Dimethylphenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Dimethyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Di-n-butyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
1,3-Dinitrobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
1,4-Dinitrobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
4,6-Dinitro-2-methylphenol	ND		9.5	1.2	ug/L		08/21/15 12:04	08/25/15 19:42	1
2,4-Dinitrophenol	ND		47	1.9	ug/L		08/21/15 12:04	08/25/15 19:42	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-209-SD
Date Collected: 08/19/15 11:10
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2,6-Dinitrotoluene	ND		9.5	2.0	ug/L		08/21/15 12:04	08/25/15 19:42	1
Di-n-octyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Dinoseb	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 19:42	1
Diphenylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Disulfoton	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Ethyl methanesulfonate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Famphur	ND		95	1.6	ug/L		08/21/15 12:04	08/25/15 19:42	1
Fluoranthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Fluorene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Hexachlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Hexachlorobutadiene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Hexachlorocyclopentadiene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Hexachloroethane	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Hexachlorophene	ND		240	9.5	ug/L		08/21/15 12:04	08/26/15 17:35	1
Hexachloropropene	ND		95	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Indeno[1,2,3-cd]pyrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Isodrin	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Isophorone	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Isosafrole	ND		19	4.7	ug/L		08/21/15 12:04	08/25/15 19:42	1
Kepone	ND		95	19	ug/L		08/21/15 12:04	08/26/15 17:35	1
Methapyrilene	ND		47	1.2	ug/L		08/21/15 12:04	08/25/15 19:42	1
3-Methylcholanthrene	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Methyl methanesulfonate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2-Methylnaphthalene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Methyl parathion	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2-Methylphenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
3 & 4 Methylphenol	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 19:42	1
Naphthalene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
1,4-Naphthoquinone	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
1-Naphthylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2-Naphthylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2-Nitroaniline	ND		9.5	1.0	ug/L		08/21/15 12:04	08/25/15 19:42	1
3-Nitroaniline	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
4-Nitroaniline	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Nitrobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
5-Nitro-o-toluidine	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2-Nitrophenol	ND		9.5	1.4	ug/L		08/21/15 12:04	08/25/15 19:42	1
4-Nitrophenol	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 19:42	1
N-Nitrosodiethylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
N-Nitrosodimethylamine	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 19:42	1
N-Nitrosodi-n-butylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
N-Nitrosodi-n-propylamine	ND		9.5	1.4	ug/L		08/21/15 12:04	08/25/15 19:42	1
N-Nitrosomethylethylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
N-Nitrosomorpholine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
N-Nitrosopiperidine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
N-Nitrosopyrrolidine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
o,o',o''-Triethylphosphorothioate	ND		47	1.1	ug/L		08/21/15 12:04	08/25/15 19:42	1
o-Toluidine	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-209-SD
Date Collected: 08/19/15 11:10
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Parathion	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
p-Dimethylamino azobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Pentachlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Pentachloroethane	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Pentachloronitrobenzene	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Pentachlorophenol	ND		9.5	1.2	ug/L		08/21/15 12:04	08/25/15 19:42	1
Phenacetin	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Phenanthrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Phenol	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 19:42	1
Phorate	ND		47	1.9	ug/L		08/21/15 12:04	08/25/15 19:42	1
p-Phenylene diamine	ND		95	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Pronamide	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Pyrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
Pyridine	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 19:42	1
Safrole	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
1,2,4,5-Tetrachlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2,3,4,6-Tetrachlorophenol	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
1,2,4-Trichlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2,4,5-Trichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
2,4,6-Trichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1
1,3,5-Trinitrobenzene	ND		47	0.95	ug/L		08/21/15 12:04	08/25/15 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*83*		*43 - 108*	*08/21/15 12:04*	*08/25/15 19:42*	*1*
2-Fluorophenol (Surr)	*36*		*15 - 59*	*08/21/15 12:04*	*08/25/15 19:42*	*1*
Nitrobenzene-d5 (Surr)	*82*		*50 - 101*	*08/21/15 12:04*	*08/25/15 19:42*	*1*
Phenol-d5 (Surr)	*24*		*10 - 50*	*08/21/15 12:04*	*08/25/15 19:42*	*1*
Terphenyl-d14 (Surr)	*56*		*21 - 97*	*08/21/15 12:04*	*08/25/15 19:42*	*1*
2,4,6-Tribromophenol (Surr)	*100*		*37 - 120*	*08/21/15 12:04*	*08/25/15 19:42*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1
alpha-BHC	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1
beta-BHC	ND		0.047	0.012	ug/L		08/24/15 14:06	08/25/15 15:29	1
delta-BHC	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1
gamma-BHC (Lindane)	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1
alpha-Chlordane	ND		0.047	0.014	ug/L		08/24/15 14:06	08/25/15 15:29	1
gamma-Chlordane	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1
4,4'-DDD	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1
4,4'-DDE	ND		0.047	0.013	ug/L		08/24/15 14:06	08/25/15 15:29	1
4,4'-DDT	ND		0.047	0.022	ug/L		08/24/15 14:06	08/25/15 15:29	1
Dieldrin	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1
Endosulfan I	ND		0.047	0.018	ug/L		08/24/15 14:06	08/25/15 15:29	1
Endosulfan II	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1
Endosulfan sulfate	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1
Endrin	ND		0.047	0.017	ug/L		08/24/15 14:06	08/25/15 15:29	1
Endrin aldehyde	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1
Endrin ketone	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1
Heptachlor	ND		0.047	0.0095	ug/L		08/24/15 14:06	08/25/15 15:29	1

Preliminary Data

Client Sample ID: PZ-209-SD

Date Collected: 08/19/15 11:10
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-2

Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.047	0.016	ug/L		08/24/15 14:06	08/25/15 15:29	1
Methoxychlor	ND		0.47	0.012	ug/L		08/24/15 14:06	08/25/15 15:29	1
Toxaphene	ND		1.9	0.25	ug/L		08/24/15 14:06	08/25/15 15:29	1
Technical Chlordane	ND		0.47	0.095	ug/L		08/24/15 14:06	08/25/15 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	55		44 - 112	08/24/15 14:06	08/25/15 15:29	1
Tetrachloro-m-xylene	94		49 - 104	08/24/15 14:06	08/25/15 15:29	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.95	0.33	ug/L		08/25/15 13:16	08/27/15 10:30	1
PCB-1221	ND		0.95	0.33	ug/L		08/25/15 13:16	08/27/15 10:30	1
PCB-1232	ND		0.95	0.33	ug/L		08/25/15 13:16	08/27/15 10:30	1
PCB-1242	ND		0.95	0.33	ug/L		08/25/15 13:16	08/27/15 10:30	1
PCB-1248	ND		0.95	0.33	ug/L		08/25/15 13:16	08/27/15 10:30	1
PCB-1254	ND		0.95	0.16	ug/L		08/25/15 13:16	08/27/15 10:30	1
PCB-1260	ND		0.95	0.16	ug/L		08/25/15 13:16	08/27/15 10:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	130		52 - 150	08/25/15 13:16	08/27/15 10:30	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.26	ug/L		08/24/15 12:55	08/26/15 20:50	1
2,4-D	ND		7.6	4.0	ug/L		08/24/15 12:55	08/26/15 20:50	1
Silvex (2,4,5-TP)	ND		0.95	0.18	ug/L		08/24/15 12:55	08/26/15 20:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	92		60 - 128	08/24/15 12:55	08/26/15 20:50	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	44		25	2.5	mg/L			08/25/15 01:08	50

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.28	pg/L		08/26/15 08:47	08/28/15 00:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	74		31 - 137	08/26/15 08:47	08/28/15 00:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	99		42 - 164	08/26/15 08:47	08/28/15 00:52	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	^	10	3.7	ug/L		08/21/15 15:55	08/26/15 21:09	1
Arsenic	2.4	J	10	1.8	ug/L		08/21/15 15:55	08/26/15 21:09	1
Barium	44	J	50	2.1	ug/L		08/21/15 15:55	08/26/15 21:09	1
Beryllium	ND		5.0	0.28	ug/L		08/21/15 15:55	08/26/15 21:09	1
Boron	130	^	50	7.2	ug/L		08/21/15 15:55	08/26/15 21:09	1

Preliminary Data

Client Sample ID: PZ-209-SD

Date Collected: 08/19/15 11:10
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		5.0	0.34	ug/L		08/21/15 15:55	08/26/15 21:09	1
Chromium	8.9	J	10	3.4	ug/L		08/21/15 15:55	08/26/15 21:09	1
Cobalt	ND		50	2.7	ug/L		08/21/15 15:55	08/26/15 21:09	1
Copper	ND		25	2.1	ug/L		08/21/15 15:55	08/26/15 21:09	1
Lead	0.70	J	10	0.60	ug/L		08/21/15 15:55	08/26/15 21:09	1
Magnesium	37		1.0	0.051	mg/L		08/21/15 15:55	08/26/15 21:09	1
Manganese	73		15	1.0	ug/L		08/21/15 15:55	08/26/15 21:09	1
Nickel	0.0063	J	0.040	0.0026	mg/L		08/21/15 15:55	08/26/15 21:09	1
Selenium	ND		15	2.1	ug/L		08/21/15 15:55	08/26/15 21:09	1
Silver	ND		10	0.99	ug/L		08/21/15 15:55	08/26/15 21:09	1
Thallium	ND		20	2.4	ug/L		08/21/15 15:55	08/26/15 21:09	1
Tin	ND		100	5.0	ug/L		08/21/15 15:55	08/26/15 21:09	1
Vanadium	ND		50	4.4	ug/L		08/21/15 15:55	08/26/15 21:09	1
Zinc	8.7	J	20	8.3	ug/L		08/21/15 15:55	08/26/15 21:09	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/21/15 14:30	08/21/15 19:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.3	J	10	2.9	ug/L		08/25/15 15:15	08/26/15 19:27	1

Client Sample ID: PZ-210-SS

Date Collected: 08/19/15 13:37
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 14:37	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 14:37	1
Acrolein	ND		50	3.1	ug/L			08/22/15 14:37	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 14:37	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 14:37	1
Benzene	0.77	J	5.0	0.25	ug/L			08/22/15 14:37	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 14:37	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 14:37	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 14:37	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 14:37	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 14:37	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 14:37	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 14:37	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 14:37	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 14:37	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 14:37	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 14:37	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 14:37	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 14:37	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 14:37	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 14:37	1

Preliminary Data

Client Sample ID: PZ-210-SS

Date Collected: 08/19/15 13:37
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 14:37	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 14:37	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 14:37	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 14:37	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 14:37	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 14:37	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 14:37	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 14:37	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 14:37	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 14:37	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 14:37	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 14:37	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 14:37	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 14:37	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 14:37	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 14:37	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 14:37	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 14:37	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 14:37	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 14:37	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 14:37	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 14:37	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 14:37	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 14:37	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 14:37	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 14:37	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 14:37	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 14:37	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 14:37	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 14:37	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 14:37	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 14:37	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 14:37	1
Trichloroethene	ND		5.0	0.29	ug/L			08/22/15 14:37	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 14:37	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 14:37	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 14:37	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 14:37	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 14:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*75 - 123*		*08/22/15 14:37*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*08/22/15 14:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*		*08/22/15 14:37*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*08/22/15 14:37*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Acenaphthylene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-210-SS
Date Collected: 08/19/15 13:37
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2-Acetylaminofluorene	ND		95	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
alpha,alpha-Dimethyl phenethylamine	ND		48	21	ug/L		08/21/15 12:04	08/25/15 20:14	1
4-Aminobiphenyl	ND		48	1.0	ug/L		08/21/15 12:04	08/25/15 20:14	1
Anthracene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Benzo[a]anthracene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Benzo[a]pyrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Benzo[b]fluoranthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Benzo[g,h,i]perylene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Benzo[k]fluoranthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Benzyl alcohol	ND		9.5	2.9	ug/L		08/21/15 12:04	08/25/15 20:14	1
Bis(2-chloroethoxy)methane	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Bis(2-chloroethyl)ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
bis(2 chloro-1-methylethyl) ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Bis(2-ethylhexyl) phthalate	ND		9.5	1.8	ug/L		08/21/15 12:04	08/25/15 20:14	1
4-Bromophenyl phenyl ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Butyl benzyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
4-Chloroaniline	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 20:14	1
Chlorobenzilate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
4-Chloro-3-methylphenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2-Chloronaphthalene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2-Chlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
4-Chlorophenyl phenyl ether	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Chrysene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Diallate	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 20:14	1
Dibenz(a,h)anthracene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Dibenzofuran	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
3,3'-Dichlorobenzidine	ND		48	1.2	ug/L		08/21/15 12:04	08/25/15 20:14	1
2,4-Dichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2,6-Dichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Diethyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Dimethoate	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
3,3'-Dimethylbenzidine	ND		48	2.5	ug/L		08/21/15 12:04	08/25/15 20:14	1
2,4-Dimethylphenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Dimethyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Di-n-butyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
1,3-Dinitrobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
1,4-Dinitrobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
4,6-Dinitro-2-methylphenol	ND		9.5	1.2	ug/L		08/21/15 12:04	08/25/15 20:14	1
2,4-Dinitrophenol	ND		48	1.9	ug/L		08/21/15 12:04	08/25/15 20:14	1
2,4-Dinitrotoluene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2,6-Dinitrotoluene	ND		9.5	2.1	ug/L		08/21/15 12:04	08/25/15 20:14	1
Di-n-octyl phthalate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Dinoseb	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 20:14	1
Diphenylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Disulfoton	ND		48	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Ethyl methanesulfonate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Famphur	ND		95	1.6	ug/L		08/21/15 12:04	08/25/15 20:14	1

Preliminary Data

Client Sample ID: PZ-210-SS

Date Collected: 08/19/15 13:37
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Fluorene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Hexachlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Hexachlorobutadiene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Hexachlorocyclopentadiene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Hexachloroethane	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Hexachlorophene	ND		240	9.5	ug/L		08/21/15 12:04	08/26/15 18:08	1
Hexachloropropene	ND		95	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Indeno[1,2,3-cd]pyrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Isodrin	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Isophorone	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Isosafrole	ND		19	4.8	ug/L		08/21/15 12:04	08/25/15 20:14	1
Kepone	ND		95	19	ug/L		08/21/15 12:04	08/26/15 18:08	1
Methapyrilene	ND		48	1.2	ug/L		08/21/15 12:04	08/25/15 20:14	1
3-Methylcholanthrene	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Methyl methanesulfonate	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2-Methylnaphthalene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Methyl parathion	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2-Methylphenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
3 & 4 Methylphenol	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 20:14	1
Naphthalene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
1,4-Naphthoquinone	ND		48	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
1-Naphthylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2-Naphthylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2-Nitroaniline	ND		9.5	1.0	ug/L		08/21/15 12:04	08/25/15 20:14	1
3-Nitroaniline	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
4-Nitroaniline	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Nitrobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
5-Nitro-o-toluidine	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2-Nitrophenol	ND		9.5	1.4	ug/L		08/21/15 12:04	08/25/15 20:14	1
4-Nitrophenol	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 20:14	1
N-Nitrosodiethylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
N-Nitrosodimethylamine	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 20:14	1
N-Nitrosodi-n-butylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
N-Nitrosodi-n-propylamine	ND		9.5	1.4	ug/L		08/21/15 12:04	08/25/15 20:14	1
N-Nitrosomethylethylamine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
N-Nitrosomorpholine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
N-Nitrosopiperidine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
N-Nitrosopyrrolidine	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
o,o',o''-Triethylphosphorothioate	ND		48	1.1	ug/L		08/21/15 12:04	08/25/15 20:14	1
o-Toluidine	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Parathion	ND		48	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
p-Dimethylamino azobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Pentachlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Pentachloroethane	ND		48	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Pentachloronitrobenzene	ND		48	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Pentachlorophenol	ND		9.5	1.2	ug/L		08/21/15 12:04	08/25/15 20:14	1
Phenacetin	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Phenanthrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1

Preliminary Data

Client Sample ID: PZ-210-SS

Date Collected: 08/19/15 13:37
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		9.5	1.9	ug/L		08/21/15 12:04	08/25/15 20:14	1
Phorate	ND		48	1.9	ug/L		08/21/15 12:04	08/25/15 20:14	1
p-Phenylene diamine	ND		95	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Pronamide	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Pyrene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
Pyridine	ND		19	1.9	ug/L		08/21/15 12:04	08/25/15 20:14	1
Safrole	ND		19	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
1,2,4,5-Tetrachlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2,3,4,6-Tetrachlorophenol	ND		48	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
1,2,4-Trichlorobenzene	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2,4,5-Trichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
2,4,6-Trichlorophenol	ND		9.5	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1
1,3,5-Trinitrobenzene	ND		48	0.95	ug/L		08/21/15 12:04	08/25/15 20:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	82		43 - 108	08/21/15 12:04	08/25/15 20:14	1
2-Fluorophenol (Surr)	37		15 - 59	08/21/15 12:04	08/25/15 20:14	1
Nitrobenzene-d5 (Surr)	82		50 - 101	08/21/15 12:04	08/25/15 20:14	1
Phenol-d5 (Surr)	24		10 - 50	08/21/15 12:04	08/25/15 20:14	1
Terphenyl-d14 (Surr)	52		21 - 97	08/21/15 12:04	08/25/15 20:14	1
2,4,6-Tribromophenol (Surr)	102		37 - 120	08/21/15 12:04	08/25/15 20:14	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
alpha-BHC	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
beta-BHC	ND		0.049	0.013	ug/L		08/24/15 14:06	08/25/15 15:50	1
delta-BHC	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
gamma-BHC (Lindane)	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
alpha-Chlordane	ND		0.049	0.015	ug/L		08/24/15 14:06	08/25/15 15:50	1
gamma-Chlordane	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
4,4'-DDD	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
4,4'-DDE	ND		0.049	0.014	ug/L		08/24/15 14:06	08/25/15 15:50	1
4,4'-DDT	ND		0.049	0.023	ug/L		08/24/15 14:06	08/25/15 15:50	1
Dieldrin	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
Endosulfan I	ND		0.049	0.019	ug/L		08/24/15 14:06	08/25/15 15:50	1
Endosulfan II	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
Endosulfan sulfate	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
Endrin	ND		0.049	0.018	ug/L		08/24/15 14:06	08/25/15 15:50	1
Endrin aldehyde	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
Endrin ketone	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
Heptachlor	ND		0.049	0.0098	ug/L		08/24/15 14:06	08/25/15 15:50	1
Heptachlor epoxide	ND		0.049	0.017	ug/L		08/24/15 14:06	08/25/15 15:50	1
Methoxychlor	ND		0.49	0.013	ug/L		08/24/15 14:06	08/25/15 15:50	1
Toxaphene	ND		2.0	0.26	ug/L		08/24/15 14:06	08/25/15 15:50	1
Technical Chlordane	ND		0.49	0.098	ug/L		08/24/15 14:06	08/25/15 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	53		44 - 112	08/24/15 14:06	08/25/15 15:50	1
Tetrachloro-m-xylene	73		49 - 104	08/24/15 14:06	08/25/15 15:50	1

Preliminary Data

Client Sample ID: PZ-210-SS

Date Collected: 08/19/15 13:37
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-3

Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 10:46	1
PCB-1221	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 10:46	1
PCB-1232	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 10:46	1
PCB-1242	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 10:46	1
PCB-1248	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 10:46	1
PCB-1254	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 10:46	1
PCB-1260	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 10:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*117*		*52 - 150*	*08/25/15 13:16*	*08/27/15 10:46*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.26	ug/L		08/24/15 12:55	08/26/15 21:20	1
2,4-D	ND		7.6	4.0	ug/L		08/24/15 12:55	08/26/15 21:20	1
Silvex (2,4,5-TP)	ND		0.95	0.18	ug/L		08/24/15 12:55	08/26/15 21:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*82*		*60 - 128*	*08/24/15 12:55*	*08/26/15 21:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	21		1.0	0.10	mg/L			08/25/15 01:22	2

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.26	pg/L		08/26/15 08:47	08/28/15 01:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*75*		*31 - 137*	*08/26/15 08:47*	*08/28/15 01:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*100*		*42 - 164*	*08/26/15 08:47*	*08/28/15 01:38*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	4.0	J ^	10	3.7	ug/L		08/21/15 15:55	08/26/15 21:14	1
Arsenic	4.4	J	10	1.8	ug/L		08/21/15 15:55	08/26/15 21:14	1
Barium	70		50	2.1	ug/L		08/21/15 15:55	08/26/15 21:14	1
Beryllium	ND		5.0	0.28	ug/L		08/21/15 15:55	08/26/15 21:14	1
Boron	120	^	50	7.2	ug/L		08/21/15 15:55	08/26/15 21:14	1
Cadmium	ND		5.0	0.34	ug/L		08/21/15 15:55	08/26/15 21:14	1
Chromium	4.9	J	10	3.4	ug/L		08/21/15 15:55	08/26/15 21:14	1
Cobalt	ND		50	2.7	ug/L		08/21/15 15:55	08/26/15 21:14	1
Copper	ND		25	2.1	ug/L		08/21/15 15:55	08/26/15 21:14	1
Lead	1.9	J	10	0.60	ug/L		08/21/15 15:55	08/26/15 21:14	1
Magnesium	45		1.0	0.051	mg/L		08/21/15 15:55	08/26/15 21:14	1
Manganese	120		15	1.0	ug/L		08/21/15 15:55	08/26/15 21:14	1
Nickel	0.0055	J	0.040	0.0026	mg/L		08/21/15 15:55	08/26/15 21:14	1
Selenium	ND		15	2.1	ug/L		08/21/15 15:55	08/26/15 21:14	1
Silver	ND		10	0.99	ug/L		08/21/15 15:55	08/26/15 21:14	1
Thallium	ND		20	2.4	ug/L		08/21/15 15:55	08/26/15 21:14	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-210-SS

Date Collected: 08/19/15 13:37
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tin	ND		100	5.0	ug/L		08/21/15 15:55	08/26/15 21:14	1
Vanadium	ND		50	4.4	ug/L		08/21/15 15:55	08/26/15 21:14	1
Zinc	ND		20	8.3	ug/L		08/21/15 15:55	08/26/15 21:14	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/21/15 14:30	08/21/15 19:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	2.9	ug/L		08/25/15 15:15	08/26/15 19:31	1

Client Sample ID: PZ-210-SD

Date Collected: 08/19/15 14:36
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 15:02	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 15:02	1
Acrolein	ND		50	3.1	ug/L			08/22/15 15:02	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 15:02	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 15:02	1
Benzene	2.4	J	5.0	0.25	ug/L			08/22/15 15:02	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 15:02	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 15:02	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 15:02	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 15:02	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 15:02	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 15:02	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 15:02	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 15:02	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 15:02	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 15:02	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 15:02	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 15:02	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 15:02	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 15:02	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 15:02	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 15:02	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 15:02	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 15:02	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 15:02	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 15:02	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 15:02	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 15:02	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 15:02	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 15:02	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 15:02	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 15:02	1

Preliminary Data

Client Sample ID: PZ-210-SD

Date Collected: 08/19/15 14:36
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 15:02	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 15:02	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 15:02	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 15:02	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 15:02	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 15:02	1
Isobutyl alcohol	**220**		200	7.3	ug/L			08/22/15 15:02	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 15:02	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 15:02	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 15:02	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 15:02	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 15:02	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 15:02	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 15:02	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 15:02	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 15:02	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 15:02	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 15:02	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 15:02	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/22/15 15:02	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 15:02	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 15:02	1
Trichloroethene	**0.91**	**J B**	5.0	0.29	ug/L			08/22/15 15:02	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 15:02	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 15:02	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 15:02	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 15:02	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*	*X*	*75 - 123*		*08/22/15 15:02*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*08/22/15 15:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*78 - 127*		*08/22/15 15:02*	*1*
Toluene-d8 (Surr)	*114*		*80 - 120*		*08/22/15 15:02*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Acenaphthylene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Acetophenone	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2-Acetylaminofluorene	ND		100	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
alpha,alpha-Dimethyl phenethylamine	ND		51	22	ug/L		08/21/15 12:04	08/25/15 20:47	1
4-Aminobiphenyl	ND		51	1.1	ug/L		08/21/15 12:04	08/25/15 20:47	1
Anthracene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Benzo[a]anthracene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Benzo[a]pyrene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Benzo[b]fluoranthene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Benzo[g,h,i]perylene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Benzo[k]fluoranthene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Benzyl alcohol	ND		10	3.0	ug/L		08/21/15 12:04	08/25/15 20:47	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-210-SD
Date Collected: 08/19/15 14:36
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Bis(2-chloroethyl)ether	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
bis(2 chloro-1-methylethyl) ether	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Bis(2-ethylhexyl) phthalate	ND		10	1.9	ug/L		08/21/15 12:04	08/25/15 20:47	1
4-Bromophenyl phenyl ether	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Butyl benzyl phthalate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
4-Chloroaniline	ND		10	2.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Chlorobenzilate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
4-Chloro-3-methylphenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2-Chloronaphthalene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2-Chlorophenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
4-Chlorophenyl phenyl ether	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Chrysene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Diallate	ND		20	2.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Dibenz(a,h)anthracene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Dibenzofuran	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
3,3'-Dichlorobenzidine	ND		51	1.3	ug/L		08/21/15 12:04	08/25/15 20:47	1
2,4-Dichlorophenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2,6-Dichlorophenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Diethyl phthalate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Dimethoate	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
7,12-Dimethylbenz(a)anthracene	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
3,3'-Dimethylbenzidine	ND		51	2.7	ug/L		08/21/15 12:04	08/25/15 20:47	1
2,4-Dimethylphenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Dimethyl phthalate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Di-n-butyl phthalate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
1,3-Dinitrobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
1,4-Dinitrobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
4,6-Dinitro-2-methylphenol	ND		10	1.3	ug/L		08/21/15 12:04	08/25/15 20:47	1
2,4-Dinitrophenol	ND		51	2.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2,4-Dinitrotoluene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2,6-Dinitrotoluene	ND		10	2.2	ug/L		08/21/15 12:04	08/25/15 20:47	1
Di-n-octyl phthalate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Dinoseb	ND		20	2.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Diphenylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Disulfoton	ND		51	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Ethyl methanesulfonate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Famphur	ND		100	1.7	ug/L		08/21/15 12:04	08/25/15 20:47	1
Fluoranthene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Fluorene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Hexachlorobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Hexachlorobutadiene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Hexachloroethane	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Hexachlorophene	ND		250	10	ug/L		08/21/15 12:04	08/26/15 18:41	1
Hexachloropropene	ND		100	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Indeno[1,2,3-cd]pyrene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Isodrin	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Isophorone	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-210-SD
Date Collected: 08/19/15 14:36
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isosafrole	ND		20	5.1	ug/L		08/21/15 12:04	08/25/15 20:47	1
Kepone	ND		100	20	ug/L		08/21/15 12:04	08/26/15 18:41	1
Methapyrilene	ND		51	1.3	ug/L		08/21/15 12:04	08/25/15 20:47	1
3-Methylcholanthrene	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Methyl methanesulfonate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2-Methylnaphthalene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Methyl parathion	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2-Methylphenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
3 & 4 Methylphenol	ND		20	2.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Naphthalene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
1,4-Naphthoquinone	ND		51	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
1-Naphthylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2-Naphthylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2-Nitroaniline	ND		10	1.1	ug/L		08/21/15 12:04	08/25/15 20:47	1
3-Nitroaniline	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
4-Nitroaniline	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Nitrobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
5-Nitro-o-toluidine	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2-Nitrophenol	ND		10	1.5	ug/L		08/21/15 12:04	08/25/15 20:47	1
4-Nitrophenol	ND		10	2.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
N-Nitrosodiethylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
N-Nitrosodimethylamine	ND		10	2.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
N-Nitrosodi-n-butylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/L		08/21/15 12:04	08/25/15 20:47	1
N-Nitrosomethylethylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
N-Nitrosomorpholine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
N-Nitrosopiperidine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
N-Nitrosopyrrolidine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
o,o',o"-Triethylphosphorothioate	ND		51	1.2	ug/L		08/21/15 12:04	08/25/15 20:47	1
o-Toluidine	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Parathion	ND		51	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
p-Dimethylamino azobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Pentachlorobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Pentachloroethane	ND		51	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Pentachloronitrobenzene	ND		51	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Pentachlorophenol	ND		10	1.3	ug/L		08/21/15 12:04	08/25/15 20:47	1
Phenacetin	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Phenanthrene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Phenol	ND		10	2.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Phorate	ND		51	2.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
p-Phenylene diamine	ND		100	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Pronamide	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Pyrene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Pyridine	ND		20	2.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
Safrole	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2,3,4,6-Tetrachlorophenol	ND		51	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
1,2,4-Trichlorobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
2,4,5-Trichlorophenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1

Preliminary Data

Client Sample ID: PZ-210-SD

Date Collected: 08/19/15 14:36
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1
1,3,5-Trinitrobenzene	ND		51	1.0	ug/L		08/21/15 12:04	08/25/15 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*43 - 108*	*08/21/15 12:04*	*08/25/15 20:47*	*1*
2-Fluorophenol (Surr)	*35*		*15 - 59*	*08/21/15 12:04*	*08/25/15 20:47*	*1*
Nitrobenzene-d5 (Surr)	*75*		*50 - 101*	*08/21/15 12:04*	*08/25/15 20:47*	*1*
Phenol-d5 (Surr)	*24*		*10 - 50*	*08/21/15 12:04*	*08/25/15 20:47*	*1*
Terphenyl-d14 (Surr)	*48*		*21 - 97*	*08/21/15 12:04*	*08/25/15 20:47*	*1*
2,4,6-Tribromophenol (Surr)	*93*		*37 - 120*	*08/21/15 12:04*	*08/25/15 20:47*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
alpha-BHC	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
beta-BHC	ND		0.051	0.013	ug/L		08/24/15 14:06	08/25/15 16:09	1
delta-BHC	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
gamma-BHC (Lindane)	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
alpha-Chlordane	ND		0.051	0.015	ug/L		08/24/15 14:06	08/25/15 16:09	1
gamma-Chlordane	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
4,4'-DDD	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
4,4'-DDE	ND		0.051	0.014	ug/L		08/24/15 14:06	08/25/15 16:09	1
4,4'-DDT	ND		0.051	0.024	ug/L		08/24/15 14:06	08/25/15 16:09	1
Dieldrin	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
Endosulfan I	ND		0.051	0.020	ug/L		08/24/15 14:06	08/25/15 16:09	1
Endosulfan II	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
Endosulfan sulfate	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
Endrin	ND		0.051	0.018	ug/L		08/24/15 14:06	08/25/15 16:09	1
Endrin aldehyde	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
Endrin ketone	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
Heptachlor	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:09	1
Heptachlor epoxide	ND		0.051	0.017	ug/L		08/24/15 14:06	08/25/15 16:09	1
Methoxychlor	ND		0.51	0.013	ug/L		08/24/15 14:06	08/25/15 16:09	1
Toxaphene	ND		2.1	0.28	ug/L		08/24/15 14:06	08/25/15 16:09	1
Technical Chlordane	ND		0.51	0.10	ug/L		08/24/15 14:06	08/25/15 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*39*	*X*	*44 - 112*	*08/24/15 14:06*	*08/25/15 16:09*	*1*
Tetrachloro-m-xylene	*62*		*49 - 104*	*08/24/15 14:06*	*08/25/15 16:09*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.36	ug/L		08/25/15 13:16	08/27/15 11:02	1
PCB-1221	ND		1.0	0.36	ug/L		08/25/15 13:16	08/27/15 11:02	1
PCB-1232	ND		1.0	0.36	ug/L		08/25/15 13:16	08/27/15 11:02	1
PCB-1242	ND		1.0	0.36	ug/L		08/25/15 13:16	08/27/15 11:02	1
PCB-1248	ND		1.0	0.36	ug/L		08/25/15 13:16	08/27/15 11:02	1
PCB-1254	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 11:02	1
PCB-1260	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 11:02	1

Preliminary Data

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-210-SD
Date Collected: 08/19/15 14:36
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-4
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	115		52 - 150	08/25/15 13:16	08/27/15 11:02	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.27	ug/L		08/24/15 12:55	08/26/15 21:50	1
2,4-D	ND		8.0	4.2	ug/L		08/24/15 12:55	08/26/15 21:50	1
Silvex (2,4,5-TP)	ND		1.0	0.19	ug/L		08/24/15 12:55	08/26/15 21:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	92		60 - 128	08/24/15 12:55	08/26/15 21:50	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	41		25	2.5	mg/L			08/25/15 02:32	50

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.31	pg/L		08/26/15 08:47	08/28/15 02:24	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	71		31 - 137	08/26/15 08:47	08/28/15 02:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	100		42 - 164	08/26/15 08:47	08/28/15 02:24	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	^	10	3.7	ug/L		08/21/15 15:55	08/26/15 21:18	1
Arsenic	5.4	J	10	1.8	ug/L		08/21/15 15:55	08/26/15 21:18	1
Barium	82		50	2.1	ug/L		08/21/15 15:55	08/26/15 21:18	1
Beryllium	ND		5.0	0.28	ug/L		08/21/15 15:55	08/26/15 21:18	1
Boron	250	^	50	7.2	ug/L		08/21/15 15:55	08/26/15 21:18	1
Cadmium	ND		5.0	0.34	ug/L		08/21/15 15:55	08/26/15 21:18	1
Chromium	6.1	J	10	3.4	ug/L		08/21/15 15:55	08/26/15 21:18	1
Cobalt	ND		50	2.7	ug/L		08/21/15 15:55	08/26/15 21:18	1
Copper	ND		25	2.1	ug/L		08/21/15 15:55	08/26/15 21:18	1
Lead	2.5	J	10	0.60	ug/L		08/21/15 15:55	08/26/15 21:18	1
Magnesium	49		1.0	0.051	mg/L		08/21/15 15:55	08/26/15 21:18	1
Manganese	120		15	1.0	ug/L		08/21/15 15:55	08/26/15 21:18	1
Nickel	0.012	J	0.040	0.0026	mg/L		08/21/15 15:55	08/26/15 21:18	1
Selenium	3.1	J B	15	2.1	ug/L		08/21/15 15:55	08/26/15 21:18	1
Silver	ND		10	0.99	ug/L		08/21/15 15:55	08/26/15 21:18	1
Thallium	ND		20	2.4	ug/L		08/21/15 15:55	08/26/15 21:18	1
Tin	ND		100	5.0	ug/L		08/21/15 15:55	08/26/15 21:18	1
Vanadium	ND		50	4.4	ug/L		08/21/15 15:55	08/26/15 21:18	1
Zinc	ND		20	8.3	ug/L		08/21/15 15:55	08/26/15 21:18	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/21/15 14:30	08/21/15 19:52	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-210-SD

Date Collected: 08/19/15 14:36
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-4
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	2.9	ug/L		08/25/15 15:15	08/26/15 19:34	1

Client Sample ID: PZ-211-SS

Date Collected: 08/19/15 16:09
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 15:27	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 15:27	1
Acrolein	ND		50	3.1	ug/L			08/22/15 15:27	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 15:27	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 15:27	1
Benzene	1.2	J	5.0	0.25	ug/L			08/22/15 15:27	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 15:27	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 15:27	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 15:27	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 15:27	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 15:27	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 15:27	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 15:27	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 15:27	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 15:27	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 15:27	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 15:27	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 15:27	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 15:27	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 15:27	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 15:27	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 15:27	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 15:27	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 15:27	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 15:27	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 15:27	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 15:27	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 15:27	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 15:27	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 15:27	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 15:27	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 15:27	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 15:27	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 15:27	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 15:27	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 15:27	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 15:27	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 15:27	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 15:27	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 15:27	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 15:27	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 15:27	1

Preliminary Data

Client Sample ID: PZ-211-SS

Date Collected: 08/19/15 16:09
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 15:27	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 15:27	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 15:27	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 15:27	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 15:27	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 15:27	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 15:27	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 15:27	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 15:27	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 15:27	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 15:27	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 15:27	1
Trichloroethene	**1.4**	**J B**	5.0	0.29	ug/L			08/22/15 15:27	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 15:27	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 15:27	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 15:27	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 15:27	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 15:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*	*X*	*75 - 123*		*08/22/15 15:27*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/22/15 15:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*78 - 127*		*08/22/15 15:27*	*1*
Toluene-d8 (Surr)	*112*		*80 - 120*		*08/22/15 15:27*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Acenaphthylene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Acetophenone	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2-Acetylaminofluorene	ND		99	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
alpha,alpha-Dimethyl phenethylamine	ND		50	22	ug/L		08/21/15 12:04	08/28/15 14:58	1
4-Aminobiphenyl	ND		50	1.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
Anthracene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Benzo[a]anthracene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Benzo[a]pyrene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Benzo[b]fluoranthene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Benzo[g,h,i]perylene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Benzo[k]fluoranthene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Benzyl alcohol	ND		9.9	3.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
Bis(2-chloroethoxy)methane	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Bis(2-chloroethyl)ether	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
bis(2 chloro-1-methylethyl) ether	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Bis(2-ethylhexyl) phthalate	ND		9.9	1.8	ug/L		08/21/15 12:04	08/28/15 14:58	1
4-Bromophenyl phenyl ether	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Butyl benzyl phthalate	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
4-Chloroaniline	ND		9.9	2.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
Chlorobenzilate	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
4-Chloro-3-methylphenol	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2-Chloronaphthalene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-211-SS
Date Collected: 08/19/15 16:09
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
4-Chlorophenyl phenyl ether	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Chrysene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Diallate	ND		20	2.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
Dibenz(a,h)anthracene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Dibenzofuran	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
3,3'-Dichlorobenzidine	ND		50	1.3	ug/L		08/21/15 12:04	08/28/15 14:58	1
2,4-Dichlorophenol	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2,6-Dichlorophenol	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Diethyl phthalate	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Dimethoate	ND		20	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
7,12-Dimethylbenz(a)anthracene	ND		20	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
3,3'-Dimethylbenzidine	ND		50	2.6	ug/L		08/21/15 12:04	08/28/15 14:58	1
2,4-Dimethylphenol	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Dimethyl phthalate	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Di-n-butyl phthalate	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
1,3-Dinitrobenzene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
1,4-Dinitrobenzene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
4,6-Dinitro-2-methylphenol	ND		9.9	1.2	ug/L		08/21/15 12:04	08/28/15 14:58	1
2,4-Dinitrophenol	ND		50	2.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
2,4-Dinitrotoluene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2,6-Dinitrotoluene	ND		9.9	2.1	ug/L		08/21/15 12:04	08/28/15 14:58	1
Di-n-octyl phthalate	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Dinoseb	ND		20	2.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
Diphenylamine	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Disulfoton	ND		50	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Ethyl methanesulfonate	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Famphur	ND		99	1.7	ug/L		08/21/15 12:04	08/28/15 14:58	1
Fluoranthene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Fluorene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Hexachlorobenzene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Hexachlorobutadiene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Hexachlorocyclopentadiene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Hexachloroethane	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Hexachlorophene	ND		250	9.9	ug/L		08/21/15 12:04	08/26/15 19:14	1
Hexachloropropene	ND		99	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Indeno[1,2,3-cd]pyrene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Isodrin	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Isophorone	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Isosafrole	ND		20	5.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
Kepone	ND		99	20	ug/L		08/21/15 12:04	08/26/15 19:14	1
Methapyrilene	ND		50	1.2	ug/L		08/21/15 12:04	08/28/15 14:58	1
3-Methylcholanthrene	ND		20	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Methyl methanesulfonate	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2-Methylnaphthalene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Methyl parathion	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2-Methylphenol	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
3 & 4 Methylphenol	ND		20	2.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
Naphthalene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1

Preliminary Data

Client Sample ID: PZ-211-SS

Date Collected: 08/19/15 16:09
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Naphthoquinone	ND		50	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
1-Naphthylamine	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2-Naphthylamine	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2-Nitroaniline	ND		9.9	1.1	ug/L		08/21/15 12:04	08/28/15 14:58	1
3-Nitroaniline	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
4-Nitroaniline	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Nitrobenzene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
5-Nitro-o-toluidine	ND		20	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2-Nitrophenol	ND		9.9	1.5	ug/L		08/21/15 12:04	08/28/15 14:58	1
4-Nitrophenol	ND		9.9	2.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
N-Nitrosodiethylamine	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
N-Nitrosodimethylamine	ND		9.9	2.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
N-Nitrosodi-n-butylamine	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
N-Nitrosodi-n-propylamine	ND		9.9	1.5	ug/L		08/21/15 12:04	08/28/15 14:58	1
N-Nitrosomethylethylamine	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
N-Nitrosomorpholine	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
N-Nitrosopiperidine	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
N-Nitrosopyrrolidine	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
o,o',o''-Triethylphosphorothioate	ND		50	1.1	ug/L		08/21/15 12:04	08/28/15 14:58	1
o-Toluidine	ND		20	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Parathion	ND		50	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
p-Dimethylamino azobenzene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Pentachlorobenzene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Pentachloroethane	ND		50	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Pentachloronitrobenzene	ND		50	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Pentachlorophenol	ND		9.9	1.3	ug/L		08/21/15 12:04	08/28/15 14:58	1
Phenacetin	ND		20	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Phenanthrene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Phenol	ND		9.9	2.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
Phorate	ND		50	2.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
p-Phenylene diamine	ND		99	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Pronamide	ND		20	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Pyrene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
Pyridine	ND		20	2.0	ug/L		08/21/15 12:04	08/28/15 14:58	1
Safrole	ND		20	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
1,2,4,5-Tetrachlorobenzene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2,3,4,6-Tetrachlorophenol	ND		50	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
1,2,4-Trichlorobenzene	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2,4,5-Trichlorophenol	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
2,4,6-Trichlorophenol	ND		9.9	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1
1,3,5-Trinitrobenzene	ND		50	0.99	ug/L		08/21/15 12:04	08/28/15 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*70*		*43 - 108*	*08/21/15 12:04*	*08/28/15 14:58*	*1*
2-Fluorophenol (Surr)	*31*		*15 - 59*	*08/21/15 12:04*	*08/28/15 14:58*	*1*
Nitrobenzene-d5 (Surr)	*66*		*50 - 101*	*08/21/15 12:04*	*08/28/15 14:58*	*1*
Phenol-d5 (Surr)	*20*		*10 - 50*	*08/21/15 12:04*	*08/28/15 14:58*	*1*
Terphenyl-d14 (Surr)	*49*		*21 - 97*	*08/21/15 12:04*	*08/28/15 14:58*	*1*
2,4,6-Tribromophenol (Surr)	*83*		*37 - 120*	*08/21/15 12:04*	*08/28/15 14:58*	*1*

Preliminary Data

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-211-SS
Date Collected: 08/19/15 16:09
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-5
Matrix: Water

Preliminary Data

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
alpha-BHC	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
beta-BHC	ND		0.050	0.013	ug/L		08/24/15 14:06	08/25/15 16:29	1
delta-BHC	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
gamma-BHC (Lindane)	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
alpha-Chlordane	ND		0.050	0.015	ug/L		08/24/15 14:06	08/25/15 16:29	1
gamma-Chlordane	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
4,4'-DDD	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
4,4'-DDE	ND		0.050	0.014	ug/L		08/24/15 14:06	08/25/15 16:29	1
4,4'-DDT	ND		0.050	0.023	ug/L		08/24/15 14:06	08/25/15 16:29	1
Dieldrin	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
Endosulfan I	ND		0.050	0.019	ug/L		08/24/15 14:06	08/25/15 16:29	1
Endosulfan II	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
Endosulfan sulfate	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
Endrin	ND		0.050	0.018	ug/L		08/24/15 14:06	08/25/15 16:29	1
Endrin aldehyde	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
Endrin ketone	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
Heptachlor	ND		0.050	0.0099	ug/L		08/24/15 14:06	08/25/15 16:29	1
Heptachlor epoxide	ND		0.050	0.017	ug/L		08/24/15 14:06	08/25/15 16:29	1
Methoxychlor	ND		0.50	0.013	ug/L		08/24/15 14:06	08/25/15 16:29	1
Toxaphene	ND		2.0	0.27	ug/L		08/24/15 14:06	08/25/15 16:29	1
Technical Chlordane	ND		0.50	0.099	ug/L		08/24/15 14:06	08/25/15 16:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*50*		*44 - 112*	*08/24/15 14:06*	*08/25/15 16:29*	*1*
Tetrachloro-m-xylene	*79*		*49 - 104*	*08/24/15 14:06*	*08/25/15 16:29*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 11:18	1
PCB-1221	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 11:18	1
PCB-1232	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 11:18	1
PCB-1242	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 11:18	1
PCB-1248	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 11:18	1
PCB-1254	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 11:18	1
PCB-1260	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 11:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*92*		*52 - 150*	*08/25/15 13:16*	*08/27/15 11:18*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.99	0.27	ug/L		08/24/15 12:55	08/26/15 22:20	1
2,4-D	ND		7.9	4.2	ug/L		08/24/15 12:55	08/26/15 22:20	1
Silvex (2,4,5-TP)	ND		0.99	0.19	ug/L		08/24/15 12:55	08/26/15 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*99*		*60 - 128*	*08/24/15 12:55*	*08/26/15 22:20*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Client Sample ID: PZ-211-SS

Date Collected: 08/19/15 16:09
Date Received: 08/19/15 17:45

Lab Sample ID: 160-13457-5

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	38		25	2.5	mg/L			08/25/15 03:00	50

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.53	pg/L		08/26/15 08:47	08/28/15 06:45	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*70*		*31 - 137*	*08/26/15 08:47*	*08/28/15 06:45*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*102*		*42 - 164*	*08/26/15 08:47*	*08/28/15 06:45*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	7.4	J ^	10	3.7	ug/L		08/21/15 15:55	08/26/15 21:22	1
Arsenic	3.3	J	10	1.8	ug/L		08/21/15 15:55	08/26/15 21:22	1
Barium	87		50	2.1	ug/L		08/21/15 15:55	08/26/15 21:22	1
Beryllium	0.30	J	5.0	0.28	ug/L		08/21/15 15:55	08/26/15 21:22	1
Boron	450	^	50	7.2	ug/L		08/21/15 15:55	08/26/15 21:22	1
Cadmium	ND		5.0	0.34	ug/L		08/21/15 15:55	08/26/15 21:22	1
Chromium	4.8	J	10	3.4	ug/L		08/21/15 15:55	08/26/15 21:22	1
Cobalt	ND		50	2.7	ug/L		08/21/15 15:55	08/26/15 21:22	1
Copper	ND		25	2.1	ug/L		08/21/15 15:55	08/26/15 21:22	1
Lead	1.0	J	10	0.60	ug/L		08/21/15 15:55	08/26/15 21:22	1
Magnesium	44		1.0	0.051	mg/L		08/21/15 15:55	08/26/15 21:22	1
Manganese	71		15	1.0	ug/L		08/21/15 15:55	08/26/15 21:22	1
Nickel	0.0095	J	0.040	0.0026	mg/L		08/21/15 15:55	08/26/15 21:22	1
Selenium	2.2	J B	15	2.1	ug/L		08/21/15 15:55	08/26/15 21:22	1
Silver	ND		10	0.99	ug/L		08/21/15 15:55	08/26/15 21:22	1
Thallium	ND		20	2.4	ug/L		08/21/15 15:55	08/26/15 21:22	1
Tin	ND		100	5.0	ug/L		08/21/15 15:55	08/26/15 21:22	1
Vanadium	ND		50	4.4	ug/L		08/21/15 15:55	08/26/15 21:22	1
Zinc	9.5	J	20	8.3	ug/L		08/21/15 15:55	08/26/15 21:22	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/21/15 14:30	08/21/15 19:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	2.9	ug/L		08/25/15 15:15	08/26/15 19:37	1

Preliminary Data

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 160-207022/7
Matrix: Water
Analysis Batch: 207022

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 13:23	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 13:23	1
Acrolein	ND		50	3.1	ug/L			08/22/15 13:23	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 13:23	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 13:23	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 13:23	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 13:23	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 13:23	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 13:23	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 13:23	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 13:23	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 13:23	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 13:23	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 13:23	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 13:23	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 13:23	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 13:23	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 13:23	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 13:23	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 13:23	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 13:23	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 13:23	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 13:23	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 13:23	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 13:23	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 13:23	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 13:23	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 13:23	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 13:23	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 13:23	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 13:23	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 13:23	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 13:23	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 13:23	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 13:23	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 13:23	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 13:23	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 13:23	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 13:23	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 13:23	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 13:23	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 13:23	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 13:23	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 13:23	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 13:23	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 13:23	1

Preliminary Data

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

Lab Sample ID: MB 160-207022/7
Matrix: Water
Analysis Batch: 207022

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		5.0	1.0	ug/L			08/22/15 13:23	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 13:23	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 13:23	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 13:23	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 13:23	1
Trichloroethene	0.589	J	5.0	0.29	ug/L			08/22/15 13:23	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 13:23	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 13:23	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 13:23	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 13:23	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 13:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*	*X*	*75 - 123*		*08/22/15 13:23*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/22/15 13:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*78 - 127*		*08/22/15 13:23*	*1*
Toluene-d8 (Surr)	*113*		*80 - 120*		*08/22/15 13:23*	*1*

Lab Sample ID: LCS 160-207022/4
Matrix: Water
Analysis Batch: 207022

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	50.1		ug/L		100	72 - 139
Acetonitrile	500	489		ug/L		98	75 - 129
Acrolein	248	252		ug/L		102	67 - 140
Acrylonitrile	500	489		ug/L		98	80 - 120
Allyl chloride	50.0	53.3		ug/L		107	75 - 127
Benzene	50.0	52.2		ug/L		104	80 - 120
Bromochloromethane	50.0	48.6		ug/L		97	80 - 120
Bromodichloromethane	50.0	50.1		ug/L		100	80 - 120
Bromoform	50.0	49.7		ug/L		99	80 - 120
Bromomethane	50.0	45.3		ug/L		91	48 - 140
2-Butanone (MEK)	50.0	52.5		ug/L		105	68 - 128
Carbon disulfide	50.0	51.2		ug/L		102	79 - 120
Carbon tetrachloride	50.0	52.0		ug/L		104	74 - 128
Chlorobenzene	50.0	50.0		ug/L		100	80 - 120
Chloroethane	50.0	46.6		ug/L		93	55 - 140
Chloroform	50.0	47.9		ug/L		96	80 - 120
Chloromethane	50.0	54.0		ug/L		108	72 - 123
cis-1,2-Dichloroethene	50.0	50.4		ug/L		101	80 - 120
cis-1,3-Dichloropropene	50.0	54.1		ug/L		108	80 - 120
Dibromochloromethane	50.0	49.1		ug/L		98	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	46.8		ug/L		94	69 - 135
1,2-Dibromoethane (EDB)	50.0	49.7		ug/L		99	80 - 120
Dibromomethane	50.0	49.2		ug/L		98	80 - 120
1,2-Dichlorobenzene	50.0	54.2		ug/L		108	76 - 122

Preliminary Data

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

Lab Sample ID: LCS 160-207022/4
Matrix: Water
Analysis Batch: 207022

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	50.0	54.2		ug/L		108	77 - 122
1,4-Dichlorobenzene	50.0	51.7		ug/L		103	80 - 120
Dichlorodifluoromethane	50.0	55.3		ug/L		111	49 - 140
1,1-Dichloroethane	50.0	51.3		ug/L		103	80 - 120
1,2-Dichloroethane	50.0	53.0		ug/L		106	80 - 120
1,1-Dichloroethene	50.0	52.3		ug/L		105	77 - 121
1,2-Dichloropropane	50.0	51.2		ug/L		102	80 - 120
1,3-Dichloropropane	50.0	52.4		ug/L		105	80 - 120
2,2-Dichloropropane	50.0	57.1		ug/L		114	73 - 134
1,1-Dichloropropene	50.0	57.5		ug/L		115	80 - 120
Ethylbenzene	50.0	56.1		ug/L		112	80 - 120
Ethyl methacrylate	50.0	47.4		ug/L		95	72 - 134
2-Hexanone	50.0	48.1		ug/L		96	64 - 136
Iodomethane	50.0	52.7		ug/L		105	72 - 130
Isobutyl alcohol	1250	1170		ug/L		94	69 - 130
Methacrylonitrile	500	509		ug/L		102	78 - 123
Methylene Chloride	50.0	48.8		ug/L		98	79 - 115
Methyl methacrylate	100	96.4		ug/L		96	64 - 127
4-Methyl-2-pentanone (MIBK)	50.0	53.0		ug/L		106	74 - 129
Propionitrile	500	454		ug/L		91	74 - 131
Styrene	50.0	57.0		ug/L		114	80 - 120
1,1,1,2-Tetrachloroethane	50.0	51.1		ug/L		102	80 - 120
1,1,2,2-Tetrachloroethane	50.0	50.0		ug/L		100	80 - 120
Tetrachloroethene	50.0	49.4		ug/L		99	80 - 120
Toluene	50.0	53.1		ug/L		106	80 - 120
trans-1,4-Dichloro-2-butene	50.0	48.9		ug/L		98	80 - 123
trans-1,2-Dichloroethene	50.0	51.3		ug/L		103	80 - 120
trans-1,3-Dichloropropene	50.0	52.5		ug/L		105	80 - 120
1,1,1-Trichloroethane	50.0	52.5		ug/L		105	75 - 127
1,1,2-Trichloroethane	50.0	46.2		ug/L		92	80 - 120
Trichloroethene	50.0	51.7		ug/L		103	80 - 120
Trichlorofluoromethane	50.0	49.2		ug/L		98	72 - 132
1,2,3-Trichloropropane	50.0	47.0		ug/L		94	80 - 120
Vinyl acetate	50.0	54.6		ug/L		109	43 - 140
Vinyl chloride	50.0	46.7		ug/L		93	68 - 120
Xylenes, Total	100	107		ug/L		107	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*75 - 123*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*
Toluene-d8 (Surr)	*105*		*80 - 120*

Preliminary Data

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

Lab Sample ID: LCSD 160-207022/5
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	46.8		ug/L		94	72 - 139	7	20
Acetonitrile	500	503		ug/L		101	75 - 129	3	20
Acrolein	248	255		ug/L		103	67 - 140	1	20
Acrylonitrile	500	487		ug/L		97	80 - 120	1	20
Allyl chloride	50.0	51.1		ug/L		102	75 - 127	4	20
Benzene	50.0	52.6		ug/L		105	80 - 120	1	20
Bromochloromethane	50.0	47.3		ug/L		95	80 - 120	3	20
Bromodichloromethane	50.0	52.1		ug/L		104	80 - 120	4	20
Bromoform	50.0	47.4		ug/L		95	80 - 120	5	20
Bromomethane	50.0	45.4		ug/L		91	48 - 140	0	20
2-Butanone (MEK)	50.0	53.5		ug/L		107	68 - 128	2	20
Carbon disulfide	50.0	50.3		ug/L		101	79 - 120	2	20
Carbon tetrachloride	50.0	52.8		ug/L		106	74 - 128	2	20
Chlorobenzene	50.0	50.4		ug/L		101	80 - 120	1	20
Chloroethane	50.0	46.2		ug/L		92	55 - 140	1	20
Chloroform	50.0	50.8		ug/L		102	80 - 120	6	20
Chloromethane	50.0	54.7		ug/L		109	72 - 123	1	20
cis-1,2-Dichloroethene	50.0	51.8		ug/L		104	80 - 120	3	20
cis-1,3-Dichloropropene	50.0	55.0		ug/L		110	80 - 120	2	20
Dibromochloromethane	50.0	51.8		ug/L		104	80 - 120	5	20
1,2-Dibromo-3-Chloropropane	50.0	52.7		ug/L		105	69 - 135	12	20
1,2-Dibromoethane (EDB)	50.0	50.0		ug/L		100	80 - 120	1	20
Dibromomethane	50.0	51.2		ug/L		102	80 - 120	4	20
1,2-Dichlorobenzene	50.0	53.3		ug/L		107	76 - 122	2	20
1,3-Dichlorobenzene	50.0	55.9		ug/L		112	77 - 122	3	20
1,4-Dichlorobenzene	50.0	52.3		ug/L		105	80 - 120	1	20
Dichlorodifluoromethane	50.0	56.3		ug/L		113	49 - 140	2	20
1,1-Dichloroethane	50.0	50.4		ug/L		101	80 - 120	2	20
1,2-Dichloroethane	50.0	50.6		ug/L		101	80 - 120	5	20
1,1-Dichloroethene	50.0	52.1		ug/L		104	77 - 121	0	20
1,2-Dichloropropane	50.0	53.3		ug/L		107	80 - 120	4	20
1,3-Dichloropropane	50.0	54.0		ug/L		108	80 - 120	3	20
2,2-Dichloropropane	50.0	59.2		ug/L		118	73 - 134	4	20
1,1-Dichloropropene	50.0	57.9		ug/L		116	80 - 120	1	20
Ethylbenzene	50.0	57.0		ug/L		114	80 - 120	2	20
Ethyl methacrylate	50.0	52.7		ug/L		105	72 - 134	11	20
2-Hexanone	50.0	57.0		ug/L		114	64 - 136	17	20
Iodomethane	50.0	51.1		ug/L		102	72 - 130	3	20
Isobutyl alcohol	1250	1180		ug/L		95	69 - 130	1	20
Methacrylonitrile	500	525		ug/L		105	78 - 123	3	20
Methylene Chloride	50.0	47.6		ug/L		95	79 - 115	2	20
Methyl methacrylate	100	104		ug/L		104	64 - 127	8	20
4-Methyl-2-pentanone (MIBK)	50.0	57.2		ug/L		114	74 - 129	8	20
Propionitrile	500	468		ug/L		94	74 - 131	3	20
Styrene	50.0	57.9		ug/L		116	80 - 120	1	20
1,1,1,2-Tetrachloroethane	50.0	51.6		ug/L		103	80 - 120	1	20
1,1,2,2-Tetrachloroethane	50.0	50.7		ug/L		101	80 - 120	1	20
Tetrachloroethene	50.0	50.1		ug/L		100	80 - 120	2	20

Preliminary Data

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

Lab Sample ID: LCSD 160-207022/5
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	50.0	54.2		ug/L		108	80 - 120	2	20
trans-1,4-Dichloro-2-butene	50.0	50.1		ug/L		100	80 - 123	2	20
trans-1,2-Dichloroethene	50.0	49.2		ug/L		98	80 - 120	4	20
trans-1,3-Dichloropropene	50.0	60.3	*	ug/L		121	80 - 120	14	20
1,1,1-Trichloroethane	50.0	52.0		ug/L		104	75 - 127	1	20
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	80 - 120	9	20
Trichloroethene	50.0	50.8		ug/L		102	80 - 120	2	20
Trichlorofluoromethane	50.0	47.8		ug/L		96	72 - 132	3	20
1,2,3-Trichloropropane	50.0	47.8		ug/L		96	80 - 120	2	20
Vinyl acetate	50.0	54.2		ug/L		108	43 - 140	1	20
Vinyl chloride	50.0	46.2		ug/L		92	68 - 120	1	20
Xylenes, Total	100	109		ug/L		109	80 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*75 - 123*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*
Toluene-d8 (Surr)	*107*		*80 - 120*

Lab Sample ID: 160-13506-A-4 MS
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		50.0	58.9		ug/L		118	54 - 140
Acetonitrile	ND		500	568		ug/L		114	71 - 135
Acrolein	ND		248	247		ug/L		100	52 - 150
Acrylonitrile	ND		500	554		ug/L		111	80 - 125
Allyl chloride	ND		50.0	53.4		ug/L		107	80 - 120
Benzene	ND		50.0	56.7		ug/L		113	72 - 123
Bromochloromethane	ND		50.0	52.2		ug/L		104	80 - 120
Bromodichloromethane	ND		50.0	57.0		ug/L		114	80 - 120
Bromoform	ND		50.0	50.4		ug/L		101	78 - 122
Bromomethane	ND		50.0	51.0		ug/L		102	51 - 146
2-Butanone (MEK)	ND		50.0	57.3		ug/L		115	62 - 135
Carbon disulfide	ND		50.0	52.9		ug/L		106	80 - 120
Carbon tetrachloride	ND		50.0	53.1		ug/L		106	80 - 124
Chlorobenzene	ND		50.0	53.3		ug/L		107	80 - 120
Chloroethane	ND		50.0	53.5		ug/L		107	53 - 148
Chloroform	ND		50.0	52.1		ug/L		104	80 - 120
Chloromethane	ND		50.0	50.7		ug/L		101	80 - 120
cis-1,2-Dichloroethene	ND		50.0	55.3		ug/L		111	80 - 120
cis-1,3-Dichloropropene	ND		50.0	54.9		ug/L		110	80 - 120
Dibromochloromethane	ND		50.0	54.0		ug/L		108	80 - 120
1,2-Dibromo-3-Chloropropane	ND		50.0	51.7		ug/L		103	59 - 144
1,2-Dibromoethane (EDB)	ND		50.0	55.4		ug/L		111	80 - 120
Dibromomethane	ND		50.0	57.6		ug/L		115	80 - 120
1,2-Dichlorobenzene	ND		50.0	55.7		ug/L		111	77 - 117

Preliminary Data

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

Lab Sample ID: 160-13506-A-4 MS
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	ND		50.0	55.9		ug/L		112	80 - 120
1,4-Dichlorobenzene	ND		50.0	53.1		ug/L		106	80 - 120
Dichlorodifluoromethane	ND		50.0	50.7		ug/L		101	70 - 131
1,1-Dichloroethane	ND		50.0	52.6		ug/L		105	80 - 120
1,2-Dichloroethane	ND		50.0	55.8		ug/L		112	80 - 120
1,1-Dichloroethene	ND		50.0	52.9		ug/L		106	80 - 120
1,2-Dichloropropane	ND		50.0	55.3		ug/L		111	80 - 120
1,3-Dichloropropane	ND		50.0	57.3		ug/L		115	80 - 120
2,2-Dichloropropane	ND		50.0	53.4		ug/L		107	81 - 128
1,1-Dichloropropene	ND		50.0	57.5		ug/L		115	80 - 120
Ethylbenzene	ND		50.0	58.2		ug/L		116	80 - 120
Ethyl methacrylate	ND		50.0	50.9		ug/L		102	73 - 128
2-Hexanone	ND		50.0	59.5		ug/L		119	65 - 136
Iodomethane	ND		50.0	52.3		ug/L		105	77 - 125
Isobutyl alcohol	ND		1250	1390		ug/L		111	67 - 134
Methacrylonitrile	ND		500	605		ug/L		121	78 - 121
Methylene Chloride	ND		50.0	51.7		ug/L		103	80 - 120
Methyl methacrylate	ND		100	107		ug/L		107	69 - 124
4-Methyl-2-pentanone (MIBK)	ND		50.0	59.5		ug/L		119	74 - 132
Propionitrile	ND		500	542		ug/L		108	76 - 127
Styrene	ND		50.0	59.7		ug/L		119	80 - 120
1,1,1,2-Tetrachloroethane	ND		50.0	54.4		ug/L		109	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	54.9		ug/L		110	72 - 125
Tetrachloroethene	ND		50.0	50.5		ug/L		101	80 - 120
Toluene	ND		50.0	53.9		ug/L		108	80 - 120
trans-1,4-Dichloro-2-butene	ND		50.0	45.6		ug/L		91	73 - 125
trans-1,2-Dichloroethene	ND		50.0	48.7		ug/L		97	80 - 120
trans-1,3-Dichloropropene	ND	*	50.0	58.2		ug/L		116	77 - 122
1,1,1-Trichloroethane	ND		50.0	52.1		ug/L		104	81 - 123
1,1,2-Trichloroethane	ND		50.0	54.2		ug/L		108	76 - 119
Trichloroethene	ND		50.0	53.3		ug/L		107	80 - 120
Trichlorofluoromethane	ND		50.0	55.1		ug/L		110	79 - 128
1,2,3-Trichloropropane	ND		50.0	49.9		ug/L		100	72 - 120
Vinyl acetate	ND		50.0	57.9		ug/L		116	47 - 150
Vinyl chloride	ND		50.0	48.1		ug/L		96	75 - 118
Xylenes, Total	ND		100	109		ug/L		109	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*75 - 123*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*107*		*78 - 127*
Toluene-d8 (Surr)	*106*		*80 - 120*

Preliminary Data

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

Lab Sample ID: 160-13506-A-4 MSD
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		50.0	56.0		ug/L		112	54 - 140	5	20
Acetonitrile	ND		500	527		ug/L		105	71 - 135	7	20
Acrolein	ND		248	248		ug/L		100	52 - 150	0	20
Acrylonitrile	ND		500	507		ug/L		101	80 - 125	9	20
Allyl chloride	ND		50.0	52.4		ug/L		105	80 - 120	2	20
Benzene	ND		50.0	52.3		ug/L		105	72 - 123	8	20
Bromochloromethane	ND		50.0	49.6		ug/L		99	80 - 120	5	20
Bromodichloromethane	ND		50.0	55.6		ug/L		111	80 - 120	2	20
Bromoform	ND		50.0	54.1		ug/L		108	78 - 122	7	20
Bromomethane	ND		50.0	46.3		ug/L		93	51 - 146	10	20
2-Butanone (MEK)	ND		50.0	53.0		ug/L		106	62 - 135	8	20
Carbon disulfide	ND		50.0	48.8		ug/L		98	80 - 120	8	20
Carbon tetrachloride	ND		50.0	51.5		ug/L		103	80 - 124	3	20
Chlorobenzene	ND		50.0	52.4		ug/L		105	80 - 120	2	20
Chloroethane	ND		50.0	48.3		ug/L		97	53 - 148	10	20
Chloroform	ND		50.0	50.2		ug/L		100	80 - 120	4	20
Chloromethane	ND		50.0	50.0		ug/L		100	80 - 120	1	20
cis-1,2-Dichloroethene	ND		50.0	51.3		ug/L		103	80 - 120	8	20
cis-1,3-Dichloropropene	ND		50.0	54.9		ug/L		110	80 - 120	0	20
Dibromochloromethane	ND		50.0	54.7		ug/L		109	80 - 120	1	20
1,2-Dibromo-3-Chloropropane	ND		50.0	49.8		ug/L		100	59 - 144	4	20
1,2-Dibromoethane (EDB)	ND		50.0	55.5		ug/L		111	80 - 120	0	20
Dibromomethane	ND		50.0	54.1		ug/L		108	80 - 120	6	20
1,2-Dichlorobenzene	ND		50.0	53.8		ug/L		108	77 - 117	4	20
1,3-Dichlorobenzene	ND		50.0	54.5		ug/L		109	80 - 120	3	20
1,4-Dichlorobenzene	ND		50.0	52.8		ug/L		106	80 - 120	1	20
Dichlorodifluoromethane	ND		50.0	55.9		ug/L		112	70 - 131	10	20
1,1-Dichloroethane	ND		50.0	50.1		ug/L		100	80 - 120	5	20
1,2-Dichloroethane	ND		50.0	56.0		ug/L		112	80 - 120	0	20
1,1-Dichloroethene	ND		50.0	49.4		ug/L		99	80 - 120	7	20
1,2-Dichloropropane	ND		50.0	55.3		ug/L		111	80 - 120	0	20
1,3-Dichloropropane	ND		50.0	55.7		ug/L		111	80 - 120	3	20
2,2-Dichloropropane	ND		50.0	51.3		ug/L		103	81 - 128	4	20
1,1-Dichloropropene	ND		50.0	57.0		ug/L		114	80 - 120	1	20
Ethylbenzene	ND		50.0	56.1		ug/L		112	80 - 120	4	20
Ethyl methacrylate	ND		50.0	52.2		ug/L		104	73 - 128	3	20
2-Hexanone	ND		50.0	54.7		ug/L		109	65 - 136	8	20
Iodomethane	ND		50.0	49.0		ug/L		98	77 - 125	7	20
Isobutyl alcohol	ND		1250	1260		ug/L		101	67 - 134	10	20
Methacrylonitrile	ND		500	558		ug/L		112	78 - 121	8	20
Methylene Chloride	ND		50.0	49.2		ug/L		98	80 - 120	5	20
Methyl methacrylate	ND		100	115		ug/L		115	69 - 124	8	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	57.9		ug/L		116	74 - 132	3	20
Propionitrile	ND		500	496		ug/L		99	76 - 127	9	20
Styrene	ND		50.0	57.1		ug/L		114	80 - 120	5	20
1,1,1,2-Tetrachloroethane	ND		50.0	52.0		ug/L		104	80 - 120	4	20
1,1,2,2-Tetrachloroethane	ND		50.0	54.5		ug/L		109	72 - 125	1	20
Tetrachloroethene	ND		50.0	49.1		ug/L		98	80 - 120	3	20

Preliminary Data

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

Lab Sample ID: 160-13506-A-4 MSD
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	ND		50.0	53.9		ug/L		108	80 - 120	0	20
trans-1,4-Dichloro-2-butene	ND		50.0	53.2		ug/L		106	73 - 125	15	20
trans-1,2-Dichloroethene	ND		50.0	49.1		ug/L		98	80 - 120	1	20
trans-1,3-Dichloropropene	ND	*	50.0	60.1		ug/L		120	77 - 122	3	20
1,1,1-Trichloroethane	ND		50.0	52.2		ug/L		104	81 - 123	0	20
1,1,2-Trichloroethane	ND		50.0	52.8		ug/L		106	76 - 119	3	20
Trichloroethene	ND		50.0	50.9		ug/L		102	80 - 120	5	20
Trichlorofluoromethane	ND		50.0	50.1		ug/L		100	79 - 128	10	20
1,2,3-Trichloropropane	ND		50.0	50.6		ug/L		101	72 - 120	1	20
Vinyl acetate	ND		50.0	57.1		ug/L		114	47 - 150	1	20
Vinyl chloride	ND		50.0	47.5		ug/L		95	75 - 118	1	20
Xylenes, Total	ND		100	106		ug/L		106	80 - 120	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*75 - 123*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*
Toluene-d8 (Surr)	*108*		*80 - 120*

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

Lab Sample ID: MB 160-206950/1-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206950

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Acenaphthylene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Acetophenone	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2-Acetylaminofluorene	ND		100	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
alpha,alpha-Dimethyl phenethylamine	ND		50	22	ug/L		08/21/15 12:04	08/25/15 16:25	1
4-Aminobiphenyl	ND		50	1.1	ug/L		08/21/15 12:04	08/25/15 16:25	1
Anthracene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Benzo[a]anthracene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Benzo[a]pyrene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Benzo[b]fluoranthene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Benzo[g,h,i]perylene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Benzo[k]fluoranthene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Benzyl alcohol	ND		10	3.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Bis(2-chloroethoxy)methane	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Bis(2-chloroethyl)ether	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
bis(2 chloro-1-methylethyl) ether	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Bis(2-ethylhexyl) phthalate	ND		10	1.9	ug/L		08/21/15 12:04	08/25/15 16:25	1
4-Bromophenyl phenyl ether	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Butyl benzyl phthalate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
4-Chloroaniline	ND		10	2.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Chlorobenzilate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
4-Chloro-3-methylphenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1

Preliminary Data

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

Lab Sample ID: MB 160-206950/1-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206950

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2-Chlorophenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
4-Chlorophenyl phenyl ether	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Chrysene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Diallate	ND		20	2.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Dibenz(a,h)anthracene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Dibenzofuran	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
3,3'-Dichlorobenzidine	ND		50	1.3	ug/L		08/21/15 12:04	08/25/15 16:25	1
2,4-Dichlorophenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2,6-Dichlorophenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Diethyl phthalate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Dimethoate	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
7,12-Dimethylbenz(a)anthracene	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
3,3'-Dimethylbenzidine	ND		50	2.6	ug/L		08/21/15 12:04	08/25/15 16:25	1
2,4-Dimethylphenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Dimethyl phthalate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Di-n-butyl phthalate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
1,3-Dinitrobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
1,4-Dinitrobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
4,6-Dinitro-2-methylphenol	ND		10	1.3	ug/L		08/21/15 12:04	08/25/15 16:25	1
2,4-Dinitrophenol	ND		50	2.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2,4-Dinitrotoluene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2,6-Dinitrotoluene	ND		10	2.2	ug/L		08/21/15 12:04	08/25/15 16:25	1
Di-n-octyl phthalate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Dinoseb	ND		20	2.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Diphenylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Disulfoton	ND		50	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Ethyl methanesulfonate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Famphur	ND		100	1.7	ug/L		08/21/15 12:04	08/25/15 16:25	1
Fluoranthene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Fluorene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Hexachlorobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Hexachlorobutadiene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Hexachloroethane	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Hexachloropropene	ND		100	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Indeno[1,2,3-cd]pyrene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Isodrin	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Isophorone	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Isosafrole	ND		20	5.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Methapyrilene	ND		50	1.3	ug/L		08/21/15 12:04	08/25/15 16:25	1
3-Methylcholanthrene	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Methyl methanesulfonate	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2-Methylnaphthalene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Methyl parathion	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2-Methylphenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
3 & 4 Methylphenol	ND		20	2.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Naphthalene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1

Preliminary Data

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

Lab Sample ID: MB 160-206950/1-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206950

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Naphthoquinone	ND		50	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
1-Naphthylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2-Naphthylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2-Nitroaniline	ND		10	1.1	ug/L		08/21/15 12:04	08/25/15 16:25	1
3-Nitroaniline	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
4-Nitroaniline	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Nitrobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
5-Nitro-o-toluidine	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2-Nitrophenol	ND		10	1.5	ug/L		08/21/15 12:04	08/25/15 16:25	1
4-Nitrophenol	ND		10	2.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
N-Nitrosodiethylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
N-Nitrosodimethylamine	ND		10	2.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
N-Nitrosodi-n-butylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/L		08/21/15 12:04	08/25/15 16:25	1
N-Nitrosomethylethylamine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
N-Nitrosomorpholine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
N-Nitrosopiperidine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
N-Nitrosopyrrolidine	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
o,o',o"-Triethylphosphorothioate	ND		50	1.1	ug/L		08/21/15 12:04	08/25/15 16:25	1
o-Toluidine	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Parathion	ND		50	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
p-Dimethylamino azobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Pentachlorobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Pentachloroethane	ND		50	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Pentachloronitrobenzene	ND		50	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Pentachlorophenol	ND		10	1.3	ug/L		08/21/15 12:04	08/25/15 16:25	1
Phenacetin	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Phenanthrene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Phenol	ND		10	2.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Phorate	ND		50	2.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
p-Phenylene diamine	ND		100	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Pronamide	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Pyrene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Pyridine	ND		20	2.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
Safrole	ND		20	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2,3,4,6-Tetrachlorophenol	ND		50	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
1,2,4-Trichlorobenzene	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2,4,5-Trichlorophenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
2,4,6-Trichlorophenol	ND		10	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1
1,3,5-Trinitrobenzene	ND		50	1.0	ug/L		08/21/15 12:04	08/25/15 16:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*85*		*43 - 108*	*08/21/15 12:04*	*08/25/15 16:25*	*1*
2-Fluorophenol (Surr)	*55*		*15 - 59*	*08/21/15 12:04*	*08/25/15 16:25*	*1*
Nitrobenzene-d5 (Surr)	*85*		*50 - 101*	*08/21/15 12:04*	*08/25/15 16:25*	*1*
Phenol-d5 (Surr)	*42*		*10 - 50*	*08/21/15 12:04*	*08/25/15 16:25*	*1*
Terphenyl-d14 (Surr)	*82*		*21 - 97*	*08/21/15 12:04*	*08/25/15 16:25*	*1*

Preliminary Data

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

Lab Sample ID: MB 160-206950/1-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206950

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	107		37 - 120	08/21/15 12:04	08/25/15 16:25	1

Lab Sample ID: MB 160-206950/1-A
Matrix: Water
Analysis Batch: 207950

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206950

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorophene	ND		250	10	ug/L		08/21/15 12:04	08/26/15 14:16	1
Kepone	ND		100	20	ug/L		08/21/15 12:04	08/26/15 14:16	1

Lab Sample ID: LCS 160-206950/2-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 206950

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	200	173		ug/L		86	58 - 108
Acenaphthylene	200	173		ug/L		87	59 - 110
Anthracene	200	178		ug/L		89	59 - 106
Benzo[a]anthracene	200	190		ug/L		95	56 - 105
Benzo[a]pyrene	200	191		ug/L		96	54 - 109
Benzo[b]fluoranthene	200	198		ug/L		99	58 - 109
Benzo[g,h,i]perylene	200	200		ug/L		100	50 - 119
Benzo[k]fluoranthene	200	180		ug/L		90	54 - 109
Bis(2-chloroethoxy)methane	200	172		ug/L		86	59 - 110
Bis(2-chloroethyl)ether	200	168		ug/L		84	58 - 109
bis(2 chloro-1-methylethyl) ether	200	162		ug/L		81	49 - 97
Bis(2-ethylhexyl) phthalate	200	188		ug/L		94	58 - 111
4-Bromophenyl phenyl ether	200	188		ug/L		94	62 - 98
Butyl benzyl phthalate	200	193		ug/L		97	56 - 111
4-Chloroaniline	200	161		ug/L		81	43 - 97
4-Chloro-3-methylphenol	200	180		ug/L		90	51 - 102
2-Chloronaphthalene	200	173		ug/L		87	58 - 109
2-Chlorophenol	200	162		ug/L		81	47 - 97
4-Chlorophenyl phenyl ether	200	185		ug/L		93	59 - 110
Chrysene	200	175		ug/L		87	55 - 107
Dibenz(a,h)anthracene	200	205		ug/L		103	52 - 118
Dibenzofuran	200	174		ug/L		87	57 - 106
3,3'-Dichlorobenzidine	200	193		ug/L		97	50 - 105
2,4-Dichlorophenol	200	181		ug/L		90	55 - 104
Diethyl phthalate	200	184		ug/L		92	58 - 113
2,4-Dimethylphenol	200	169		ug/L		85	53 - 99
Dimethyl phthalate	200	190		ug/L		95	60 - 114
Di-n-butyl phthalate	200	184		ug/L		92	60 - 105
4,6-Dinitro-2-methylphenol	200	209		ug/L		105	56 - 118
2,4-Dinitrophenol	200	176		ug/L		88	53 - 119
2,4-Dinitrotoluene	200	206		ug/L		103	57 - 117
2,6-Dinitrotoluene	200	195		ug/L		98	59 - 117
Di-n-octyl phthalate	200	197		ug/L		99	59 - 113

Preliminary Data

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

Lab Sample ID: LCS 160-206950/2-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 206950

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diphenylamine	200	180		ug/L		90	58 - 102
Fluoranthene	200	188		ug/L		94	56 - 113
Fluorene	200	179		ug/L		89	61 - 113
Hexachlorobenzene	200	193		ug/L		97	57 - 113
Hexachlorobutadiene	200	176		ug/L		88	52 - 102
Hexachlorocyclopentadiene	200	178		ug/L		89	40 - 120
Hexachloroethane	200	162		ug/L		81	52 - 102
Indeno[1,2,3-cd]pyrene	200	223		ug/L		111	49 - 120
Isophorone	200	172		ug/L		86	56 - 101
2-Methylnaphthalene	200	173		ug/L		87	54 - 101
2-Methylphenol	200	147		ug/L		73	40 - 96
3 & 4 Methylphenol	200	157		ug/L		78	40 - 87
Naphthalene	200	167		ug/L		84	54 - 98
2-Nitroaniline	200	182		ug/L		91	57 - 120
3-Nitroaniline	200	185		ug/L		92	47 - 113
4-Nitroaniline	200	195		ug/L		97	51 - 119
Nitrobenzene	200	172		ug/L		86	59 - 110
2-Nitrophenol	200	191		ug/L		95	58 - 111
4-Nitrophenol	200	89.5		ug/L		45	20 - 47
N-Nitrosodi-n-propylamine	200	180		ug/L		90	59 - 115
Pentachlorophenol	200	189		ug/L		94	49 - 115
Phenanthrene	200	174		ug/L		87	59 - 110
Phenol	200	88.1		ug/L		44	20 - 69
Pyrene	200	184		ug/L		92	55 - 105
1,2,4-Trichlorobenzene	200	173		ug/L		86	56 - 100
2,4,5-Trichlorophenol	200	192		ug/L		96	56 - 113
2,4,6-Trichlorophenol	200	191		ug/L		96	47 - 116

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*84*		*43 - 108*
2-Fluorophenol (Surr)	*57*		*15 - 59*
Nitrobenzene-d5 (Surr)	*88*		*50 - 101*
Phenol-d5 (Surr)	*46*		*10 - 50*
Terphenyl-d14 (Surr)	*90*		*21 - 97*
2,4,6-Tribromophenol (Surr)	*114*		*37 - 120*

Lab Sample ID: LCSD 160-206950/3-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 206950

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	200	159		ug/L		80	58 - 108	8	20
Acenaphthylene	200	160		ug/L		80	59 - 110	8	20
Anthracene	200	162		ug/L		81	59 - 106	9	20
Benzo[a]anthracene	200	172		ug/L		86	56 - 105	10	20
Benzo[a]pyrene	200	175		ug/L		87	54 - 109	9	20
Benzo[b]fluoranthene	200	182		ug/L		91	58 - 109	8	20
Benzo[g,h,i]perylene	200	180		ug/L		90	50 - 119	11	20

Preliminary Data

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

Lab Sample ID: LCSD 160-206950/3-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 206950

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[k]fluoranthene	200	162		ug/L		81	54 - 109	10	20
Bis(2-chloroethoxy)methane	200	161		ug/L		81	59 - 110	7	20
Bis(2-chloroethyl)ether	200	156		ug/L		78	58 - 109	7	20
bis(2 chloro-1-methylethyl) ether	200	153		ug/L		77	49 - 97	5	20
Bis(2-ethylhexyl) phthalate	200	172		ug/L		86	58 - 111	9	20
4-Bromophenyl phenyl ether	200	170		ug/L		85	62 - 98	10	20
Butyl benzyl phthalate	200	176		ug/L		88	56 - 111	10	20
4-Chloroaniline	200	150		ug/L		75	43 - 97	7	20
4-Chloro-3-methylphenol	200	168		ug/L		84	51 - 102	7	20
2-Chloronaphthalene	200	159		ug/L		80	58 - 109	8	20
2-Chlorophenol	200	150		ug/L		75	47 - 97	7	20
4-Chlorophenyl phenyl ether	200	169		ug/L		85	59 - 110	9	20
Chrysene	200	159		ug/L		79	55 - 107	10	20
Dibenz(a,h)anthracene	200	185		ug/L		93	52 - 118	10	20
Dibenzofuran	200	159		ug/L		80	57 - 106	9	20
3,3'-Dichlorobenzidine	200	176		ug/L		88	50 - 105	9	20
2,4-Dichlorophenol	200	167		ug/L		83	55 - 104	8	20
Diethyl phthalate	200	167		ug/L		84	58 - 113	10	20
2,4-Dimethylphenol	200	156		ug/L		78	53 - 99	8	20
Dimethyl phthalate	200	172		ug/L		86	60 - 114	9	20
Di-n-butyl phthalate	200	169		ug/L		84	60 - 105	8	20
4,6-Dinitro-2-methylphenol	200	191		ug/L		95	56 - 118	9	20
2,4-Dinitrophenol	200	148		ug/L		74	53 - 119	17	20
2,4-Dinitrotoluene	200	187		ug/L		93	57 - 117	10	20
2,6-Dinitrotoluene	200	178		ug/L		89	59 - 117	9	20
Di-n-octyl phthalate	200	179		ug/L		90	59 - 113	10	20
Diphenylamine	200	165		ug/L		82	58 - 102	9	20
Fluoranthene	200	173		ug/L		86	56 - 113	9	20
Fluorene	200	165		ug/L		82	61 - 113	8	20
Hexachlorobenzene	200	175		ug/L		87	57 - 113	10	20
Hexachlorobutadiene	200	160		ug/L		80	52 - 102	9	20
Hexachlorocyclopentadiene	200	166		ug/L		83	40 - 120	7	20
Hexachloroethane	200	152		ug/L		76	52 - 102	7	20
Indeno[1,2,3-cd]pyrene	200	193		ug/L		96	49 - 120	15	20
Isophorone	200	158		ug/L		79	56 - 101	8	20
2-Methylnaphthalene	200	159		ug/L		80	54 - 101	9	20
2-Methylphenol	200	139		ug/L		69	40 - 96	5	20
3 & 4 Methylphenol	200	147		ug/L		74	40 - 87	6	20
Naphthalene	200	156		ug/L		78	54 - 98	7	20
2-Nitroaniline	200	167		ug/L		83	57 - 120	9	20
3-Nitroaniline	200	169		ug/L		85	47 - 113	9	20
4-Nitroaniline	200	175		ug/L		88	51 - 119	11	20
Nitrobenzene	200	161		ug/L		80	59 - 110	7	20
2-Nitrophenol	200	177		ug/L		89	58 - 111	7	20
4-Nitrophenol	200	84.6		ug/L		42	20 - 47	6	20
N-Nitrosodi-n-propylamine	200	168		ug/L		84	59 - 115	7	20
Pentachlorophenol	200	170		ug/L		85	49 - 115	10	20
Phenanthrene	200	161		ug/L		80	59 - 110	8	20

Preliminary Data

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

Lab Sample ID: LCSD 160-206950/3-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 206950

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol	200	82.3		ug/L		41	20 - 69	7	20
Pyrene	200	167		ug/L		84	55 - 105	10	20
1,2,4-Trichlorobenzene	200	160		ug/L		80	56 - 100	8	20
2,4,5-Trichlorophenol	200	173		ug/L		86	56 - 113	11	20
2,4,6-Trichlorophenol	200	175		ug/L		87	47 - 116	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*79*		*43 - 108*
2-Fluorophenol (Surr)	*54*		*15 - 59*
Nitrobenzene-d5 (Surr)	*84*		*50 - 101*
Phenol-d5 (Surr)	*44*		*10 - 50*
Terphenyl-d14 (Surr)	*83*		*21 - 97*
2,4,6-Tribromophenol (Surr)	*106*		*37 - 120*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 160-207387/1-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207387

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
alpha-BHC	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
beta-BHC	ND		0.050	0.013	ug/L		08/24/15 14:06	08/25/15 14:10	1
delta-BHC	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
gamma-BHC (Lindane)	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
alpha-Chlordane	ND		0.050	0.015	ug/L		08/24/15 14:06	08/25/15 14:10	1
gamma-Chlordane	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
4,4'-DDD	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
4,4'-DDE	ND		0.050	0.014	ug/L		08/24/15 14:06	08/25/15 14:10	1
4,4'-DDT	ND		0.050	0.023	ug/L		08/24/15 14:06	08/25/15 14:10	1
Dieldrin	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endosulfan I	ND		0.050	0.019	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endosulfan II	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endosulfan sulfate	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endrin	ND		0.050	0.018	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endrin aldehyde	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endrin ketone	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Heptachlor	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Heptachlor epoxide	ND		0.050	0.017	ug/L		08/24/15 14:06	08/25/15 14:10	1
Methoxychlor	ND		0.50	0.013	ug/L		08/24/15 14:06	08/25/15 14:10	1
Toxaphene	ND		2.0	0.27	ug/L		08/24/15 14:06	08/25/15 14:10	1
Technical Chlordane	ND		0.50	0.10	ug/L		08/24/15 14:06	08/25/15 14:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*83*		*44 - 112*	*08/24/15 14:06*	*08/25/15 14:10*	*1*
Tetrachloro-m-xylene	*89*		*49 - 104*	*08/24/15 14:06*	*08/25/15 14:10*	*1*

Preliminary Data

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 160-207387/2-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207387

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	0.500	0.398		ug/L		80	42 - 103
alpha-BHC	0.500	0.470		ug/L		94	65 - 109
beta-BHC	0.500	0.444		ug/L		89	62 - 105
delta-BHC	0.500	0.514		ug/L		103	66 - 111
gamma-BHC (Lindane)	0.501	0.466		ug/L		93	63 - 110
alpha-Chlordane	0.500	0.446		ug/L		89	58 - 106
gamma-Chlordane	0.500	0.443		ug/L		89	55 - 107
4,4'-DDD	0.500	0.513		ug/L		103	63 - 115
4,4'-DDE	0.501	0.462		ug/L		92	58 - 107
4,4'-DDT	0.500	0.479		ug/L		96	63 - 115
Dieldrin	0.501	0.450		ug/L		90	63 - 106
Endosulfan I	0.500	0.375		ug/L		75	40 - 106
Endosulfan II	0.500	0.385		ug/L		77	48 - 104
Endosulfan sulfate	0.500	0.469		ug/L		94	61 - 111
Endrin	0.501	0.456		ug/L		91	64 - 111
Endrin aldehyde	0.500	0.476		ug/L		95	40 - 139
Endrin ketone	0.501	0.475		ug/L		95	60 - 112
Heptachlor	0.500	0.371		ug/L		74	42 - 119
Heptachlor epoxide	0.500	0.455		ug/L		91	63 - 106
Methoxychlor	0.500	0.468	J	ug/L		94	62 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*84*		*44 - 112*
Tetrachloro-m-xylene	*85*		*49 - 104*

Lab Sample ID: LCSD 160-207387/3-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 207387

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldrin	0.500	0.393		ug/L		79	42 - 103	1	20
alpha-BHC	0.500	0.471		ug/L		94	65 - 109	0	20
beta-BHC	0.500	0.435		ug/L		87	62 - 105	2	20
delta-BHC	0.500	0.500		ug/L		100	66 - 111	3	20
gamma-BHC (Lindane)	0.501	0.458		ug/L		92	63 - 110	2	20
alpha-Chlordane	0.500	0.427		ug/L		85	58 - 106	4	20
gamma-Chlordane	0.500	0.427		ug/L		85	55 - 107	4	20
4,4'-DDD	0.500	0.470		ug/L		94	63 - 115	9	20
4,4'-DDE	0.501	0.445		ug/L		89	58 - 107	4	20
4,4'-DDT	0.500	0.434		ug/L		87	63 - 115	10	20
Dieldrin	0.501	0.434		ug/L		87	63 - 106	4	20
Endosulfan I	0.500	0.362		ug/L		72	40 - 106	4	20
Endosulfan II	0.500	0.369		ug/L		74	48 - 104	4	20
Endosulfan sulfate	0.500	0.438		ug/L		88	61 - 111	7	20
Endrin	0.501	0.434		ug/L		87	64 - 111	5	20
Endrin aldehyde	0.500	0.440		ug/L		88	40 - 139	8	20
Endrin ketone	0.501	0.436		ug/L		87	60 - 112	9	20
Heptachlor	0.500	0.361		ug/L		72	42 - 119	3	20

Preliminary Data

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 160-207387/3-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 207387

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Heptachlor epoxide	0.500	0.440		ug/L		88	63 - 106	3	20
Methoxychlor	0.500	0.429	J	ug/L		86	62 - 119	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*77*		*44 - 112*
Tetrachloro-m-xylene	*86*		*49 - 104*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 160-207737/1-A
Matrix: Water
Analysis Batch: 207944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1221	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1232	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1242	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1248	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1254	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1260	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 09:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*104*		*52 - 150*	*08/25/15 13:16*	*08/27/15 09:26*	*1*

Lab Sample ID: LCS 160-207737/2-A
Matrix: Water
Analysis Batch: 207944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	5.00	4.44		ug/L		89	51 - 126
PCB-1260	5.00	4.41		ug/L		88	66 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*90*		*52 - 150*

Lab Sample ID: LCSD 160-207737/3-A
Matrix: Water
Analysis Batch: 207944

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 207737

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	5.00	4.09		ug/L		82	51 - 126	8	20
PCB-1260	5.00	4.08		ug/L		82	66 - 125	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*81*		*52 - 150*

Preliminary Data

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 160-207377/1-A
Matrix: Water
Analysis Batch: 207961

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207377

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.27	ug/L		08/24/15 12:55	08/26/15 18:50	1
2,4-D	ND		8.0	4.2	ug/L		08/24/15 12:55	08/26/15 18:50	1
Silvex (2,4,5-TP)	ND		1.0	0.19	ug/L		08/24/15 12:55	08/26/15 18:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*108*		*60 - 128*	*08/24/15 12:55*	*08/26/15 18:50*	*1*

Lab Sample ID: LCS 160-207377/2-A
Matrix: Water
Analysis Batch: 207961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207377

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	5.92		ug/L		118	40 - 140
2,4-D	20.0	27.4		ug/L		137	40 - 140
Silvex (2,4,5-TP)	5.00	5.64		ug/L		113	37 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*103*		*60 - 128*

Lab Sample ID: LCSD 160-207377/3-A
Matrix: Water
Analysis Batch: 207961

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 207377

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	6.59		ug/L		132	40 - 140	11	20
2,4-D	20.0	26.4		ug/L		132	40 - 140	4	20
Silvex (2,4,5-TP)	5.00	6.14		ug/L		123	37 - 140	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*104*		*60 - 128*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-207415/10
Matrix: Water
Analysis Batch: 207415

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.50	0.050	mg/L			08/24/15 18:52	1

Lab Sample ID: LCS 160-207415/11
Matrix: Water
Analysis Batch: 207415

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	8.00	7.67		mg/L		96	90 - 110

Preliminary Data

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 160-13327-F-1 MS
Matrix: Water
Analysis Batch: 207415

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate - DL	30		80.0	105		mg/L		94	90 - 110

Lab Sample ID: 160-13327-F-1 DU
Matrix: Water
Analysis Batch: 207415

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate - DL	30		30.1		mg/L		1	20

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Lab Sample ID: MB 320-84116/1-A
Matrix: Water
Analysis Batch: 84518

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 84116

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.29	pg/L		08/26/15 08:47	08/27/15 18:44	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*65*		*31 - 137*	*08/26/15 08:47*	*08/27/15 18:44*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*101*		*42 - 164*	*08/26/15 08:47*	*08/27/15 18:44*	*1*

Lab Sample ID: LCS 320-84116/2-A
Matrix: Water
Analysis Batch: 84518

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 84116

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	235		pg/L		118	73 - 146

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*67*		*25 - 141*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*101*		*42 - 164*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-206995/1-A
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206995

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	^	10	3.7	ug/L		08/21/15 15:55	08/26/15 20:29	1
Arsenic	ND		10	1.8	ug/L		08/21/15 15:55	08/26/15 20:29	1
Barium	ND		50	2.1	ug/L		08/21/15 15:55	08/26/15 20:29	1

Preliminary Data

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

Lab Sample ID: MB 160-206995/1-A
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206995

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		5.0	0.28	ug/L		08/21/15 15:55	08/26/15 20:29	1
Boron	ND	^	50	7.2	ug/L		08/21/15 15:55	08/26/15 20:29	1
Cadmium	ND		5.0	0.34	ug/L		08/21/15 15:55	08/26/15 20:29	1
Chromium	ND		10	3.4	ug/L		08/21/15 15:55	08/26/15 20:29	1
Cobalt	ND		50	2.7	ug/L		08/21/15 15:55	08/26/15 20:29	1
Copper	ND		25	2.1	ug/L		08/21/15 15:55	08/26/15 20:29	1
Lead	ND		10	0.60	ug/L		08/21/15 15:55	08/26/15 20:29	1
Magnesium	ND		1.0	0.051	mg/L		08/21/15 15:55	08/26/15 20:29	1
Manganese	ND		15	1.0	ug/L		08/21/15 15:55	08/26/15 20:29	1
Nickel	ND		0.040	0.0026	mg/L		08/21/15 15:55	08/26/15 20:29	1
Selenium	4.90	J	15	2.1	ug/L		08/21/15 15:55	08/26/15 20:29	1
Silver	ND		10	0.99	ug/L		08/21/15 15:55	08/26/15 20:29	1
Thallium	ND		20	2.4	ug/L		08/21/15 15:55	08/26/15 20:29	1
Tin	ND		100	5.0	ug/L		08/21/15 15:55	08/26/15 20:29	1
Vanadium	ND		50	4.4	ug/L		08/21/15 15:55	08/26/15 20:29	1
Zinc	ND		20	8.3	ug/L		08/21/15 15:55	08/26/15 20:29	1

Lab Sample ID: LCS 160-206995/2-A
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 206995

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	514	^	ug/L		103	80 - 120
Arsenic	1000	952		ug/L		95	80 - 120
Barium	1000	995		ug/L		100	80 - 120
Beryllium	1000	984		ug/L		98	80 - 120
Boron	2000	1980	^	ug/L		99	80 - 120
Cadmium	1000	1030		ug/L		103	80 - 120
Chromium	1000	1070		ug/L		107	80 - 120
Cobalt	1000	1100		ug/L		110	80 - 120
Copper	1000	1020		ug/L		102	80 - 120
Lead	1000	1030		ug/L		103	80 - 120
Magnesium	10.0	10.0		mg/L		100	80 - 120
Manganese	1000	1040		ug/L		104	80 - 120
Nickel	1.00	1.10		mg/L		110	80 - 120
Selenium	500	489		ug/L		98	80 - 120
Silver	200	208		ug/L		104	80 - 120
Thallium	200	217		ug/L		108	80 - 120
Tin	1000	997		ug/L		100	80 - 120
Vanadium	1000	974		ug/L		97	80 - 120
Zinc	1000	1030		ug/L		103	80 - 120

Lab Sample ID: 160-13435-G-5-B MS
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 206995

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	4.4	J ^	500	517	^	ug/L		103	75 - 125
Arsenic	2.4	J	1000	955		ug/L		95	75 - 125

Preliminary Data

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

Lab Sample ID: 160-13435-G-5-B MS
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 206995

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	ND		1000	1010		ug/L		101	75 - 125
Beryllium	ND		1000	993		ug/L		99	75 - 125
Boron	ND	^	2000	2010	^	ug/L		101	75 - 125
Cadmium	ND		1000	1030		ug/L		103	75 - 125
Chromium	ND		1000	1070		ug/L		107	75 - 125
Cobalt	ND		1000	1090		ug/L		109	75 - 125
Copper	ND		1000	1020		ug/L		102	75 - 125
Lead	ND		1000	1020		ug/L		102	75 - 125
Magnesium	ND		10.0	10.1		mg/L		101	75 - 125
Manganese	ND		1000	1050		ug/L		105	75 - 125
Nickel	ND		1.00	1.09		mg/L		109	75 - 125
Selenium	2.3	J B	500	493		ug/L		98	75 - 125
Silver	ND		200	211		ug/L		106	75 - 125
Thallium	ND		200	218		ug/L		109	75 - 125
Tin	ND		1000	998		ug/L		100	75 - 125
Vanadium	ND		1000	988		ug/L		99	75 - 125
Zinc	13	J	1000	1040		ug/L		103	75 - 125

Lab Sample ID: 160-13435-G-5-C MSD
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 206995

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	4.4	J ^	500	503	^	ug/L		100	75 - 125	3	20
Arsenic	2.4	J	1000	944		ug/L		94	75 - 125	1	20
Barium	ND		1000	993		ug/L		99	75 - 125	1	20
Beryllium	ND		1000	982		ug/L		98	75 - 125	1	20
Boron	ND	^	2000	1970	^	ug/L		99	75 - 125	2	20
Cadmium	ND		1000	1020		ug/L		102	75 - 125	1	20
Chromium	ND		1000	1060		ug/L		106	75 - 125	1	20
Cobalt	ND		1000	1080		ug/L		108	75 - 125	1	20
Copper	ND		1000	1020		ug/L		102	75 - 125	1	20
Lead	ND		1000	1010		ug/L		101	75 - 125	1	20
Magnesium	ND		10.0	9.89		mg/L		99	75 - 125	2	20
Manganese	ND		1000	1030		ug/L		103	75 - 125	3	20
Nickel	ND		1.00	1.08		mg/L		108	75 - 125	1	20
Selenium	2.3	J B	500	490		ug/L		98	75 - 125	1	20
Silver	ND		200	209		ug/L		104	75 - 125	1	20
Thallium	ND		200	214		ug/L		107	75 - 125	2	20
Tin	ND		1000	985		ug/L		98	75 - 125	1	20
Vanadium	ND		1000	969		ug/L		97	75 - 125	2	20
Zinc	13	J	1000	1030		ug/L		102	75 - 125	1	20

Preliminary Data

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-206978/1-A
Matrix: Water
Analysis Batch: 207322

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/21/15 13:49	08/21/15 19:18	1

Lab Sample ID: LCS 160-206978/2-A
Matrix: Water
Analysis Batch: 207322

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 206978

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.65		ug/L		93	80 - 120

Lab Sample ID: 160-13471-D-3-B MS
Matrix: Water
Analysis Batch: 207322

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 206978

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		5.00	4.53		ug/L		91	80 - 120

Lab Sample ID: 160-13471-D-3-C MSD
Matrix: Water
Analysis Batch: 207322

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 206978

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		5.00	4.60		ug/L		92	80 - 120	1	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 160-207699/1-A
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207699

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	2.9	ug/L		08/25/15 15:15	08/26/15 19:07	1

Lab Sample ID: HLCS 160-207699/3-A
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	400	362		ug/L		90	90 - 110

Lab Sample ID: LCS 160-207699/2-A
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	200	180		ug/L		90	90 - 110

Preliminary Data

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: 160-13457-1 MS
Matrix: Water
Analysis Batch: 208193

Client Sample ID: PZ-209-SS
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	3.6	J	200	172		ug/L		84	66 - 120

Lab Sample ID: 160-13457-1 DU
Matrix: Water
Analysis Batch: 208193

Client Sample ID: PZ-209-SS
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	3.6	J	3.76	J	ug/L		4	20

Preliminary Data

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

GC/MS VOA

Analysis Batch: 207022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	8260C	
160-13457-2	PZ-209-SD	Total/NA	Water	8260C	
160-13457-3	PZ-210-SS	Total/NA	Water	8260C	
160-13457-4	PZ-210-SD	Total/NA	Water	8260C	
160-13457-5	PZ-211-SS	Total/NA	Water	8260C	
160-13506-A-4 MS	Matrix Spike	Total/NA	Water	8260C	
160-13506-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 160-207022/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-207022/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-207022/7	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 206950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	3510C	
160-13457-2	PZ-209-SD	Total/NA	Water	3510C	
160-13457-3	PZ-210-SS	Total/NA	Water	3510C	
160-13457-4	PZ-210-SD	Total/NA	Water	3510C	
160-13457-5	PZ-211-SS	Total/NA	Water	3510C	
LCS 160-206950/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 160-206950/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-206950/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 207735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	8270D	206950
160-13457-2	PZ-209-SD	Total/NA	Water	8270D	206950
160-13457-3	PZ-210-SS	Total/NA	Water	8270D	206950
160-13457-4	PZ-210-SD	Total/NA	Water	8270D	206950
LCS 160-206950/2-A	Lab Control Sample	Total/NA	Water	8270D	206950
LCSD 160-206950/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	206950
MB 160-206950/1-A	Method Blank	Total/NA	Water	8270D	206950

Analysis Batch: 207950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	8270D	206950
160-13457-2	PZ-209-SD	Total/NA	Water	8270D	206950
160-13457-3	PZ-210-SS	Total/NA	Water	8270D	206950
160-13457-4	PZ-210-SD	Total/NA	Water	8270D	206950
160-13457-5	PZ-211-SS	Total/NA	Water	8270D	206950
MB 160-206950/1-A	Method Blank	Total/NA	Water	8270D	206950

Analysis Batch: 208390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-5	PZ-211-SS	Total/NA	Water	8270D	206950

Preliminary Data

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

GC Semi VOA

Prep Batch: 207377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	8151A	
160-13457-2	PZ-209-SD	Total/NA	Water	8151A	
160-13457-3	PZ-210-SS	Total/NA	Water	8151A	
160-13457-4	PZ-210-SD	Total/NA	Water	8151A	
160-13457-5	PZ-211-SS	Total/NA	Water	8151A	
LCS 160-207377/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 160-207377/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
MB 160-207377/1-A	Method Blank	Total/NA	Water	8151A	

Prep Batch: 207387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	3510C	
160-13457-2	PZ-209-SD	Total/NA	Water	3510C	
160-13457-3	PZ-210-SS	Total/NA	Water	3510C	
160-13457-4	PZ-210-SD	Total/NA	Water	3510C	
160-13457-5	PZ-211-SS	Total/NA	Water	3510C	
LCS 160-207387/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 160-207387/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-207387/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 207683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	8081B	207387
160-13457-2	PZ-209-SD	Total/NA	Water	8081B	207387
160-13457-3	PZ-210-SS	Total/NA	Water	8081B	207387
160-13457-4	PZ-210-SD	Total/NA	Water	8081B	207387
160-13457-5	PZ-211-SS	Total/NA	Water	8081B	207387
LCS 160-207387/2-A	Lab Control Sample	Total/NA	Water	8081B	207387
LCSD 160-207387/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	207387
MB 160-207387/1-A	Method Blank	Total/NA	Water	8081B	207387

Prep Batch: 207737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	3510C	
160-13457-2	PZ-209-SD	Total/NA	Water	3510C	
160-13457-3	PZ-210-SS	Total/NA	Water	3510C	
160-13457-4	PZ-210-SD	Total/NA	Water	3510C	
160-13457-5	PZ-211-SS	Total/NA	Water	3510C	
LCS 160-207737/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 160-207737/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-207737/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 207944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	8082A	207737
160-13457-2	PZ-209-SD	Total/NA	Water	8082A	207737
160-13457-3	PZ-210-SS	Total/NA	Water	8082A	207737
160-13457-4	PZ-210-SD	Total/NA	Water	8082A	207737
160-13457-5	PZ-211-SS	Total/NA	Water	8082A	207737
LCS 160-207737/2-A	Lab Control Sample	Total/NA	Water	8082A	207737
LCSD 160-207737/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	207737

Preliminary Data

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

GC Semi VOA (Continued)

Analysis Batch: 207944 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-207737/1-A	Method Blank	Total/NA	Water	8082A	207737

Analysis Batch: 207961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	8151A	207377
160-13457-2	PZ-209-SD	Total/NA	Water	8151A	207377
160-13457-3	PZ-210-SS	Total/NA	Water	8151A	207377
160-13457-4	PZ-210-SD	Total/NA	Water	8151A	207377
160-13457-5	PZ-211-SS	Total/NA	Water	8151A	207377
LCS 160-207377/2-A	Lab Control Sample	Total/NA	Water	8151A	207377
LCSD 160-207377/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	207377
MB 160-207377/1-A	Method Blank	Total/NA	Water	8151A	207377

HPLC/IC

Analysis Batch: 207415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13327-F-1 DU - DL	Duplicate	Total/NA	Water	300.0	
160-13327-F-1 MS - DL	Matrix Spike	Total/NA	Water	300.0	
160-13457-1 - DL	PZ-209-SS	Total/NA	Water	300.0	
160-13457-2 - DL	PZ-209-SD	Total/NA	Water	300.0	
160-13457-3 - DL	PZ-210-SS	Total/NA	Water	300.0	
160-13457-4 - DL	PZ-210-SD	Total/NA	Water	300.0	
160-13457-5 - DL	PZ-211-SS	Total/NA	Water	300.0	
LCS 160-207415/11	Lab Control Sample	Total/NA	Water	300.0	
MB 160-207415/10	Method Blank	Total/NA	Water	300.0	

Specialty Organics

Prep Batch: 84116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	1613B	
160-13457-2	PZ-209-SD	Total/NA	Water	1613B	
160-13457-3	PZ-210-SS	Total/NA	Water	1613B	
160-13457-4	PZ-210-SD	Total/NA	Water	1613B	
160-13457-5	PZ-211-SS	Total/NA	Water	1613B	
LCS 320-84116/2-A	Lab Control Sample	Total/NA	Water	1613B	
MB 320-84116/1-A	Method Blank	Total/NA	Water	1613B	

Analysis Batch: 84514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-5	PZ-211-SS	Total/NA	Water	1613B	84116

Analysis Batch: 84518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	1613B	84116
160-13457-2	PZ-209-SD	Total/NA	Water	1613B	84116
160-13457-3	PZ-210-SS	Total/NA	Water	1613B	84116
160-13457-4	PZ-210-SD	Total/NA	Water	1613B	84116
LCS 320-84116/2-A	Lab Control Sample	Total/NA	Water	1613B	84116

Preliminary Data

Specialty Organics (Continued)

Analysis Batch: 84518 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-84116/1-A	Method Blank	Total/NA	Water	1613B	84116

Metals

Prep Batch: 206978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	7470A	
160-13457-2	PZ-209-SD	Total/NA	Water	7470A	
160-13457-3	PZ-210-SS	Total/NA	Water	7470A	
160-13457-4	PZ-210-SD	Total/NA	Water	7470A	
160-13457-5	PZ-211-SS	Total/NA	Water	7470A	
160-13471-D-3-B MS	Matrix Spike	Total/NA	Water	7470A	
160-13471-D-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
LCS 160-206978/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 160-206978/1-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 206995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13435-G-5-B MS	Matrix Spike	Total/NA	Water	3010A	
160-13435-G-5-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	
160-13457-1	PZ-209-SS	Total/NA	Water	3010A	
160-13457-2	PZ-209-SD	Total/NA	Water	3010A	
160-13457-3	PZ-210-SS	Total/NA	Water	3010A	
160-13457-4	PZ-210-SD	Total/NA	Water	3010A	
160-13457-5	PZ-211-SS	Total/NA	Water	3010A	
LCS 160-206995/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-206995/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 207322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	7470A	206978
160-13457-2	PZ-209-SD	Total/NA	Water	7470A	206978
160-13457-3	PZ-210-SS	Total/NA	Water	7470A	206978
160-13457-4	PZ-210-SD	Total/NA	Water	7470A	206978
160-13457-5	PZ-211-SS	Total/NA	Water	7470A	206978
160-13471-D-3-B MS	Matrix Spike	Total/NA	Water	7470A	206978
160-13471-D-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	206978
LCS 160-206978/2-A	Lab Control Sample	Total/NA	Water	7470A	206978
MB 160-206978/1-A	Method Blank	Total/NA	Water	7470A	206978

Analysis Batch: 208156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13435-G-5-B MS	Matrix Spike	Total/NA	Water	6010C	206995
160-13435-G-5-C MSD	Matrix Spike Duplicate	Total/NA	Water	6010C	206995
160-13457-1	PZ-209-SS	Total/NA	Water	6010C	206995
160-13457-2	PZ-209-SD	Total/NA	Water	6010C	206995
160-13457-3	PZ-210-SS	Total/NA	Water	6010C	206995
160-13457-4	PZ-210-SD	Total/NA	Water	6010C	206995
160-13457-5	PZ-211-SS	Total/NA	Water	6010C	206995
LCS 160-206995/2-A	Lab Control Sample	Total/NA	Water	6010C	206995

Preliminary Data

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Metals (Continued)

Analysis Batch: 208156 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-206995/1-A	Method Blank	Total/NA	Water	6010C	206995

General Chemistry

Prep Batch: 207699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	Distill/CN	
160-13457-1 DU	PZ-209-SS	Total/NA	Water	Distill/CN	
160-13457-1 MS	PZ-209-SS	Total/NA	Water	Distill/CN	
160-13457-2	PZ-209-SD	Total/NA	Water	Distill/CN	
160-13457-3	PZ-210-SS	Total/NA	Water	Distill/CN	
160-13457-4	PZ-210-SD	Total/NA	Water	Distill/CN	
160-13457-5	PZ-211-SS	Total/NA	Water	Distill/CN	
HLCS 160-207699/3-A	Lab Control Sample	Total/NA	Water	Distill/CN	
LCS 160-207699/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 160-207699/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 208193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-1	PZ-209-SS	Total/NA	Water	335.4	207699
160-13457-1 DU	PZ-209-SS	Total/NA	Water	335.4	207699
160-13457-1 MS	PZ-209-SS	Total/NA	Water	335.4	207699
160-13457-2	PZ-209-SD	Total/NA	Water	335.4	207699
160-13457-3	PZ-210-SS	Total/NA	Water	335.4	207699
160-13457-4	PZ-210-SD	Total/NA	Water	335.4	207699
160-13457-5	PZ-211-SS	Total/NA	Water	335.4	207699
HLCS 160-207699/3-A	Lab Control Sample	Total/NA	Water	335.4	207699
LCS 160-207699/2-A	Lab Control Sample	Total/NA	Water	335.4	207699
MB 160-207699/1-A	Method Blank	Total/NA	Water	335.4	207699

Preliminary Data

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	12DCE	TOL
Lab Sample ID	Client Sample ID	(75-123)	(80-120)	(78-127)	(80-120)
160-13457-1	PZ-209-SS	122	104	103	110
160-13457-2	PZ-209-SD	126 X	108	102	112
160-13457-3	PZ-210-SS	121	98	100	107
160-13457-4	PZ-210-SD	124 X	96	101	114
160-13457-5	PZ-211-SS	129 X	103	101	112
160-13506-A-4 MS	Matrix Spike	111	101	107	106
160-13506-A-4 MSD	Matrix Spike Duplicate	118	97	100	108
LCS 160-207022/4	Lab Control Sample	113	95	100	105
LCSD 160-207022/5	Lab Control Sample Dup	119	95	100	107
MB 160-207022/7	Method Blank	129 X	104	101	113

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(43-108)	(15-59)	(50-101)	(10-50)	(21-97)	(37-120)
160-13457-1	PZ-209-SS	79	36	78	22	52	95
160-13457-2	PZ-209-SD	83	36	82	24	56	100
160-13457-3	PZ-210-SS	82	37	82	24	52	102
160-13457-4	PZ-210-SD	76	35	75	24	48	93
160-13457-5	PZ-211-SS	70	31	66	20	49	83
LCS 160-206950/2-A	Lab Control Sample	84	57	88	46	90	114
LCSD 160-206950/3-A	Lab Control Sample Dup	79	54	84	44	83	106
MB 160-206950/1-A	Method Blank	85	55	85	42	82	107

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB2	TCX2
Lab Sample ID	Client Sample ID	(44-112)	(49-104)
160-13457-1	PZ-209-SS	53	82
160-13457-2	PZ-209-SD	55	94
160-13457-3	PZ-210-SS	53	73
160-13457-4	PZ-210-SD	39 X	62

Preliminary Data

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB2	TCX2
Lab Sample ID	Client Sample ID	(44-112)	(49-104)
160-13457-5	PZ-211-SS	50	79
LCS 160-207387/2-A	Lab Control Sample	84	85
LCSD 160-207387/3-A	Lab Control Sample Dup	77	86
MB 160-207387/1-A	Method Blank	83	89

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)
TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		DCB1
Lab Sample ID	Client Sample ID	(52-150)
160-13457-1	PZ-209-SS	87
160-13457-2	PZ-209-SD	130
160-13457-3	PZ-210-SS	117
160-13457-4	PZ-210-SD	115
160-13457-5	PZ-211-SS	92
LCS 160-207737/2-A	Lab Control Sample	90
LCSD 160-207737/3-A	Lab Control Sample Dup	81
MB 160-207737/1-A	Method Blank	104

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		DCPA1
Lab Sample ID	Client Sample ID	(60-128)
160-13457-1	PZ-209-SS	92
160-13457-2	PZ-209-SD	92
160-13457-3	PZ-210-SS	82
160-13457-4	PZ-210-SD	92
160-13457-5	PZ-211-SS	99
LCS 160-207377/2-A	Lab Control Sample	103
LCSD 160-207377/3-A	Lab Control Sample Dup	104
MB 160-207377/1-A	Method Blank	108

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid

Preliminary Data

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		37TCDD
Lab Sample ID	**Client Sample ID**	**(42-164)**
160-13457-1	PZ-209-SS	102
160-13457-2	PZ-209-SD	99
160-13457-3	PZ-210-SS	100
160-13457-4	PZ-210-SD	100
160-13457-5	PZ-211-SS	102
LCS 320-84116/2-A	Lab Control Sample	101
MB 320-84116/1-A	Method Blank	101

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Preliminary Data

Isotope Dilution Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13457-1

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**TCDD (31-137)**
160-13457-1	PZ-209-SS	79
160-13457-2	PZ-209-SD	74
160-13457-3	PZ-210-SS	75
160-13457-4	PZ-210-SD	71
160-13457-5	PZ-211-SS	70
MB 320-84116/1-A	Method Blank	65

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**TCDD (25-141)**
LCS 320-84116/2-A	Lab Control Sample	67

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

Preliminary Data

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT



TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-13505-1
Client Project/Site: Groundwater Samples

For:
Missouri Attorney General's Office
PO Box 899
Jefferson City, Missouri 65102

Attn: Brenna McDonald

Authorized for release by:
8/31/2015 1:04:42 PM

Chenise Lambert-Sykes, Project Manager I
(314)298-8566
chenise.lambert-sykes@testamericainc.com

Preliminary Data

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Preliminary Data

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TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: Brenna McDonald
Company: Missouri Department of Natural Resources
Address: 111 Fairgounds Road PO BOX 250
City: Rolla
State, Zip: MO, 65402
Phone:
Email: brenna.mcdonald@dnr.mo.gov
Project Name: Groundwater Samples
Site:

Sampler:
Phone:
Lab PM: Lambert-Sykes, Chenise Y
E-Mail: chenise.lambert-sykes@testamericainc.com
Carrier Tracking No(s):
COC No: 160-3116-1450.2
Page: Page 2 of 3
Job #:

Due Date Requested:
TAT Requested (days): 48 hour
PO #: Purchase Order not required
WO #:
Project #: 16004530
SSOW#:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D_Sulfate	415.1 - Total Organic Carbon	6010C, 7470A	8260C - (MOD) OLM 4.2	8081B, 8082A, 8151A, 8270D	335.4 - Cyanide, Total	376.1 - Sulfide	1613B_Tetras - TCDD only	6010C - (MOD) Standard List	Total Number of containers
			Preservation Code:				N	S	D	A	N	B	CB	N	D	
MO-1-SS	8/21/15	1130	G	Water			X	X	X	X	X	X	X	X	X	
MO-1-SDR	8/21/15	1400	G	Water			X	X	X	X	X	X	X	X	X	
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Special Instructions/Note: Note - headspace in VOAs due to formation water

160-13505 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

	Date:	Time:	Method of Shipment:
Empty Kit Relinquished by:			

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	8/21/15 1405			8/21/2015 14:05	
Relinquished by:	8/21/15 14:54			8/21/2015 1454	DNR
Relinquished by:	8/21/2015 1525	DNR		8/21/15 1525	TH

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Pre-Hearing Exhibit Department of Natural Resources

Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-13505-1

Login Number: 13505
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-13505-1

Login Number: 13505
List Number: 2
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 08/25/15 05:38 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Preliminary Data

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
X	Surrogate is outside control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Preliminary Data

Method Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SL
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SL
8081B	Organochlorine Pesticides (GC)	SW846	TAL SL
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SL
8151A	Herbicides (GC)	SW846	TAL SL
300.0	Anions, Ion Chromatography	MCAWW	TAL SL
1613B	Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS	40CFR136A	TAL SAC
6010C	Metals (ICP)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL
335.4	Cyanide, Total	MCAWW	TAL SL
376.1	Sulfide	MCAWW	TAL SL

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Preliminary Data

Sample Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-13505-1	MO-1-SS	Water	08/21/15 11:30	08/21/15 15:25
160-13505-2	MO-1-SDR	Water	08/21/15 14:00	08/21/15 15:25

Preliminary Data

Detection Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

Client Sample ID: MO-1-SS **Lab Sample ID: 160-13505-1**

Sample Analysis Not Complete.

Client Sample ID: MO-1-SDR **Lab Sample ID: 160-13505-2**

Sample Analysis Not Complete.

Preliminary Data

This Detection Summary does not include radiochemical test results.

Client Sample ID: MO-1-SS

Date Collected: 08/21/15 11:30
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	ND		50	7.3	ug/L			08/22/15 17:30	1
Acrolein	ND		50	3.1	ug/L			08/22/15 17:30	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 17:30	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 17:30	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 17:30	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 17:30	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 17:30	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 17:30	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 17:30	1
2-Butanone (MEK)	**16**	**J**	20	0.39	ug/L			08/22/15 17:30	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 17:30	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 17:30	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 17:30	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 17:30	1
Chloroform	**3.5**	**J**	5.0	0.15	ug/L			08/22/15 17:30	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 17:30	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 17:30	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 17:30	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 17:30	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 17:30	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 17:30	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 17:30	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 17:30	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 17:30	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 17:30	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 17:30	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 17:30	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 17:30	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 17:30	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 17:30	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 17:30	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 17:30	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 17:30	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 17:30	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 17:30	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 17:30	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 17:30	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 17:30	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 17:30	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 17:30	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 17:30	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 17:30	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 17:30	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 17:30	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 17:30	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 17:30	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 17:30	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 17:30	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 17:30	1

Preliminary Data

Client Sample ID: MO-1-SS

Date Collected: 08/21/15 11:30
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 17:30	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 17:30	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 17:30	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 17:30	1
Trichloroethene	**1.2**	**J B**	5.0	0.29	ug/L			08/22/15 17:30	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 17:30	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 17:30	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 17:30	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 17:30	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*75 - 123*		*08/22/15 17:30*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*		*08/22/15 17:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*78 - 127*		*08/22/15 17:30*	*1*
Toluene-d8 (Surr)	*116*		*80 - 120*		*08/22/15 17:30*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**7.4**	**J**	20	6.7	ug/L			08/24/15 02:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*75 - 123*		*08/24/15 02:06*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*08/24/15 02:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*78 - 127*		*08/24/15 02:06*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*08/24/15 02:06*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Acenaphthylene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Acetophenone	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2-Acetylaminofluorene	ND		110	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
alpha,alpha-Dimethyl phenethylamine	ND		56	25	ug/L		08/25/15 09:36	08/25/15 23:30	1
4-Aminobiphenyl	ND		56	1.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
Anthracene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Benzo[a]anthracene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Benzo[a]pyrene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Benzo[b]fluoranthene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Benzo[g,h,i]perylene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Benzo[k]fluoranthene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Benzyl alcohol	ND		11	3.4	ug/L		08/25/15 09:36	08/25/15 23:30	1
Bis(2-chloroethoxy)methane	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Bis(2-chloroethyl)ether	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
bis(2 chloro-1-methylethyl) ether	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Bis(2-ethylhexyl) phthalate	**26**		11	2.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
4-Bromophenyl phenyl ether	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Butyl benzyl phthalate	**8.2**	**J**	11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
4-Chloroaniline	ND		11	2.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
Chlorobenzilate	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1

Preliminary Data

Client Sample ID: MO-1-SS

Date Collected: 08/21/15 11:30
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloro-3-methylphenol	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2-Chloronaphthalene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2-Chlorophenol	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
4-Chlorophenyl phenyl ether	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Chrysene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Diallate	ND		22	2.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
Dibenz(a,h)anthracene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Dibenzofuran	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
3,3'-Dichlorobenzidine	ND		56	1.4	ug/L		08/25/15 09:36	08/25/15 23:30	1
2,4-Dichlorophenol	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2,6-Dichlorophenol	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Diethyl phthalate	4.1	J	11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Dimethoate	ND		22	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
7,12-Dimethylbenz(a)anthracene	ND		22	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
3,3'-Dimethylbenzidine	ND		56	2.9	ug/L		08/25/15 09:36	08/25/15 23:30	1
2,4-Dimethylphenol	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Dimethyl phthalate	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Di-n-butyl phthalate	4.4	J	11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
1,3-Dinitrobenzene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
1,4-Dinitrobenzene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
4,6-Dinitro-2-methylphenol	ND		11	1.4	ug/L		08/25/15 09:36	08/25/15 23:30	1
2,4-Dinitrophenol	ND		56	2.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
2,4-Dinitrotoluene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2,6-Dinitrotoluene	ND		11	2.4	ug/L		08/25/15 09:36	08/25/15 23:30	1
Di-n-octyl phthalate	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Dinoseb	ND		22	2.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
Diphenylamine	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Disulfoton	ND		56	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Ethyl methanesulfonate	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Famphur	ND		110	1.9	ug/L		08/25/15 09:36	08/25/15 23:30	1
Fluoranthene	1.3	J	11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Fluorene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Hexachlorobenzene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Hexachlorobutadiene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Hexachlorocyclopentadiene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Hexachloroethane	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Hexachlorophene	ND		280	11	ug/L		08/25/15 09:36	08/26/15 21:26	1
Hexachloropropene	ND		110	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Indeno[1,2,3-cd]pyrene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Isodrin	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Isophorone	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Isosafrole	ND		22	5.6	ug/L		08/25/15 09:36	08/25/15 23:30	1
Kepone	ND		110	22	ug/L		08/25/15 09:36	08/26/15 21:26	1
Methapyrilene	ND		56	1.4	ug/L		08/25/15 09:36	08/25/15 23:30	1
3-Methylcholanthrene	ND		22	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Methyl methanesulfonate	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2-Methylnaphthalene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Methyl parathion	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2-Methylphenol	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1

Preliminary Data

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

Client Sample ID: MO-1-SS
Date Collected: 08/21/15 11:30
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	ND		22	2.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
Naphthalene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
1,4-Naphthoquinone	ND		56	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
1-Naphthylamine	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2-Naphthylamine	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2-Nitroaniline	ND		11	1.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
3-Nitroaniline	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
4-Nitroaniline	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Nitrobenzene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
5-Nitro-o-toluidine	ND		22	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2-Nitrophenol	ND		11	1.7	ug/L		08/25/15 09:36	08/25/15 23:30	1
4-Nitrophenol	ND		11	2.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
N-Nitrosodiethylamine	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
N-Nitrosodimethylamine	ND		11	2.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
N-Nitrosodi-n-butylamine	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
N-Nitrosodi-n-propylamine	ND		11	1.7	ug/L		08/25/15 09:36	08/25/15 23:30	1
N-Nitrosomethylethylamine	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
N-Nitrosomorpholine	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
N-Nitrosopiperidine	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
N-Nitrosopyrrolidine	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
o,o',o''-Triethylphosphorothioate	ND		56	1.3	ug/L		08/25/15 09:36	08/25/15 23:30	1
o-Toluidine	ND		22	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Parathion	ND		56	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
p-Dimethylamino azobenzene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Pentachlorobenzene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Pentachloroethane	ND		56	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Pentachloronitrobenzene	ND		56	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Pentachlorophenol	ND		11	1.4	ug/L		08/25/15 09:36	08/25/15 23:30	1
Phenacetin	ND		22	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Phenanthrene	4.8	J	11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Phenol	ND		11	2.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
Phorate	ND		56	2.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
p-Phenylene diamine	ND		110	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Pronamide	ND		22	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Pyrene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
Pyridine	ND		22	2.2	ug/L		08/25/15 09:36	08/25/15 23:30	1
Safrole	ND		22	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
1,2,4,5-Tetrachlorobenzene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2,3,4,6-Tetrachlorophenol	ND		56	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
1,2,4-Trichlorobenzene	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2,4,5-Trichlorophenol	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
2,4,6-Trichlorophenol	ND		11	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1
1,3,5-Trinitrobenzene	ND		56	1.1	ug/L		08/25/15 09:36	08/25/15 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*37*	*X*	*43 - 108*	*08/25/15 09:36*	*08/25/15 23:30*	*1*
2-Fluorophenol (Surr)	*18*		*15 - 59*	*08/25/15 09:36*	*08/25/15 23:30*	*1*
Nitrobenzene-d5 (Surr)	*37*	*X*	*50 - 101*	*08/25/15 09:36*	*08/25/15 23:30*	*1*
Phenol-d5 (Surr)	*13*		*10 - 50*	*08/25/15 09:36*	*08/25/15 23:30*	*1*
Terphenyl-d14 (Surr)	*17*	*X*	*21 - 97*	*08/25/15 09:36*	*08/25/15 23:30*	*1*

Preliminary Data

Client Sample ID: MO-1-SS

Date Collected: 08/21/15 11:30
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-1

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	*42*		*37 - 120*	*08/25/15 09:36*	*08/25/15 23:30*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
alpha-BHC	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
beta-BHC	ND		0.055	0.014	ug/L		08/24/15 14:06	08/25/15 18:49	1
delta-BHC	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
gamma-BHC (Lindane)	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
alpha-Chlordane	ND		0.055	0.016	ug/L		08/24/15 14:06	08/25/15 18:49	1
gamma-Chlordane	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
4,4'-DDD	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
4,4'-DDE	ND		0.055	0.015	ug/L		08/24/15 14:06	08/25/15 18:49	1
4,4'-DDT	ND		0.055	0.025	ug/L		08/24/15 14:06	08/25/15 18:49	1
Dieldrin	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
Endosulfan I	ND		0.055	0.021	ug/L		08/24/15 14:06	08/25/15 18:49	1
Endosulfan II	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
Endosulfan sulfate	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
Endrin	ND		0.055	0.020	ug/L		08/24/15 14:06	08/25/15 18:49	1
Endrin aldehyde	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
Endrin ketone	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
Heptachlor	ND		0.055	0.011	ug/L		08/24/15 14:06	08/25/15 18:49	1
Heptachlor epoxide	ND		0.055	0.019	ug/L		08/24/15 14:06	08/25/15 18:49	1
Methoxychlor	ND		0.55	0.014	ug/L		08/24/15 14:06	08/25/15 18:49	1
Toxaphene	ND		2.2	0.29	ug/L		08/24/15 14:06	08/25/15 18:49	1
Technical Chlordane	ND		0.55	0.11	ug/L		08/24/15 14:06	08/25/15 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	*11*	*X*	*44 - 112*	*08/24/15 14:06*	*08/25/15 18:49*	*1*
Tetrachloro-m-xylene	*34*	*X*	*49 - 104*	*08/24/15 14:06*	*08/25/15 18:49*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.2	0.41	ug/L		08/25/15 13:26	08/27/15 12:22	1
PCB-1221	ND		1.2	0.41	ug/L		08/25/15 13:26	08/27/15 12:22	1
PCB-1232	ND		1.2	0.41	ug/L		08/25/15 13:26	08/27/15 12:22	1
PCB-1242	ND		1.2	0.41	ug/L		08/25/15 13:26	08/27/15 12:22	1
PCB-1248	ND		1.2	0.41	ug/L		08/25/15 13:26	08/27/15 12:22	1
PCB-1254	ND		1.2	0.20	ug/L		08/25/15 13:26	08/27/15 12:22	1
PCB-1260	ND		1.2	0.20	ug/L		08/25/15 13:26	08/27/15 12:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	*72*		*52 - 150*	*08/25/15 13:26*	*08/27/15 12:22*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.1	0.29	ug/L		08/24/15 12:55	08/27/15 09:54	1
2,4-D	ND		8.7	4.6	ug/L		08/24/15 12:55	08/27/15 09:54	1
Silvex (2,4,5-TP)	ND		1.1	0.20	ug/L		08/24/15 12:55	08/27/15 09:54	1

Preliminary Data

Client Sample ID: MO-1-SS

Date Collected: 08/21/15 11:30
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-1

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*77*		*60 - 128*	*08/24/15 12:55*	*08/27/15 09:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	480		25	2.5	mg/L			08/25/15 21:22	50

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		11	0.34	pg/L		08/26/15 11:38	08/28/15 07:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*65*		*31 - 137*	*08/26/15 11:38*	*08/28/15 07:31*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*106*		*42 - 164*	*08/26/15 11:38*	*08/28/15 07:31*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	84	J ^ B	200	75	ug/L		08/24/15 16:46	08/26/15 21:34	20
Arsenic	64	J	200	36	ug/L		08/24/15 16:46	08/26/15 21:34	20
Barium	760	J	1000	42	ug/L		08/24/15 16:46	08/26/15 21:34	20
Beryllium	14	J	100	5.7	ug/L		08/24/15 16:46	08/26/15 21:34	20
Boron	520	J ^	1000	140	ug/L		08/24/15 16:46	08/26/15 21:34	20
Cadmium	ND		100	6.7	ug/L		08/24/15 16:46	08/26/15 21:34	20
Chromium	250		200	67	ug/L		08/24/15 16:46	08/26/15 21:34	20
Cobalt	ND		1000	54	ug/L		08/24/15 16:46	08/26/15 21:34	20
Copper	100	J	500	42	ug/L		08/24/15 16:46	08/26/15 21:34	20
Lead	160	J	200	12	ug/L		08/24/15 16:46	08/26/15 21:34	20
Magnesium	52		20	1.0	mg/L		08/24/15 16:46	08/26/15 21:34	20
Manganese	1600		300	20	ug/L		08/24/15 16:46	08/26/15 21:34	20
Nickel	0.25	J	0.80	0.051	mg/L		08/24/15 16:46	08/26/15 21:34	20
Selenium	42	J	300	42	ug/L		08/24/15 16:46	08/26/15 21:34	20
Silver	ND		200	20	ug/L		08/24/15 16:46	08/26/15 21:34	20
Thallium	ND		400	48	ug/L		08/24/15 16:46	08/26/15 21:34	20
Tin	ND		2000	100	ug/L		08/24/15 16:46	08/26/15 21:34	20
Vanadium	ND		1000	88	ug/L		08/24/15 16:46	08/26/15 21:34	20
Zinc	510		400	170	ug/L		08/24/15 16:46	08/26/15 21:34	20

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20		0.20	0.060	ug/L		08/25/15 12:47	08/25/15 22:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	2.9	ug/L		08/25/15 15:15	08/26/15 19:48	1
Sulfide	11		1.0	0.45	mg/L			08/27/15 16:25	1

Preliminary Data

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

Client Sample ID: MO-1-SDR

Date Collected: 08/21/15 14:00
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 17:55	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 17:55	1
Acrolein	ND		50	3.1	ug/L			08/22/15 17:55	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 17:55	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 17:55	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 17:55	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 17:55	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 17:55	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 17:55	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 17:55	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 17:55	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 17:55	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 17:55	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 17:55	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 17:55	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 17:55	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 17:55	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 17:55	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 17:55	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 17:55	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 17:55	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 17:55	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 17:55	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 17:55	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 17:55	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 17:55	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 17:55	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 17:55	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 17:55	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 17:55	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 17:55	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 17:55	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 17:55	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 17:55	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 17:55	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 17:55	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 17:55	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 17:55	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 17:55	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 17:55	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 17:55	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 17:55	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 17:55	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 17:55	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 17:55	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 17:55	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 17:55	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 17:55	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 17:55	1

Preliminary Data

Client Sample ID: MO-1-SDR

Date Collected: 08/21/15 14:00
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 17:55	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 17:55	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 17:55	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 17:55	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 17:55	1
Trichloroethene	1.2	J B	5.0	0.29	ug/L			08/22/15 17:55	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 17:55	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 17:55	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 17:55	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 17:55	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*75 - 123*		*08/22/15 17:55*	*1*
Dibromofluoromethane (Surr)	*116*		*80 - 120*		*08/22/15 17:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*78 - 127*		*08/22/15 17:55*	*1*
Toluene-d8 (Surr)	*111*		*80 - 120*		*08/22/15 17:55*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Acenaphthylene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Acetophenone	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2-Acetylaminofluorene	ND		100	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
alpha,alpha-Dimethyl phenethylamine	ND		51	23	ug/L		08/25/15 09:36	08/26/15 00:02	1
4-Aminobiphenyl	ND		51	1.1	ug/L		08/25/15 09:36	08/26/15 00:02	1
Anthracene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Benzo[a]anthracene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Benzo[a]pyrene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Benzo[b]fluoranthene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Benzo[g,h,i]perylene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Benzo[k]fluoranthene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Benzyl alcohol	ND		10	3.1	ug/L		08/25/15 09:36	08/26/15 00:02	1
Bis(2-chloroethoxy)methane	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Bis(2-chloroethyl)ether	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
bis(2 chloro-1-methylethyl) ether	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Bis(2-ethylhexyl) phthalate	ND		10	1.9	ug/L		08/25/15 09:36	08/26/15 00:02	1
4-Bromophenyl phenyl ether	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Butyl benzyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
4-Chloroaniline	ND		10	2.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Chlorobenzilate	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
4-Chloro-3-methylphenol	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2-Chloronaphthalene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2-Chlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
4-Chlorophenyl phenyl ether	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Chrysene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Diallate	ND		20	2.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Dibenz(a,h)anthracene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Dibenzofuran	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
3,3'-Dichlorobenzidine	ND		51	1.3	ug/L		08/25/15 09:36	08/26/15 00:02	1

Preliminary Data

Client Sample ID: MO-1-SDR

Date Collected: 08/21/15 14:00
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2,6-Dichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Diethyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Dimethoate	ND		20	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
7,12-Dimethylbenz(a)anthracene	ND		20	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
3,3'-Dimethylbenzidine	ND		51	2.7	ug/L		08/25/15 09:36	08/26/15 00:02	1
2,4-Dimethylphenol	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Dimethyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Di-n-butyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
1,3-Dinitrobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
1,4-Dinitrobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
4,6-Dinitro-2-methylphenol	ND		10	1.3	ug/L		08/25/15 09:36	08/26/15 00:02	1
2,4-Dinitrophenol	ND		51	2.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2,4-Dinitrotoluene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2,6-Dinitrotoluene	ND		10	2.2	ug/L		08/25/15 09:36	08/26/15 00:02	1
Di-n-octyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Dinoseb	ND		20	2.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Diphenylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Disulfoton	ND		51	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Ethyl methanesulfonate	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Famphur	ND		100	1.7	ug/L		08/25/15 09:36	08/26/15 00:02	1
Fluoranthene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Fluorene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Hexachlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Hexachlorobutadiene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Hexachloroethane	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Hexachlorophene	ND		260	10	ug/L		08/25/15 09:36	08/26/15 21:59	1
Hexachloropropene	ND		100	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Indeno[1,2,3-cd]pyrene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Isodrin	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Isophorone	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Isosafrole	ND		20	5.1	ug/L		08/25/15 09:36	08/26/15 00:02	1
Kepone	ND		100	20	ug/L		08/25/15 09:36	08/26/15 21:59	1
Methapyrilene	ND		51	1.3	ug/L		08/25/15 09:36	08/26/15 00:02	1
3-Methylcholanthrene	ND		20	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Methyl methanesulfonate	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2-Methylnaphthalene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Methyl parathion	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2-Methylphenol	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
3 & 4 Methylphenol	ND		20	2.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Naphthalene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
1,4-Naphthoquinone	ND		51	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
1-Naphthylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2-Naphthylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2-Nitroaniline	ND		10	1.1	ug/L		08/25/15 09:36	08/26/15 00:02	1
3-Nitroaniline	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
4-Nitroaniline	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Nitrobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1

Preliminary Data

Client Sample ID: MO-1-SDR

Date Collected: 08/21/15 14:00
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
5-Nitro-o-toluidine	ND		20	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2-Nitrophenol	ND		10	1.6	ug/L		08/25/15 09:36	08/26/15 00:02	1
4-Nitrophenol	ND		10	2.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
N-Nitrosodiethylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
N-Nitrosodimethylamine	ND		10	2.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
N-Nitrosodi-n-butylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/L		08/25/15 09:36	08/26/15 00:02	1
N-Nitrosomethylethylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
N-Nitrosomorpholine	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
N-Nitrosopiperidine	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
N-Nitrosopyrrolidine	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
o,o',o"-Triethylphosphorothioate	ND		51	1.2	ug/L		08/25/15 09:36	08/26/15 00:02	1
o-Toluidine	ND		20	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Parathion	ND		51	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
p-Dimethylamino azobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Pentachlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Pentachloroethane	ND		51	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Pentachloronitrobenzene	ND		51	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Pentachlorophenol	ND		10	1.3	ug/L		08/25/15 09:36	08/26/15 00:02	1
Phenacetin	ND		20	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Phenanthrene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Phenol	ND		10	2.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Phorate	ND		51	2.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
p-Phenylene diamine	ND		100	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Pronamide	ND		20	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Pyrene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Pyridine	ND		20	2.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
Safrole	ND		20	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2,3,4,6-Tetrachlorophenol	ND		51	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
1,2,4-Trichlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2,4,5-Trichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
2,4,6-Trichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1
1,3,5-Trinitrobenzene	ND		51	1.0	ug/L		08/25/15 09:36	08/26/15 00:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*75*		*43 - 108*	*08/25/15 09:36*	*08/26/15 00:02*	*1*
2-Fluorophenol (Surr)	*37*		*15 - 59*	*08/25/15 09:36*	*08/26/15 00:02*	*1*
Nitrobenzene-d5 (Surr)	*74*		*50 - 101*	*08/25/15 09:36*	*08/26/15 00:02*	*1*
Phenol-d5 (Surr)	*23*		*10 - 50*	*08/25/15 09:36*	*08/26/15 00:02*	*1*
Terphenyl-d14 (Surr)	*61*		*21 - 97*	*08/25/15 09:36*	*08/26/15 00:02*	*1*
2,4,6-Tribromophenol (Surr)	*93*		*37 - 120*	*08/25/15 09:36*	*08/26/15 00:02*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1
alpha-BHC	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1
beta-BHC	ND		0.051	0.013	ug/L		08/24/15 14:06	08/25/15 19:09	1
delta-BHC	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1
gamma-BHC (Lindane)	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1

Preliminary Data

Client Sample ID: MO-1-SDR

Date Collected: 08/21/15 14:00
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-2

Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.051	0.015	ug/L		08/24/15 14:06	08/25/15 19:09	1
gamma-Chlordane	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1
4,4'-DDD	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1
4,4'-DDE	ND		0.051	0.014	ug/L		08/24/15 14:06	08/25/15 19:09	1
4,4'-DDT	ND		0.051	0.024	ug/L		08/24/15 14:06	08/25/15 19:09	1
Dieldrin	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1
Endosulfan I	ND		0.051	0.019	ug/L		08/24/15 14:06	08/25/15 19:09	1
Endosulfan II	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1
Endosulfan sulfate	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1
Endrin	ND		0.051	0.018	ug/L		08/24/15 14:06	08/25/15 19:09	1
Endrin aldehyde	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1
Endrin ketone	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1
Heptachlor	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 19:09	1
Heptachlor epoxide	ND		0.051	0.017	ug/L		08/24/15 14:06	08/25/15 19:09	1
Methoxychlor	ND		0.51	0.013	ug/L		08/24/15 14:06	08/25/15 19:09	1
Toxaphene	ND		2.0	0.28	ug/L		08/24/15 14:06	08/25/15 19:09	1
Technical Chlordane	ND		0.51	0.10	ug/L		08/24/15 14:06	08/25/15 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*53*		*44 - 112*	*08/24/15 14:06*	*08/25/15 19:09*	*1*
Tetrachloro-m-xylene	*67*		*49 - 104*	*08/24/15 14:06*	*08/25/15 19:09*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.2	0.42	ug/L		08/25/15 13:26	08/27/15 12:38	1
PCB-1221	ND		1.2	0.42	ug/L		08/25/15 13:26	08/27/15 12:38	1
PCB-1232	ND		1.2	0.42	ug/L		08/25/15 13:26	08/27/15 12:38	1
PCB-1242	ND		1.2	0.42	ug/L		08/25/15 13:26	08/27/15 12:38	1
PCB-1248	ND		1.2	0.42	ug/L		08/25/15 13:26	08/27/15 12:38	1
PCB-1254	ND		1.2	0.20	ug/L		08/25/15 13:26	08/27/15 12:38	1
PCB-1260	ND		1.2	0.20	ug/L		08/25/15 13:26	08/27/15 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*80*		*52 - 150*	*08/25/15 13:26*	*08/27/15 12:38*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.2	0.32	ug/L		08/24/15 12:55	08/27/15 10:24	1
2,4-D	ND		9.5	5.0	ug/L		08/24/15 12:55	08/27/15 10:24	1
Silvex (2,4,5-TP)	ND		1.2	0.23	ug/L		08/24/15 12:55	08/27/15 10:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*99*		*60 - 128*	*08/24/15 12:55*	*08/27/15 10:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	91		25	2.5	mg/L			08/25/15 21:50	50

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.27	pg/L		08/26/15 11:38	08/28/15 08:17	1

Preliminary Data

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

Client Sample ID: MO-1-SDR

Date Collected: 08/21/15 14:00
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13505-2

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	71		31 - 137	08/26/15 11:38	08/28/15 08:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	99		42 - 164	08/26/15 11:38	08/28/15 08:17	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	^	10	3.7	ug/L		08/24/15 16:46	08/26/15 21:38	1
Arsenic	**3.0**	**J**	10	1.8	ug/L		08/24/15 16:46	08/26/15 21:38	1
Barium	**100**		50	2.1	ug/L		08/24/15 16:46	08/26/15 21:38	1
Beryllium	ND		5.0	0.28	ug/L		08/24/15 16:46	08/26/15 21:38	1
Boron	**93**	^	50	7.2	ug/L		08/24/15 16:46	08/26/15 21:38	1
Cadmium	ND		5.0	0.34	ug/L		08/24/15 16:46	08/26/15 21:38	1
Chromium	**8.8**	**J**	10	3.4	ug/L		08/24/15 16:46	08/26/15 21:38	1
Cobalt	ND		50	2.7	ug/L		08/24/15 16:46	08/26/15 21:38	1
Copper	ND		25	2.1	ug/L		08/24/15 16:46	08/26/15 21:38	1
Lead	ND		10	0.60	ug/L		08/24/15 16:46	08/26/15 21:38	1
Magnesium	**42**		1.0	0.051	mg/L		08/24/15 16:46	08/26/15 21:38	1
Manganese	**20**		15	1.0	ug/L		08/24/15 16:46	08/26/15 21:38	1
Nickel	**0.0085**	**J**	0.040	0.0026	mg/L		08/24/15 16:46	08/26/15 21:38	1
Selenium	**2.6**	**J**	15	2.1	ug/L		08/24/15 16:46	08/26/15 21:38	1
Silver	ND		10	0.99	ug/L		08/24/15 16:46	08/26/15 21:38	1
Thallium	ND		20	2.4	ug/L		08/24/15 16:46	08/26/15 21:38	1
Tin	ND		100	5.0	ug/L		08/24/15 16:46	08/26/15 21:38	1
Vanadium	ND		50	4.4	ug/L		08/24/15 16:46	08/26/15 21:38	1
Zinc	ND		20	8.3	ug/L		08/24/15 16:46	08/26/15 21:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.072**	**J**	0.20	0.060	ug/L		08/25/15 12:47	08/25/15 22:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	2.9	ug/L		08/25/15 15:15	08/26/15 19:51	1
Sulfide	**1.1**		1.0	0.45	mg/L			08/27/15 16:34	1

Preliminary Data

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 160-207022/7
Matrix: Water
Analysis Batch: 207022

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 13:23	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 13:23	1
Acrolein	ND		50	3.1	ug/L			08/22/15 13:23	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 13:23	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 13:23	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 13:23	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 13:23	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 13:23	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 13:23	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 13:23	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 13:23	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 13:23	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 13:23	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 13:23	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 13:23	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 13:23	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 13:23	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 13:23	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 13:23	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 13:23	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 13:23	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 13:23	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 13:23	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 13:23	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 13:23	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 13:23	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 13:23	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 13:23	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 13:23	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 13:23	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 13:23	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 13:23	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 13:23	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 13:23	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 13:23	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 13:23	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 13:23	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 13:23	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 13:23	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 13:23	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 13:23	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 13:23	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 13:23	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 13:23	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 13:23	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 13:23	1

Preliminary Data

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

Lab Sample ID: MB 160-207022/7
Matrix: Water
Analysis Batch: 207022

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		5.0	1.0	ug/L			08/22/15 13:23	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 13:23	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 13:23	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 13:23	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 13:23	1
Trichloroethene	0.589	J	5.0	0.29	ug/L			08/22/15 13:23	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 13:23	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 13:23	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 13:23	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 13:23	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 13:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*	*X*	*75 - 123*		*08/22/15 13:23*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/22/15 13:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*78 - 127*		*08/22/15 13:23*	*1*
Toluene-d8 (Surr)	*113*		*80 - 120*		*08/22/15 13:23*	*1*

Lab Sample ID: LCS 160-207022/4
Matrix: Water
Analysis Batch: 207022

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	50.1		ug/L		100	72 - 139
Acetonitrile	500	489		ug/L		98	75 - 129
Acrolein	248	252		ug/L		102	67 - 140
Acrylonitrile	500	489		ug/L		98	80 - 120
Allyl chloride	50.0	53.3		ug/L		107	75 - 127
Benzene	50.0	52.2		ug/L		104	80 - 120
Bromochloromethane	50.0	48.6		ug/L		97	80 - 120
Bromodichloromethane	50.0	50.1		ug/L		100	80 - 120
Bromoform	50.0	49.7		ug/L		99	80 - 120
Bromomethane	50.0	45.3		ug/L		91	48 - 140
2-Butanone (MEK)	50.0	52.5		ug/L		105	68 - 128
Carbon disulfide	50.0	51.2		ug/L		102	79 - 120
Carbon tetrachloride	50.0	52.0		ug/L		104	74 - 128
Chlorobenzene	50.0	50.0		ug/L		100	80 - 120
Chloroethane	50.0	46.6		ug/L		93	55 - 140
Chloroform	50.0	47.9		ug/L		96	80 - 120
Chloromethane	50.0	54.0		ug/L		108	72 - 123
cis-1,2-Dichloroethene	50.0	50.4		ug/L		101	80 - 120
cis-1,3-Dichloropropene	50.0	54.1		ug/L		108	80 - 120
Dibromochloromethane	50.0	49.1		ug/L		98	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	46.8		ug/L		94	69 - 135
1,2-Dibromoethane (EDB)	50.0	49.7		ug/L		99	80 - 120
Dibromomethane	50.0	49.2		ug/L		98	80 - 120
1,2-Dichlorobenzene	50.0	54.2		ug/L		108	76 - 122

Preliminary Data

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

Lab Sample ID: LCS 160-207022/4
Matrix: Water
Analysis Batch: 207022

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	50.0	54.2		ug/L		108	77 - 122
1,4-Dichlorobenzene	50.0	51.7		ug/L		103	80 - 120
Dichlorodifluoromethane	50.0	55.3		ug/L		111	49 - 140
1,1-Dichloroethane	50.0	51.3		ug/L		103	80 - 120
1,2-Dichloroethane	50.0	53.0		ug/L		106	80 - 120
1,1-Dichloroethene	50.0	52.3		ug/L		105	77 - 121
1,2-Dichloropropane	50.0	51.2		ug/L		102	80 - 120
1,3-Dichloropropane	50.0	52.4		ug/L		105	80 - 120
2,2-Dichloropropane	50.0	57.1		ug/L		114	73 - 134
1,1-Dichloropropene	50.0	57.5		ug/L		115	80 - 120
Ethylbenzene	50.0	56.1		ug/L		112	80 - 120
Ethyl methacrylate	50.0	47.4		ug/L		95	72 - 134
2-Hexanone	50.0	48.1		ug/L		96	64 - 136
Iodomethane	50.0	52.7		ug/L		105	72 - 130
Isobutyl alcohol	1250	1170		ug/L		94	69 - 130
Methacrylonitrile	500	509		ug/L		102	78 - 123
Methylene Chloride	50.0	48.8		ug/L		98	79 - 115
Methyl methacrylate	100	96.4		ug/L		96	64 - 127
4-Methyl-2-pentanone (MIBK)	50.0	53.0		ug/L		106	74 - 129
Propionitrile	500	454		ug/L		91	74 - 131
Styrene	50.0	57.0		ug/L		114	80 - 120
1,1,1,2-Tetrachloroethane	50.0	51.1		ug/L		102	80 - 120
1,1,2,2-Tetrachloroethane	50.0	50.0		ug/L		100	80 - 120
Tetrachloroethene	50.0	49.4		ug/L		99	80 - 120
Toluene	50.0	53.1		ug/L		106	80 - 120
trans-1,4-Dichloro-2-butene	50.0	48.9		ug/L		98	80 - 123
trans-1,2-Dichloroethene	50.0	51.3		ug/L		103	80 - 120
trans-1,3-Dichloropropene	50.0	52.5		ug/L		105	80 - 120
1,1,1-Trichloroethane	50.0	52.5		ug/L		105	75 - 127
1,1,2-Trichloroethane	50.0	46.2		ug/L		92	80 - 120
Trichloroethene	50.0	51.7		ug/L		103	80 - 120
Trichlorofluoromethane	50.0	49.2		ug/L		98	72 - 132
1,2,3-Trichloropropane	50.0	47.0		ug/L		94	80 - 120
Vinyl acetate	50.0	54.6		ug/L		109	43 - 140
Vinyl chloride	50.0	46.7		ug/L		93	68 - 120
Xylenes, Total	100	107		ug/L		107	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*75 - 123*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*
Toluene-d8 (Surr)	*105*		*80 - 120*

Preliminary Data

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

Lab Sample ID: LCSD 160-207022/5
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	46.8		ug/L		94	72 - 139	7	20
Acetonitrile	500	503		ug/L		101	75 - 129	3	20
Acrolein	248	255		ug/L		103	67 - 140	1	20
Acrylonitrile	500	487		ug/L		97	80 - 120	1	20
Allyl chloride	50.0	51.1		ug/L		102	75 - 127	4	20
Benzene	50.0	52.6		ug/L		105	80 - 120	1	20
Bromochloromethane	50.0	47.3		ug/L		95	80 - 120	3	20
Bromodichloromethane	50.0	52.1		ug/L		104	80 - 120	4	20
Bromoform	50.0	47.4		ug/L		95	80 - 120	5	20
Bromomethane	50.0	45.4		ug/L		91	48 - 140	0	20
2-Butanone (MEK)	50.0	53.5		ug/L		107	68 - 128	2	20
Carbon disulfide	50.0	50.3		ug/L		101	79 - 120	2	20
Carbon tetrachloride	50.0	52.8		ug/L		106	74 - 128	2	20
Chlorobenzene	50.0	50.4		ug/L		101	80 - 120	1	20
Chloroethane	50.0	46.2		ug/L		92	55 - 140	1	20
Chloroform	50.0	50.8		ug/L		102	80 - 120	6	20
Chloromethane	50.0	54.7		ug/L		109	72 - 123	1	20
cis-1,2-Dichloroethene	50.0	51.8		ug/L		104	80 - 120	3	20
cis-1,3-Dichloropropene	50.0	55.0		ug/L		110	80 - 120	2	20
Dibromochloromethane	50.0	51.8		ug/L		104	80 - 120	5	20
1,2-Dibromo-3-Chloropropane	50.0	52.7		ug/L		105	69 - 135	12	20
1,2-Dibromoethane (EDB)	50.0	50.0		ug/L		100	80 - 120	1	20
Dibromomethane	50.0	51.2		ug/L		102	80 - 120	4	20
1,2-Dichlorobenzene	50.0	53.3		ug/L		107	76 - 122	2	20
1,3-Dichlorobenzene	50.0	55.9		ug/L		112	77 - 122	3	20
1,4-Dichlorobenzene	50.0	52.3		ug/L		105	80 - 120	1	20
Dichlorodifluoromethane	50.0	56.3		ug/L		113	49 - 140	2	20
1,1-Dichloroethane	50.0	50.4		ug/L		101	80 - 120	2	20
1,2-Dichloroethane	50.0	50.6		ug/L		101	80 - 120	5	20
1,1-Dichloroethene	50.0	52.1		ug/L		104	77 - 121	0	20
1,2-Dichloropropane	50.0	53.3		ug/L		107	80 - 120	4	20
1,3-Dichloropropane	50.0	54.0		ug/L		108	80 - 120	3	20
2,2-Dichloropropane	50.0	59.2		ug/L		118	73 - 134	4	20
1,1-Dichloropropene	50.0	57.9		ug/L		116	80 - 120	1	20
Ethylbenzene	50.0	57.0		ug/L		114	80 - 120	2	20
Ethyl methacrylate	50.0	52.7		ug/L		105	72 - 134	11	20
2-Hexanone	50.0	57.0		ug/L		114	64 - 136	17	20
Iodomethane	50.0	51.1		ug/L		102	72 - 130	3	20
Isobutyl alcohol	1250	1180		ug/L		95	69 - 130	1	20
Methacrylonitrile	500	525		ug/L		105	78 - 123	3	20
Methylene Chloride	50.0	47.6		ug/L		95	79 - 115	2	20
Methyl methacrylate	100	104		ug/L		104	64 - 127	8	20
4-Methyl-2-pentanone (MIBK)	50.0	57.2		ug/L		114	74 - 129	8	20
Propionitrile	500	468		ug/L		94	74 - 131	3	20
Styrene	50.0	57.9		ug/L		116	80 - 120	1	20
1,1,1,2-Tetrachloroethane	50.0	51.6		ug/L		103	80 - 120	1	20
1,1,2,2-Tetrachloroethane	50.0	50.7		ug/L		101	80 - 120	1	20
Tetrachloroethene	50.0	50.1		ug/L		100	80 - 120	2	20

Preliminary Data

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

Lab Sample ID: LCSD 160-207022/5
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	50.0	54.2		ug/L		108	80 - 120	2	20
trans-1,4-Dichloro-2-butene	50.0	50.1		ug/L		100	80 - 123	2	20
trans-1,2-Dichloroethene	50.0	49.2		ug/L		98	80 - 120	4	20
trans-1,3-Dichloropropene	50.0	60.3	*	ug/L		121	80 - 120	14	20
1,1,1-Trichloroethane	50.0	52.0		ug/L		104	75 - 127	1	20
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	80 - 120	9	20
Trichloroethene	50.0	50.8		ug/L		102	80 - 120	2	20
Trichlorofluoromethane	50.0	47.8		ug/L		96	72 - 132	3	20
1,2,3-Trichloropropane	50.0	47.8		ug/L		96	80 - 120	2	20
Vinyl acetate	50.0	54.2		ug/L		108	43 - 140	1	20
Vinyl chloride	50.0	46.2		ug/L		92	68 - 120	1	20
Xylenes, Total	100	109		ug/L		109	80 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*75 - 123*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*
Toluene-d8 (Surr)	*107*		*80 - 120*

Lab Sample ID: 160-13506-A-4 MS
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		50.0	58.9		ug/L		118	54 - 140
Acetonitrile	ND		500	568		ug/L		114	71 - 135
Acrolein	ND		248	247		ug/L		100	52 - 150
Acrylonitrile	ND		500	554		ug/L		111	80 - 125
Allyl chloride	ND		50.0	53.4		ug/L		107	80 - 120
Benzene	ND		50.0	56.7		ug/L		113	72 - 123
Bromochloromethane	ND		50.0	52.2		ug/L		104	80 - 120
Bromodichloromethane	ND		50.0	57.0		ug/L		114	80 - 120
Bromoform	ND		50.0	50.4		ug/L		101	78 - 122
Bromomethane	ND		50.0	51.0		ug/L		102	51 - 146
2-Butanone (MEK)	ND		50.0	57.3		ug/L		115	62 - 135
Carbon disulfide	ND		50.0	52.9		ug/L		106	80 - 120
Carbon tetrachloride	ND		50.0	53.1		ug/L		106	80 - 124
Chlorobenzene	ND		50.0	53.3		ug/L		107	80 - 120
Chloroethane	ND		50.0	53.5		ug/L		107	53 - 148
Chloroform	ND		50.0	52.1		ug/L		104	80 - 120
Chloromethane	ND		50.0	50.7		ug/L		101	80 - 120
cis-1,2-Dichloroethene	ND		50.0	55.3		ug/L		111	80 - 120
cis-1,3-Dichloropropene	ND		50.0	54.9		ug/L		110	80 - 120
Dibromochloromethane	ND		50.0	54.0		ug/L		108	80 - 120
1,2-Dibromo-3-Chloropropane	ND		50.0	51.7		ug/L		103	59 - 144
1,2-Dibromoethane (EDB)	ND		50.0	55.4		ug/L		111	80 - 120
Dibromomethane	ND		50.0	57.6		ug/L		115	80 - 120
1,2-Dichlorobenzene	ND		50.0	55.7		ug/L		111	77 - 117

Preliminary Data

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

Lab Sample ID: 160-13506-A-4 MS
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	ND		50.0	55.9		ug/L		112	80 - 120
1,4-Dichlorobenzene	ND		50.0	53.1		ug/L		106	80 - 120
Dichlorodifluoromethane	ND		50.0	50.7		ug/L		101	70 - 131
1,1-Dichloroethane	ND		50.0	52.6		ug/L		105	80 - 120
1,2-Dichloroethane	ND		50.0	55.8		ug/L		112	80 - 120
1,1-Dichloroethene	ND		50.0	52.9		ug/L		106	80 - 120
1,2-Dichloropropane	ND		50.0	55.3		ug/L		111	80 - 120
1,3-Dichloropropane	ND		50.0	57.3		ug/L		115	80 - 120
2,2-Dichloropropane	ND		50.0	53.4		ug/L		107	81 - 128
1,1-Dichloropropene	ND		50.0	57.5		ug/L		115	80 - 120
Ethylbenzene	ND		50.0	58.2		ug/L		116	80 - 120
Ethyl methacrylate	ND		50.0	50.9		ug/L		102	73 - 128
2-Hexanone	ND		50.0	59.5		ug/L		119	65 - 136
Iodomethane	ND		50.0	52.3		ug/L		105	77 - 125
Isobutyl alcohol	ND		1250	1390		ug/L		111	67 - 134
Methacrylonitrile	ND		500	605		ug/L		121	78 - 121
Methylene Chloride	ND		50.0	51.7		ug/L		103	80 - 120
Methyl methacrylate	ND		100	107		ug/L		107	69 - 124
4-Methyl-2-pentanone (MIBK)	ND		50.0	59.5		ug/L		119	74 - 132
Propionitrile	ND		500	542		ug/L		108	76 - 127
Styrene	ND		50.0	59.7		ug/L		119	80 - 120
1,1,1,2-Tetrachloroethane	ND		50.0	54.4		ug/L		109	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	54.9		ug/L		110	72 - 125
Tetrachloroethene	ND		50.0	50.5		ug/L		101	80 - 120
Toluene	ND		50.0	53.9		ug/L		108	80 - 120
trans-1,4-Dichloro-2-butene	ND		50.0	45.6		ug/L		91	73 - 125
trans-1,2-Dichloroethene	ND		50.0	48.7		ug/L		97	80 - 120
trans-1,3-Dichloropropene	ND	*	50.0	58.2		ug/L		116	77 - 122
1,1,1-Trichloroethane	ND		50.0	52.1		ug/L		104	81 - 123
1,1,2-Trichloroethane	ND		50.0	54.2		ug/L		108	76 - 119
Trichloroethene	ND		50.0	53.3		ug/L		107	80 - 120
Trichlorofluoromethane	ND		50.0	55.1		ug/L		110	79 - 128
1,2,3-Trichloropropane	ND		50.0	49.9		ug/L		100	72 - 120
Vinyl acetate	ND		50.0	57.9		ug/L		116	47 - 150
Vinyl chloride	ND		50.0	48.1		ug/L		96	75 - 118
Xylenes, Total	ND		100	109		ug/L		109	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*75 - 123*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*107*		*78 - 127*
Toluene-d8 (Surr)	*106*		*80 - 120*

Preliminary Data

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

Lab Sample ID: 160-13506-A-4 MSD
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		50.0	56.0		ug/L		112	54 - 140	5	20
Acetonitrile	ND		500	527		ug/L		105	71 - 135	7	20
Acrolein	ND		248	248		ug/L		100	52 - 150	0	20
Acrylonitrile	ND		500	507		ug/L		101	80 - 125	9	20
Allyl chloride	ND		50.0	52.4		ug/L		105	80 - 120	2	20
Benzene	ND		50.0	52.3		ug/L		105	72 - 123	8	20
Bromochloromethane	ND		50.0	49.6		ug/L		99	80 - 120	5	20
Bromodichloromethane	ND		50.0	55.6		ug/L		111	80 - 120	2	20
Bromoform	ND		50.0	54.1		ug/L		108	78 - 122	7	20
Bromomethane	ND		50.0	46.3		ug/L		93	51 - 146	10	20
2-Butanone (MEK)	ND		50.0	53.0		ug/L		106	62 - 135	8	20
Carbon disulfide	ND		50.0	48.8		ug/L		98	80 - 120	8	20
Carbon tetrachloride	ND		50.0	51.5		ug/L		103	80 - 124	3	20
Chlorobenzene	ND		50.0	52.4		ug/L		105	80 - 120	2	20
Chloroethane	ND		50.0	48.3		ug/L		97	53 - 148	10	20
Chloroform	ND		50.0	50.2		ug/L		100	80 - 120	4	20
Chloromethane	ND		50.0	50.0		ug/L		100	80 - 120	1	20
cis-1,2-Dichloroethene	ND		50.0	51.3		ug/L		103	80 - 120	8	20
cis-1,3-Dichloropropene	ND		50.0	54.9		ug/L		110	80 - 120	0	20
Dibromochloromethane	ND		50.0	54.7		ug/L		109	80 - 120	1	20
1,2-Dibromo-3-Chloropropane	ND		50.0	49.8		ug/L		100	59 - 144	4	20
1,2-Dibromoethane (EDB)	ND		50.0	55.5		ug/L		111	80 - 120	0	20
Dibromomethane	ND		50.0	54.1		ug/L		108	80 - 120	6	20
1,2-Dichlorobenzene	ND		50.0	53.8		ug/L		108	77 - 117	4	20
1,3-Dichlorobenzene	ND		50.0	54.5		ug/L		109	80 - 120	3	20
1,4-Dichlorobenzene	ND		50.0	52.8		ug/L		106	80 - 120	1	20
Dichlorodifluoromethane	ND		50.0	55.9		ug/L		112	70 - 131	10	20
1,1-Dichloroethane	ND		50.0	50.1		ug/L		100	80 - 120	5	20
1,2-Dichloroethane	ND		50.0	56.0		ug/L		112	80 - 120	0	20
1,1-Dichloroethene	ND		50.0	49.4		ug/L		99	80 - 120	7	20
1,2-Dichloropropane	ND		50.0	55.3		ug/L		111	80 - 120	0	20
1,3-Dichloropropane	ND		50.0	55.7		ug/L		111	80 - 120	3	20
2,2-Dichloropropane	ND		50.0	51.3		ug/L		103	81 - 128	4	20
1,1-Dichloropropene	ND		50.0	57.0		ug/L		114	80 - 120	1	20
Ethylbenzene	ND		50.0	56.1		ug/L		112	80 - 120	4	20
Ethyl methacrylate	ND		50.0	52.2		ug/L		104	73 - 128	3	20
2-Hexanone	ND		50.0	54.7		ug/L		109	65 - 136	8	20
Iodomethane	ND		50.0	49.0		ug/L		98	77 - 125	7	20
Isobutyl alcohol	ND		1250	1260		ug/L		101	67 - 134	10	20
Methacrylonitrile	ND		500	558		ug/L		112	78 - 121	8	20
Methylene Chloride	ND		50.0	49.2		ug/L		98	80 - 120	5	20
Methyl methacrylate	ND		100	115		ug/L		115	69 - 124	8	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	57.9		ug/L		116	74 - 132	3	20
Propionitrile	ND		500	496		ug/L		99	76 - 127	9	20
Styrene	ND		50.0	57.1		ug/L		114	80 - 120	5	20
1,1,1,2-Tetrachloroethane	ND		50.0	52.0		ug/L		104	80 - 120	4	20
1,1,2,2-Tetrachloroethane	ND		50.0	54.5		ug/L		109	72 - 125	1	20
Tetrachloroethene	ND		50.0	49.1		ug/L		98	80 - 120	3	20

Preliminary Data

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

Lab Sample ID: 160-13506-A-4 MSD
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	ND		50.0	53.9		ug/L		108	80 - 120	0	20
trans-1,4-Dichloro-2-butene	ND		50.0	53.2		ug/L		106	73 - 125	15	20
trans-1,2-Dichloroethene	ND		50.0	49.1		ug/L		98	80 - 120	1	20
trans-1,3-Dichloropropene	ND	*	50.0	60.1		ug/L		120	77 - 122	3	20
1,1,1-Trichloroethane	ND		50.0	52.2		ug/L		104	81 - 123	0	20
1,1,2-Trichloroethane	ND		50.0	52.8		ug/L		106	76 - 119	3	20
Trichloroethene	ND		50.0	50.9		ug/L		102	80 - 120	5	20
Trichlorofluoromethane	ND		50.0	50.1		ug/L		100	79 - 128	10	20
1,2,3-Trichloropropane	ND		50.0	50.6		ug/L		101	72 - 120	1	20
Vinyl acetate	ND		50.0	57.1		ug/L		114	47 - 150	1	20
Vinyl chloride	ND		50.0	47.5		ug/L		95	75 - 118	1	20
Xylenes, Total	ND		100	106		ug/L		106	80 - 120	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*75 - 123*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*
Toluene-d8 (Surr)	*108*		*80 - 120*

Lab Sample ID: MB 160-207165/6
Matrix: Water
Analysis Batch: 207165

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/23/15 19:19	1
Acetonitrile	ND		50	7.3	ug/L			08/23/15 19:19	1
Acrolein	ND		50	3.1	ug/L			08/23/15 19:19	1
Acrylonitrile	ND		50	1.7	ug/L			08/23/15 19:19	1
Allyl chloride	ND		10	0.39	ug/L			08/23/15 19:19	1
Benzene	ND		5.0	0.25	ug/L			08/23/15 19:19	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/23/15 19:19	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/23/15 19:19	1
Bromoform	ND		5.0	0.37	ug/L			08/23/15 19:19	1
Bromomethane	ND		10	0.40	ug/L			08/23/15 19:19	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/23/15 19:19	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/23/15 19:19	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/23/15 19:19	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/23/15 19:19	1
Chloroethane	ND		10	0.38	ug/L			08/23/15 19:19	1
Chloroform	ND		5.0	0.15	ug/L			08/23/15 19:19	1
Chloromethane	ND		10	0.55	ug/L			08/23/15 19:19	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/23/15 19:19	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/23/15 19:19	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/23/15 19:19	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/23/15 19:19	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/23/15 19:19	1
Dibromomethane	ND		5.0	0.41	ug/L			08/23/15 19:19	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/23/15 19:19	1

Preliminary Data

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

Lab Sample ID: MB 160-207165/6
Matrix: Water
Analysis Batch: 207165

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/23/15 19:19	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/23/15 19:19	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/23/15 19:19	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/23/15 19:19	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/23/15 19:19	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/23/15 19:19	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/23/15 19:19	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/23/15 19:19	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/23/15 19:19	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/23/15 19:19	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/23/15 19:19	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/23/15 19:19	1
2-Hexanone	ND		20	0.59	ug/L			08/23/15 19:19	1
Iodomethane	ND		5.0	1.5	ug/L			08/23/15 19:19	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/23/15 19:19	1
Methacrylonitrile	ND		50	2.1	ug/L			08/23/15 19:19	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/23/15 19:19	1
Methyl methacrylate	ND		10	0.51	ug/L			08/23/15 19:19	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/23/15 19:19	1
Propionitrile	ND		50	2.4	ug/L			08/23/15 19:19	1
Styrene	ND		5.0	0.35	ug/L			08/23/15 19:19	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/23/15 19:19	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/23/15 19:19	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/23/15 19:19	1
Toluene	ND		5.0	1.0	ug/L			08/23/15 19:19	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/23/15 19:19	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/23/15 19:19	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/23/15 19:19	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/23/15 19:19	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/23/15 19:19	1
Trichloroethene	0.783	J	5.0	0.29	ug/L			08/23/15 19:19	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/23/15 19:19	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/23/15 19:19	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/23/15 19:19	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/23/15 19:19	1
Xylenes, Total	ND		10	0.85	ug/L			08/23/15 19:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*75 - 123*		*08/23/15 19:19*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*08/23/15 19:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*78 - 127*		*08/23/15 19:19*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*08/23/15 19:19*	*1*

Preliminary Data

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

Lab Sample ID: LCS 160-207165/4
Matrix: Water
Analysis Batch: 207165

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	51.4		ug/L		103	72 - 139
Acetonitrile	500	453		ug/L		91	75 - 129
Acrolein	248	241		ug/L		97	67 - 140
Acrylonitrile	500	494		ug/L		99	80 - 120
Allyl chloride	50.0	44.8		ug/L		90	75 - 127
Benzene	50.0	49.6		ug/L		99	80 - 120
Bromochloromethane	50.0	49.1		ug/L		98	80 - 120
Bromodichloromethane	50.0	45.4		ug/L		91	80 - 120
Bromoform	50.0	49.5		ug/L		99	80 - 120
Bromomethane	50.0	43.9		ug/L		88	48 - 140
2-Butanone (MEK)	50.0	49.0		ug/L		98	68 - 128
Carbon disulfide	50.0	52.3		ug/L		105	79 - 120
Carbon tetrachloride	50.0	44.6		ug/L		89	74 - 128
Chlorobenzene	50.0	48.7		ug/L		97	80 - 120
Chloroethane	50.0	43.7		ug/L		87	55 - 140
Chloroform	50.0	46.0		ug/L		92	80 - 120
Chloromethane	50.0	47.4		ug/L		95	72 - 123
cis-1,2-Dichloroethene	50.0	49.5		ug/L		99	80 - 120
cis-1,3-Dichloropropene	50.0	48.8		ug/L		98	80 - 120
Dibromochloromethane	50.0	49.2		ug/L		98	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	51.3		ug/L		103	69 - 135
1,2-Dibromoethane (EDB)	50.0	49.6		ug/L		99	80 - 120
Dibromomethane	50.0	46.1		ug/L		92	80 - 120
1,2-Dichlorobenzene	50.0	48.8		ug/L		98	76 - 122
1,3-Dichlorobenzene	50.0	49.4		ug/L		99	77 - 122
1,4-Dichlorobenzene	50.0	49.3		ug/L		99	80 - 120
Dichlorodifluoromethane	50.0	44.0		ug/L		88	49 - 140
1,1-Dichloroethane	50.0	47.5		ug/L		95	80 - 120
1,2-Dichloroethane	50.0	42.2		ug/L		84	80 - 120
1,1-Dichloroethene	50.0	52.7		ug/L		105	77 - 121
1,2-Dichloropropane	50.0	48.3		ug/L		97	80 - 120
1,3-Dichloropropane	50.0	50.4		ug/L		101	80 - 120
2,2-Dichloropropane	50.0	42.6		ug/L		85	73 - 134
1,1-Dichloropropene	50.0	47.6		ug/L		95	80 - 120
Ethylbenzene	50.0	45.1		ug/L		90	80 - 120
Ethyl methacrylate	50.0	53.5		ug/L		107	72 - 134
2-Hexanone	50.0	49.8		ug/L		100	64 - 136
Iodomethane	50.0	50.0		ug/L		100	72 - 130
Isobutyl alcohol	1250	1240		ug/L		99	69 - 130
Methacrylonitrile	500	446		ug/L		89	78 - 123
Methylene Chloride	50.0	50.6		ug/L		101	79 - 115
Methyl methacrylate	100	104		ug/L		104	64 - 127
4-Methyl-2-pentanone (MIBK)	50.0	50.8		ug/L		102	74 - 129
Propionitrile	500	478		ug/L		96	74 - 131
Styrene	50.0	51.0		ug/L		102	80 - 120
1,1,1,2-Tetrachloroethane	50.0	48.3		ug/L		97	80 - 120
1,1,2,2-Tetrachloroethane	50.0	51.8		ug/L		104	80 - 120
Tetrachloroethene	50.0	49.0		ug/L		98	80 - 120

Preliminary Data

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

Lab Sample ID: LCS 160-207165/4
Matrix: Water
Analysis Batch: 207165

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	50.0	50.5		ug/L		101	80 - 120
trans-1,4-Dichloro-2-butene	50.0	48.9		ug/L		98	80 - 123
trans-1,2-Dichloroethene	50.0	50.6		ug/L		101	80 - 120
trans-1,3-Dichloropropene	50.0	49.9		ug/L		100	80 - 120
1,1,1-Trichloroethane	50.0	44.6		ug/L		89	75 - 127
1,1,2-Trichloroethane	50.0	50.3		ug/L		101	80 - 120
Trichloroethene	50.0	43.2		ug/L		86	80 - 120
Trichlorofluoromethane	50.0	49.6		ug/L		99	72 - 132
1,2,3-Trichloropropane	50.0	46.9		ug/L		94	80 - 120
Vinyl acetate	50.0	52.0		ug/L		104	43 - 140
Vinyl chloride	50.0	46.7		ug/L		93	68 - 120
Xylenes, Total	100	99.6		ug/L		100	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*75 - 123*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*92*		*78 - 127*
Toluene-d8 (Surr)	*105*		*80 - 120*

Lab Sample ID: 160-13506-B-11 MS
Matrix: Water
Analysis Batch: 207165

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetonitrile	ND		500	470		ug/L		94	71 - 135
Acrolein	ND		248	230		ug/L		93	52 - 150
Acrylonitrile	ND		500	500		ug/L		100	80 - 125
Allyl chloride	ND		50.0	48.2		ug/L		96	80 - 120
Benzene	9.9		50.0	61.8		ug/L		104	72 - 123
Bromochloromethane	ND		50.0	52.0		ug/L		104	80 - 120
Bromodichloromethane	ND		50.0	48.5		ug/L		97	80 - 120
Bromoform	ND		50.0	50.6		ug/L		101	78 - 122
Bromomethane	ND		50.0	40.6		ug/L		81	51 - 146
Carbon disulfide	0.98	J	50.0	56.5		ug/L		111	80 - 120
Carbon tetrachloride	ND		50.0	45.0		ug/L		90	80 - 124
Chlorobenzene	1.3	J	50.0	52.1		ug/L		102	80 - 120
Chloroethane	ND		50.0	46.2		ug/L		92	53 - 148
Chloroform	ND		50.0	49.5		ug/L		99	80 - 120
Chloromethane	ND	F1	50.0	39.4	F1	ug/L		79	80 - 120
cis-1,2-Dichloroethene	ND		50.0	52.9		ug/L		106	80 - 120
cis-1,3-Dichloropropene	ND		50.0	52.6		ug/L		105	80 - 120
Dibromochloromethane	ND		50.0	50.4		ug/L		101	80 - 120
1,2-Dibromo-3-Chloropropane	ND		50.0	53.2		ug/L		106	59 - 144
1,2-Dibromoethane (EDB)	ND		50.0	52.1		ug/L		104	80 - 120
Dibromomethane	ND		50.0	48.7		ug/L		97	80 - 120
1,2-Dichlorobenzene	ND		50.0	51.5		ug/L		103	77 - 117
1,3-Dichlorobenzene	ND		50.0	52.8		ug/L		106	80 - 120
1,4-Dichlorobenzene	ND		50.0	51.0		ug/L		102	80 - 120

Preliminary Data

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

Lab Sample ID: 160-13506-B-11 MS
Matrix: Water
Analysis Batch: 207165

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	ND		50.0	40.2		ug/L		80	70 - 131
1,1-Dichloroethane	ND		50.0	51.2		ug/L		102	80 - 120
1,2-Dichloroethane	ND		50.0	44.5		ug/L		89	80 - 120
1,1-Dichloroethene	ND		50.0	55.5		ug/L		111	80 - 120
1,2-Dichloropropane	ND		50.0	52.0		ug/L		104	80 - 120
1,3-Dichloropropane	ND		50.0	51.3		ug/L		103	80 - 120
2,2-Dichloropropane	ND		50.0	45.2		ug/L		90	81 - 128
1,1-Dichloropropene	ND		50.0	51.4		ug/L		103	80 - 120
Ethylbenzene	ND		50.0	46.9		ug/L		94	80 - 120
Ethyl methacrylate	ND		50.0	52.5		ug/L		105	73 - 128
2-Hexanone	16	J	50.0	62.5		ug/L		93	65 - 136
Iodomethane	ND		50.0	53.3		ug/L		107	77 - 125
Isobutyl alcohol	ND		1250	1260		ug/L		101	67 - 134
Methacrylonitrile	ND		500	458		ug/L		92	78 - 121
Methylene Chloride	ND		50.0	55.0		ug/L		110	80 - 120
Methyl methacrylate	ND		100	107		ug/L		107	69 - 124
4-Methyl-2-pentanone (MIBK)	19	J	50.0	70.7		ug/L		102	74 - 132
Propionitrile	ND		500	485		ug/L		97	76 - 127
Styrene	ND		50.0	52.5		ug/L		105	80 - 120
1,1,1,2-Tetrachloroethane	ND		50.0	52.4		ug/L		105	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	52.9		ug/L		106	72 - 125
Tetrachloroethene	ND		50.0	50.3		ug/L		101	80 - 120
Toluene	140	F1	50.0	170	F1	ug/L		68	80 - 120
trans-1,4-Dichloro-2-butene	ND		50.0	44.5		ug/L		89	73 - 125
trans-1,2-Dichloroethene	ND		50.0	52.9		ug/L		106	80 - 120
trans-1,3-Dichloropropene	ND		50.0	51.1		ug/L		102	77 - 122
1,1,1-Trichloroethane	ND		50.0	47.4		ug/L		95	81 - 123
1,1,2-Trichloroethane	ND		50.0	50.9		ug/L		102	76 - 119
Trichloroethene	0.96	J B	50.0	46.6		ug/L		91	80 - 120
Trichlorofluoromethane	ND		50.0	49.3		ug/L		99	79 - 128
1,2,3-Trichloropropane	ND		50.0	47.5		ug/L		95	72 - 120
Vinyl acetate	ND		50.0	56.8		ug/L		114	47 - 150
Vinyl chloride	ND		50.0	44.6		ug/L		89	75 - 118
Xylenes, Total	ND		100	106		ug/L		106	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*75 - 123*
Dibromofluoromethane (Surr)	*103*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*95*		*78 - 127*
Toluene-d8 (Surr)	*104*		*80 - 120*

Lab Sample ID: 160-13506-B-11 MSD
Matrix: Water
Analysis Batch: 207165

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetonitrile	ND		500	491		ug/L		98	71 - 135	5	20
Acrolein	ND		248	222		ug/L		89	52 - 150	3	20

Preliminary Data

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

Lab Sample ID: 160-13506-B-11 MSD
Matrix: Water
Analysis Batch: 207165

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acrylonitrile	ND		500	476		ug/L		95	80 - 125	5	20
Allyl chloride	ND		50.0	42.9		ug/L		86	80 - 120	12	20
Benzene	9.9		50.0	60.0		ug/L		100	72 - 123	3	20
Bromochloromethane	ND		50.0	51.0		ug/L		102	80 - 120	2	20
Bromodichloromethane	ND		50.0	46.9		ug/L		94	80 - 120	3	20
Bromoform	ND		50.0	50.3		ug/L		101	78 - 122	0	20
Bromomethane	ND		50.0	41.2		ug/L		82	51 - 146	1	20
Carbon disulfide	0.98	J	50.0	56.5		ug/L		111	80 - 120	0	20
Carbon tetrachloride	ND		50.0	43.2		ug/L		86	80 - 124	4	20
Chlorobenzene	1.3	J	50.0	51.3		ug/L		100	80 - 120	2	20
Chloroethane	ND		50.0	42.1		ug/L		84	53 - 148	9	20
Chloroform	ND		50.0	47.0		ug/L		94	80 - 120	5	20
Chloromethane	ND	F1	50.0	37.0	F1	ug/L		74	80 - 120	6	20
cis-1,2-Dichloroethene	ND		50.0	51.9		ug/L		104	80 - 120	2	20
cis-1,3-Dichloropropene	ND		50.0	50.0		ug/L		100	80 - 120	5	20
Dibromochloromethane	ND		50.0	50.2		ug/L		100	80 - 120	0	20
1,2-Dibromo-3-Chloropropane	ND		50.0	52.2		ug/L		104	59 - 144	2	20
1,2-Dibromoethane (EDB)	ND		50.0	51.6		ug/L		103	80 - 120	1	20
Dibromomethane	ND		50.0	46.6		ug/L		93	80 - 120	4	20
1,2-Dichlorobenzene	ND		50.0	51.3		ug/L		103	77 - 117	0	20
1,3-Dichlorobenzene	ND		50.0	51.8		ug/L		104	80 - 120	2	20
1,4-Dichlorobenzene	ND		50.0	50.4		ug/L		101	80 - 120	1	20
Dichlorodifluoromethane	ND		50.0	36.1		ug/L		72	70 - 131	11	20
1,1-Dichloroethane	ND		50.0	48.5		ug/L		97	80 - 120	5	20
1,2-Dichloroethane	ND		50.0	41.0		ug/L		82	80 - 120	8	20
1,1-Dichloroethene	ND		50.0	55.4		ug/L		111	80 - 120	0	20
1,2-Dichloropropane	ND		50.0	50.0		ug/L		100	80 - 120	4	20
1,3-Dichloropropane	ND		50.0	51.2		ug/L		102	80 - 120	0	20
2,2-Dichloropropane	ND		50.0	43.2		ug/L		86	81 - 128	4	20
1,1-Dichloropropene	ND		50.0	48.8		ug/L		98	80 - 120	5	20
Ethylbenzene	ND		50.0	45.2		ug/L		90	80 - 120	4	20
Ethyl methacrylate	ND		50.0	53.1		ug/L		106	73 - 128	1	20
2-Hexanone	16	J	50.0	63.6		ug/L		96	65 - 136	2	20
Iodomethane	ND		50.0	54.1		ug/L		108	77 - 125	1	20
Isobutyl alcohol	ND		1250	1180		ug/L		95	67 - 134	6	20
Methacrylonitrile	ND		500	420		ug/L		84	78 - 121	8	20
Methylene Chloride	ND		50.0	54.9		ug/L		110	80 - 120	0	20
Methyl methacrylate	ND		100	103		ug/L		103	69 - 124	4	20
4-Methyl-2-pentanone (MIBK)	19	J	50.0	67.0		ug/L		95	74 - 132	5	20
Propionitrile	ND		500	476		ug/L		95	76 - 127	2	20
Styrene	ND		50.0	50.9		ug/L		102	80 - 120	3	20
1,1,1,2-Tetrachloroethane	ND		50.0	50.8		ug/L		102	80 - 120	3	20
1,1,2,2-Tetrachloroethane	ND		50.0	53.5		ug/L		107	72 - 125	1	20
Tetrachloroethene	ND		50.0	49.8		ug/L		100	80 - 120	1	20
Toluene	140	F1	50.0	166	F1	ug/L		60	80 - 120	2	20
trans-1,4-Dichloro-2-butene	ND		50.0	42.8		ug/L		86	73 - 125	4	20
trans-1,2-Dichloroethene	ND		50.0	54.1		ug/L		108	80 - 120	2	20
trans-1,3-Dichloropropene	ND		50.0	49.9		ug/L		100	77 - 122	2	20

Preliminary Data

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

Lab Sample ID: 160-13506-B-11 MSD
Matrix: Water
Analysis Batch: 207165

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		50.0	45.2		ug/L		90	81 - 123	5	20
1,1,2-Trichloroethane	ND		50.0	50.1		ug/L		100	76 - 119	2	20
Trichloroethene	0.96	J B	50.0	44.6		ug/L		87	80 - 120	5	20
Trichlorofluoromethane	ND		50.0	45.8		ug/L		92	79 - 128	7	20
1,2,3-Trichloropropane	ND		50.0	48.4		ug/L		97	72 - 120	2	20
Vinyl acetate	ND		50.0	52.6		ug/L		105	47 - 150	8	20
Vinyl chloride	ND		50.0	40.9		ug/L		82	75 - 118	9	20
Xylenes, Total	ND		100	104		ug/L		104	80 - 120	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*75 - 123*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*90*		*78 - 127*
Toluene-d8 (Surr)	*108*		*80 - 120*

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

Lab Sample ID: MB 160-207677/1-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Acenaphthylene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Acetophenone	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Acetylaminofluorene	ND		100	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
alpha,alpha-Dimethylphenethylamine	ND		50	22	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Aminobiphenyl	ND		50	1.1	ug/L		08/25/15 09:36	08/25/15 18:04	1
Anthracene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzo[a]anthracene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzo[a]pyrene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzo[b]fluoranthene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzo[g,h,i]perylene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzo[k]fluoranthene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzyl alcohol	ND		10	3.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Bis(2-chloroethoxy)methane	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Bis(2-chloroethyl)ether	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
bis(2 chloro-1-methylethyl) ether	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Bis(2-ethylhexyl) phthalate	ND		10	1.9	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Bromophenyl phenyl ether	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Butyl benzyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Chloroaniline	ND		10	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Chlorobenzilate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Chloro-3-methylphenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Chloronaphthalene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Chlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Chlorophenyl phenyl ether	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Chrysene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1

Preliminary Data

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

Lab Sample ID: MB 160-207677/1-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diallate	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Dibenz(a,h)anthracene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Dibenzofuran	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
3,3'-Dichlorobenzidine	ND		50	1.3	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4-Dichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,6-Dichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Diethyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Dimethoate	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
7,12-Dimethylbenz(a)anthracene	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
3,3'-Dimethylbenzidine	ND		50	2.6	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4-Dimethylphenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Dimethyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Di-n-butyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,3-Dinitrobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,4-Dinitrobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
4,6-Dinitro-2-methylphenol	ND		10	1.3	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4-Dinitrophenol	ND		50	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4-Dinitrotoluene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,6-Dinitrotoluene	ND		10	2.2	ug/L		08/25/15 09:36	08/25/15 18:04	1
Di-n-octyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Dinoseb	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Diphenylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Disulfoton	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Ethyl methanesulfonate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Famphur	ND		100	1.7	ug/L		08/25/15 09:36	08/25/15 18:04	1
Fluoranthene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Fluorene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Hexachlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Hexachlorobutadiene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Hexachloroethane	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Hexachloropropene	ND		100	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Indeno[1,2,3-cd]pyrene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Isodrin	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Isophorone	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Isosafrole	ND		20	5.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Methapyrilene	ND		50	1.3	ug/L		08/25/15 09:36	08/25/15 18:04	1
3-Methylcholanthrene	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Methyl methanesulfonate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Methylnaphthalene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Methyl parathion	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Methylphenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
3 & 4 Methylphenol	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Naphthalene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,4-Naphthoquinone	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1-Naphthylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Naphthylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Nitroaniline	ND		10	1.1	ug/L		08/25/15 09:36	08/25/15 18:04	1

Preliminary Data

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

Lab Sample ID: MB 160-207677/1-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitroaniline	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Nitroaniline	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Nitrobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
5-Nitro-o-toluidine	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Nitrophenol	ND		10	1.5	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Nitrophenol	ND		10	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosodiethylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosodimethylamine	ND		10	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosodi-n-butylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosomethylethylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosomorpholine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosopiperidine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosopyrrolidine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
o,o',o''-Triethylphosphorothioate	ND		50	1.1	ug/L		08/25/15 09:36	08/25/15 18:04	1
o-Toluidine	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Parathion	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
p-Dimethylamino azobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pentachlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pentachloroethane	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pentachloronitrobenzene	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pentachlorophenol	ND		10	1.3	ug/L		08/25/15 09:36	08/25/15 18:04	1
Phenacetin	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Phenanthrene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Phenol	ND		10	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Phorate	ND		50	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
p-Phenylene diamine	ND		100	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pronamide	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pyrene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pyridine	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Safrole	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,3,4,6-Tetrachlorophenol	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,2,4-Trichlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4,5-Trichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4,6-Trichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,3,5-Trinitrobenzene	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*43 - 108*	*08/25/15 09:36*	*08/25/15 18:04*	*1*
2-Fluorophenol (Surr)	*40*		*15 - 59*	*08/25/15 09:36*	*08/25/15 18:04*	*1*
Nitrobenzene-d5 (Surr)	*74*		*50 - 101*	*08/25/15 09:36*	*08/25/15 18:04*	*1*
Phenol-d5 (Surr)	*25*		*10 - 50*	*08/25/15 09:36*	*08/25/15 18:04*	*1*
Terphenyl-d14 (Surr)	*70*		*21 - 97*	*08/25/15 09:36*	*08/25/15 18:04*	*1*
2,4,6-Tribromophenol (Surr)	*91*		*37 - 120*	*08/25/15 09:36*	*08/25/15 18:04*	*1*

Preliminary Data

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

Lab Sample ID: MB 160-207677/1-A
Matrix: Water
Analysis Batch: 207950

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorophene	ND		250	10	ug/L		08/25/15 09:36	08/26/15 15:56	1
Kepone	ND		100	20	ug/L		08/25/15 09:36	08/26/15 15:56	1

Lab Sample ID: LCS 160-207677/2-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	200	162		ug/L		81	58 - 108
Acenaphthylene	200	163		ug/L		81	59 - 110
Anthracene	200	164		ug/L		82	59 - 106
Benzo[a]anthracene	200	175		ug/L		88	56 - 105
Benzo[a]pyrene	200	175		ug/L		88	54 - 109
Benzo[b]fluoranthene	200	185		ug/L		92	58 - 109
Benzo[g,h,i]perylene	200	182		ug/L		91	50 - 119
Benzo[k]fluoranthene	200	161		ug/L		80	54 - 109
Bis(2-chloroethoxy)methane	200	165		ug/L		82	59 - 110
Bis(2-chloroethyl)ether	200	159		ug/L		80	58 - 109
bis(2 chloro-1-methylethyl) ether	200	155		ug/L		77	49 - 97
Bis(2-ethylhexyl) phthalate	200	171		ug/L		86	58 - 111
4-Bromophenyl phenyl ether	200	172		ug/L		86	62 - 98
Butyl benzyl phthalate	200	176		ug/L		88	56 - 111
4-Chloroaniline	200	158		ug/L		79	43 - 97
4-Chloro-3-methylphenol	200	171		ug/L		86	51 - 102
2-Chloronaphthalene	200	162		ug/L		81	58 - 109
2-Chlorophenol	200	154		ug/L		77	47 - 97
4-Chlorophenyl phenyl ether	200	170		ug/L		85	59 - 110
Chrysene	200	162		ug/L		81	55 - 107
Dibenz(a,h)anthracene	200	190		ug/L		95	52 - 118
Dibenzofuran	200	161		ug/L		81	57 - 106
3,3'-Dichlorobenzidine	200	184		ug/L		92	50 - 105
2,4-Dichlorophenol	200	175		ug/L		88	55 - 104
Diethyl phthalate	200	171		ug/L		86	58 - 113
2,4-Dimethylphenol	200	162		ug/L		81	53 - 99
Dimethyl phthalate	200	176		ug/L		88	60 - 114
Di-n-butyl phthalate	200	170		ug/L		85	60 - 105
4,6-Dinitro-2-methylphenol	200	199		ug/L		99	56 - 118
2,4-Dinitrophenol	200	162		ug/L		81	53 - 119
2,4-Dinitrotoluene	200	191		ug/L		95	57 - 117
2,6-Dinitrotoluene	200	180		ug/L		90	59 - 117
Di-n-octyl phthalate	200	182		ug/L		91	59 - 113
Diphenylamine	200	166		ug/L		83	58 - 102
Fluoranthene	200	174		ug/L		87	56 - 113
Fluorene	200	167		ug/L		84	61 - 113
Hexachlorobenzene	200	177		ug/L		88	57 - 113
Hexachlorobutadiene	200	169		ug/L		84	52 - 102
Hexachlorocyclopentadiene	200	168		ug/L		84	40 - 120
Hexachloroethane	200	152		ug/L		76	52 - 102

Preliminary Data

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

Lab Sample ID: LCS 160-207677/2-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Indeno[1,2,3-cd]pyrene	200	197		ug/L		98	49 - 120
Isophorone	200	163		ug/L		82	56 - 101
2-Methylnaphthalene	200	165		ug/L		82	54 - 101
2-Methylphenol	200	133		ug/L		67	40 - 96
3 & 4 Methylphenol	200	133		ug/L		67	40 - 87
Naphthalene	200	159		ug/L		79	54 - 98
2-Nitroaniline	200	170		ug/L		85	57 - 120
3-Nitroaniline	200	174		ug/L		87	47 - 113
4-Nitroaniline	200	180		ug/L		90	51 - 119
Nitrobenzene	200	165		ug/L		83	59 - 110
2-Nitrophenol	200	185		ug/L		92	58 - 111
4-Nitrophenol	200	56.4		ug/L		28	20 - 47
N-Nitrosodi-n-propylamine	200	170		ug/L		85	59 - 115
Pentachlorophenol	200	170		ug/L		85	49 - 115
Phenanthrene	200	160		ug/L		80	59 - 110
Phenol	200	57.3		ug/L		29	20 - 69
Pyrene	200	169		ug/L		84	55 - 105
1,2,4-Trichlorobenzene	200	164		ug/L		82	56 - 100
2,4,5-Trichlorophenol	200	180		ug/L		90	56 - 113
2,4,6-Trichlorophenol	200	179		ug/L		89	47 - 116

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*78*		*43 - 108*
2-Fluorophenol (Surr)	*44*		*15 - 59*
Nitrobenzene-d5 (Surr)	*84*		*50 - 101*
Phenol-d5 (Surr)	*29*		*10 - 50*
Terphenyl-d14 (Surr)	*83*		*21 - 97*
2,4,6-Tribromophenol (Surr)	*105*		*37 - 120*

Lab Sample ID: 160-13499-B-1-A MS
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		193	138		ug/L		71	63 - 103
Acenaphthylene	ND		193	139		ug/L		72	64 - 105
Anthracene	ND		193	140		ug/L		72	64 - 101
Benzo[a]anthracene	ND		193	147		ug/L		76	55 - 116
Benzo[a]pyrene	ND		193	147		ug/L		76	55 - 109
Benzo[b]fluoranthene	ND		193	153		ug/L		79	56 - 119
Benzo[g,h,i]perylene	ND		193	151		ug/L		78	40 - 127
Benzo[k]fluoranthene	ND		193	137		ug/L		71	54 - 110
Bis(2-chloroethoxy)methane	ND		193	137		ug/L		71	64 - 105
Bis(2-chloroethyl)ether	ND		193	132		ug/L		68	63 - 104
bis(2 chloro-1-methylethyl) ether	ND		193	130		ug/L		67	54 - 102
Bis(2-ethylhexyl) phthalate	ND		193	145		ug/L		75	53 - 125
4-Bromophenyl phenyl ether	ND		193	148		ug/L		77	64 - 108
Butyl benzyl phthalate	ND		193	148		ug/L		77	56 - 128

Preliminary Data

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

Lab Sample ID: 160-13499-B-1-A MS
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	ND		193	132		ug/L		68	48 - 92
4-Chloro-3-methylphenol	ND		193	140		ug/L		72	51 - 105
2-Chloronaphthalene	ND		193	140		ug/L		73	63 - 104
2-Chlorophenol	ND		193	126		ug/L		65	52 - 92
4-Chlorophenyl phenyl ether	ND		193	146		ug/L		76	64 - 105
Chrysene	ND		193	135		ug/L		70	56 - 115
Dibenz(a,h)anthracene	ND		193	157		ug/L		82	44 - 128
Dibenzofuran	ND		193	139		ug/L		72	62 - 101
3,3'-Dichlorobenzidine	ND		193	152		ug/L		79	43 - 117
2,4-Dichlorophenol	ND		193	144		ug/L		75	60 - 99
Diethyl phthalate	ND		193	144		ug/L		75	63 - 108
2,4-Dimethylphenol	ND		193	132		ug/L		68	54 - 97
Dimethyl phthalate	ND		193	148		ug/L		77	65 - 109
Di-n-butyl phthalate	ND		193	145		ug/L		75	62 - 109
4,6-Dinitro-2-methylphenol	ND		193	146		ug/L		76	61 - 113
2,4-Dinitrophenol	ND		193	116		ug/L		60	20 - 131
2,4-Dinitrotoluene	ND		193	157		ug/L		82	62 - 112
2,6-Dinitrotoluene	ND		193	150		ug/L		78	64 - 112
Di-n-octyl phthalate	ND		193	151		ug/L		78	54 - 128
Diphenylamine	ND		193	141		ug/L		73	63 - 97
Fluoranthene	ND		193	147		ug/L		76	61 - 108
Fluorene	ND		193	143		ug/L		74	66 - 108
Hexachlorobenzene	ND		193	148		ug/L		77	62 - 108
Hexachlorobutadiene	ND		193	144		ug/L		75	57 - 97
Hexachlorocyclopentadiene	ND		193	144		ug/L		75	16 - 115
Hexachloroethane	ND		193	133		ug/L		69	57 - 97
Indeno[1,2,3-cd]pyrene	ND		193	163		ug/L		85	42 - 131
Isophorone	ND		193	134		ug/L		70	48 - 106
2-Methylnaphthalene	ND		193	142		ug/L		74	64 - 99
2-Methylphenol	ND		193	104		ug/L		54	39 - 83
3 & 4 Methylphenol	ND		193	103		ug/L		53	39 - 82
Naphthalene	ND		193	137		ug/L		71	63 - 98
2-Nitroaniline	ND		193	139		ug/L		72	62 - 115
3-Nitroaniline	ND		193	145		ug/L		75	52 - 108
4-Nitroaniline	ND		193	148		ug/L		77	56 - 114
Nitrobenzene	ND		193	135		ug/L		70	64 - 105
2-Nitrophenol	ND		193	152		ug/L		79	64 - 106
4-Nitrophenol	ND		193	40.1		ug/L		21	15 - 42
N-Nitrosodi-n-propylamine	ND		193	142		ug/L		74	64 - 110
Pentachlorophenol	ND		193	119		ug/L		62	54 - 110
Phenanthrene	ND		193	138		ug/L		71	64 - 105
Phenol	ND		193	42.0		ug/L		22	15 - 70
Pyrene	ND		193	142		ug/L		74	57 - 118
1,2,4-Trichlorobenzene	ND		193	143		ug/L		74	61 - 95
2,4,5-Trichlorophenol	ND		193	150		ug/L		78	61 - 108
2,4,6-Trichlorophenol	ND		193	148		ug/L		77	61 - 108

Preliminary Data

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

Lab Sample ID: 160-13499-B-1-A MS
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 207677

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	71		43 - 108
2-Fluorophenol (Surr)	33		15 - 59
Nitrobenzene-d5 (Surr)	72		50 - 101
Phenol-d5 (Surr)	21		10 - 50
Terphenyl-d14 (Surr)	71		21 - 97
2,4,6-Tribromophenol (Surr)	89		37 - 120

Lab Sample ID: 160-13499-C-1-A MSD
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		192	164		ug/L		85	63 - 103	17	20
Acenaphthylene	ND		192	165		ug/L		86	64 - 105	17	20
Anthracene	ND		192	164		ug/L		85	64 - 101	16	20
Benzo[a]anthracene	ND		192	174		ug/L		91	55 - 116	17	20
Benzo[a]pyrene	ND		192	176		ug/L		92	55 - 109	18	20
Benzo[b]fluoranthene	ND		192	183		ug/L		95	56 - 119	18	20
Benzo[g,h,i]perylene	ND		192	180		ug/L		94	40 - 127	18	20
Benzo[k]fluoranthene	ND		192	165		ug/L		86	54 - 110	18	20
Bis(2-chloroethoxy)methane	ND		192	161		ug/L		84	64 - 105	16	20
Bis(2-chloroethyl)ether	ND		192	157		ug/L		82	63 - 104	18	20
bis(2 chloro-1-methylethyl) ether	ND		192	157		ug/L		82	54 - 102	19	20
Bis(2-ethylhexyl) phthalate	ND		192	173		ug/L		90	53 - 125	18	20
4-Bromophenyl phenyl ether	ND		192	173		ug/L		90	64 - 108	16	20
Butyl benzyl phthalate	ND		192	175		ug/L		91	56 - 128	17	20
4-Chloroaniline	ND		192	155		ug/L		81	48 - 92	16	20
4-Chloro-3-methylphenol	ND		192	164		ug/L		86	51 - 105	16	20
2-Chloronaphthalene	ND		192	165		ug/L		86	63 - 104	16	20
2-Chlorophenol	ND		192	151		ug/L		79	52 - 92	18	20
4-Chlorophenyl phenyl ether	ND		192	174		ug/L		91	64 - 105	17	20
Chrysene	ND		192	162		ug/L		84	56 - 115	18	20
Dibenz(a,h)anthracene	ND		192	189		ug/L		99	44 - 128	19	20
Dibenzofuran	ND		192	163		ug/L		85	62 - 101	16	20
3,3'-Dichlorobenzidine	ND		192	183		ug/L		95	43 - 117	18	20
2,4-Dichlorophenol	ND		192	169		ug/L		88	60 - 99	16	20
Diethyl phthalate	ND		192	169		ug/L		88	63 - 108	16	20
2,4-Dimethylphenol	ND		192	154		ug/L		80	54 - 97	16	20
Dimethyl phthalate	ND		192	174		ug/L		91	65 - 109	16	20
Di-n-butyl phthalate	ND		192	169		ug/L		88	62 - 109	15	20
4,6-Dinitro-2-methylphenol	ND		192	174		ug/L		91	61 - 113	17	20
2,4-Dinitrophenol	ND		192	142		ug/L		74	20 - 131	20	20
2,4-Dinitrotoluene	ND		192	186		ug/L		97	62 - 112	17	20
2,6-Dinitrotoluene	ND		192	179		ug/L		93	64 - 112	18	20
Di-n-octyl phthalate	ND		192	179		ug/L		94	54 - 128	17	20
Diphenylamine	ND		192	167		ug/L		87	63 - 97	17	20
Fluoranthene	ND		192	172		ug/L		90	61 - 108	16	20
Fluorene	ND		192	169		ug/L		88	66 - 108	16	20

Preliminary Data

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

Lab Sample ID: 160-13499-C-1-A MSD
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobenzene	ND		192	174		ug/L		91	62 - 108	16	20
Hexachlorobutadiene	ND		192	171		ug/L		89	57 - 97	17	20
Hexachlorocyclopentadiene	ND		192	172		ug/L		90	16 - 115	18	20
Hexachloroethane	ND		192	159		ug/L		83	57 - 97	18	20
Indeno[1,2,3-cd]pyrene	ND		192	191		ug/L		100	42 - 131	16	20
Isophorone	ND		192	159		ug/L		83	48 - 106	17	20
2-Methylnaphthalene	ND		192	167		ug/L		87	64 - 99	16	20
2-Methylphenol	ND		192	125		ug/L		65	39 - 83	18	20
3 & 4 Methylphenol	ND		192	122		ug/L		64	39 - 82	17	20
Naphthalene	ND		192	162		ug/L		84	63 - 98	17	20
2-Nitroaniline	ND		192	168		ug/L		88	62 - 115	19	20
3-Nitroaniline	ND		192	169		ug/L		88	52 - 108	15	20
4-Nitroaniline	ND		192	173		ug/L		90	56 - 114	16	20
Nitrobenzene	ND		192	160		ug/L		83	64 - 105	17	20
2-Nitrophenol	ND		192	179		ug/L		93	64 - 106	16	20
4-Nitrophenol	ND		192	47.8		ug/L		25	15 - 42	17	20
N-Nitrosodi-n-propylamine	ND		192	169		ug/L		88	64 - 110	17	20
Pentachlorophenol	ND		192	139		ug/L		72	54 - 110	16	20
Phenanthrene	ND		192	163		ug/L		85	64 - 105	17	20
Phenol	ND		192	49.8		ug/L		26	15 - 70	17	20
Pyrene	ND		192	169		ug/L		88	57 - 118	17	20
1,2,4-Trichlorobenzene	ND		192	166		ug/L		87	61 - 95	15	20
2,4,5-Trichlorophenol	ND		192	176		ug/L		92	61 - 108	16	20
2,4,6-Trichlorophenol	ND		192	178		ug/L		93	61 - 108	18	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*85*		*43 - 108*
2-Fluorophenol (Surr)	*40*		*15 - 59*
Nitrobenzene-d5 (Surr)	*86*		*50 - 101*
Phenol-d5 (Surr)	*26*		*10 - 50*
Terphenyl-d14 (Surr)	*85*		*21 - 97*
2,4,6-Tribromophenol (Surr)	*106*		*37 - 120*

Preliminary Data

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 160-207387/1-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207387

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
alpha-BHC	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
beta-BHC	ND		0.050	0.013	ug/L		08/24/15 14:06	08/25/15 14:10	1
delta-BHC	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
gamma-BHC (Lindane)	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
alpha-Chlordane	ND		0.050	0.015	ug/L		08/24/15 14:06	08/25/15 14:10	1
gamma-Chlordane	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
4,4'-DDD	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 160-207387/1-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207387

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	ND		0.050	0.014	ug/L		08/24/15 14:06	08/25/15 14:10	1
4,4'-DDT	ND		0.050	0.023	ug/L		08/24/15 14:06	08/25/15 14:10	1
Dieldrin	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endosulfan I	ND		0.050	0.019	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endosulfan II	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endosulfan sulfate	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endrin	ND		0.050	0.018	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endrin aldehyde	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endrin ketone	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Heptachlor	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Heptachlor epoxide	ND		0.050	0.017	ug/L		08/24/15 14:06	08/25/15 14:10	1
Methoxychlor	ND		0.50	0.013	ug/L		08/24/15 14:06	08/25/15 14:10	1
Toxaphene	ND		2.0	0.27	ug/L		08/24/15 14:06	08/25/15 14:10	1
Technical Chlordane	ND		0.50	0.10	ug/L		08/24/15 14:06	08/25/15 14:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*83*		*44 - 112*	*08/24/15 14:06*	*08/25/15 14:10*	*1*
Tetrachloro-m-xylene	*89*		*49 - 104*	*08/24/15 14:06*	*08/25/15 14:10*	*1*

Lab Sample ID: LCS 160-207387/2-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207387

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	0.500	0.398		ug/L		80	42 - 103
alpha-BHC	0.500	0.470		ug/L		94	65 - 109
beta-BHC	0.500	0.444		ug/L		89	62 - 105
delta-BHC	0.500	0.514		ug/L		103	66 - 111
gamma-BHC (Lindane)	0.501	0.466		ug/L		93	63 - 110
alpha-Chlordane	0.500	0.446		ug/L		89	58 - 106
gamma-Chlordane	0.500	0.443		ug/L		89	55 - 107
4,4'-DDD	0.500	0.513		ug/L		103	63 - 115
4,4'-DDE	0.501	0.462		ug/L		92	58 - 107
4,4'-DDT	0.500	0.479		ug/L		96	63 - 115
Dieldrin	0.501	0.450		ug/L		90	63 - 106
Endosulfan I	0.500	0.375		ug/L		75	40 - 106
Endosulfan II	0.500	0.385		ug/L		77	48 - 104
Endosulfan sulfate	0.500	0.469		ug/L		94	61 - 111
Endrin	0.501	0.456		ug/L		91	64 - 111
Endrin aldehyde	0.500	0.476		ug/L		95	40 - 139
Endrin ketone	0.501	0.475		ug/L		95	60 - 112
Heptachlor	0.500	0.371		ug/L		74	42 - 119
Heptachlor epoxide	0.500	0.455		ug/L		91	63 - 106
Methoxychlor	0.500	0.468	J	ug/L		94	62 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*84*		*44 - 112*

Preliminary Data

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 160-207387/2-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207387

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	85		49 - 104

Lab Sample ID: LCSD 160-207387/3-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 207387

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldrin	0.500	0.393		ug/L		79	42 - 103	1	20
alpha-BHC	0.500	0.471		ug/L		94	65 - 109	0	20
beta-BHC	0.500	0.435		ug/L		87	62 - 105	2	20
delta-BHC	0.500	0.500		ug/L		100	66 - 111	3	20
gamma-BHC (Lindane)	0.501	0.458		ug/L		92	63 - 110	2	20
alpha-Chlordane	0.500	0.427		ug/L		85	58 - 106	4	20
gamma-Chlordane	0.500	0.427		ug/L		85	55 - 107	4	20
4,4'-DDD	0.500	0.470		ug/L		94	63 - 115	9	20
4,4'-DDE	0.501	0.445		ug/L		89	58 - 107	4	20
4,4'-DDT	0.500	0.434		ug/L		87	63 - 115	10	20
Dieldrin	0.501	0.434		ug/L		87	63 - 106	4	20
Endosulfan I	0.500	0.362		ug/L		72	40 - 106	4	20
Endosulfan II	0.500	0.369		ug/L		74	48 - 104	4	20
Endosulfan sulfate	0.500	0.438		ug/L		88	61 - 111	7	20
Endrin	0.501	0.434		ug/L		87	64 - 111	5	20
Endrin aldehyde	0.500	0.440		ug/L		88	40 - 139	8	20
Endrin ketone	0.501	0.436		ug/L		87	60 - 112	9	20
Heptachlor	0.500	0.361		ug/L		72	42 - 119	3	20
Heptachlor epoxide	0.500	0.440		ug/L		88	63 - 106	3	20
Methoxychlor	0.500	0.429	J	ug/L		86	62 - 119	9	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	77		44 - 112
Tetrachloro-m-xylene	86		49 - 104

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 160-207737/1-A
Matrix: Water
Analysis Batch: 207944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1221	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1232	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1242	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1248	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1254	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1260	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 09:26	1

Preliminary Data

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 160-207737/1-A
Matrix: Water
Analysis Batch: 207944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207737

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	104		52 - 150	08/25/15 13:16	08/27/15 09:26	1

Lab Sample ID: LCS 160-207737/2-A
Matrix: Water
Analysis Batch: 207944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	5.00	4.44		ug/L		89	51 - 126
PCB-1260	5.00	4.41		ug/L		88	66 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	90		52 - 150

Lab Sample ID: LCSD 160-207737/3-A
Matrix: Water
Analysis Batch: 207944

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 207737

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	5.00	4.09		ug/L		82	51 - 126	8	20
PCB-1260	5.00	4.08		ug/L		82	66 - 125	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	81		52 - 150

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 160-207377/1-A
Matrix: Water
Analysis Batch: 207961

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207377

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.27	ug/L		08/24/15 12:55	08/26/15 18:50	1
2,4-D	ND		8.0	4.2	ug/L		08/24/15 12:55	08/26/15 18:50	1
Silvex (2,4,5-TP)	ND		1.0	0.19	ug/L		08/24/15 12:55	08/26/15 18:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	108		60 - 128	08/24/15 12:55	08/26/15 18:50	1

Lab Sample ID: LCS 160-207377/2-A
Matrix: Water
Analysis Batch: 207961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207377

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	5.92		ug/L		118	40 - 140
2,4-D	20.0	27.4		ug/L		137	40 - 140
Silvex (2,4,5-TP)	5.00	5.64		ug/L		113	37 - 140

Preliminary Data

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 160-207377/2-A
Matrix: Water
Analysis Batch: 207961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207377

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*103*		*60 - 128*

Lab Sample ID: LCSD 160-207377/3-A
Matrix: Water
Analysis Batch: 207961

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 207377

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	6.59		ug/L		132	40 - 140	11	20
2,4-D	20.0	26.4		ug/L		132	40 - 140	4	20
Silvex (2,4,5-TP)	5.00	6.14		ug/L		123	37 - 140	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*104*		*60 - 128*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-207770/9
Matrix: Water
Analysis Batch: 207770

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.50	0.050	mg/L			08/25/15 18:49	1

Lab Sample ID: LCS 160-207770/10
Matrix: Water
Analysis Batch: 207770

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	8.00	7.64		mg/L		95	90 - 110

Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 160-13505-2 MS
Matrix: Water
Analysis Batch: 207770

Client Sample ID: MO-1-SDR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate - DL	91		200	276		mg/L		93	90 - 110

Lab Sample ID: 160-13505-2 DU
Matrix: Water
Analysis Batch: 207770

Client Sample ID: MO-1-SDR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate - DL	91		89.9		mg/L		0.9	20

Preliminary Data

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Lab Sample ID: MB 320-84116/1-A
Matrix: Water
Analysis Batch: 84518

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 84116

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.29	pg/L		08/26/15 08:47	08/27/15 18:44	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*65*		*31 - 137*	*08/26/15 08:47*	*08/27/15 18:44*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*101*		*42 - 164*	*08/26/15 08:47*	*08/27/15 18:44*	*1*

Lab Sample ID: LCS 320-84116/2-A
Matrix: Water
Analysis Batch: 84518

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 84116

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	235		pg/L		118	73 - 146

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*67*		*25 - 141*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*101*		*42 - 164*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-207421/1-A
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207421

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	4.00	J ^	10	3.7	ug/L		08/24/15 16:46	08/26/15 21:26	1
Arsenic	ND		10	1.8	ug/L		08/24/15 16:46	08/26/15 21:26	1
Barium	ND		50	2.1	ug/L		08/24/15 16:46	08/26/15 21:26	1
Beryllium	ND		5.0	0.28	ug/L		08/24/15 16:46	08/26/15 21:26	1
Boron	ND	^	50	7.2	ug/L		08/24/15 16:46	08/26/15 21:26	1
Cadmium	ND		5.0	0.34	ug/L		08/24/15 16:46	08/26/15 21:26	1
Chromium	ND		10	3.4	ug/L		08/24/15 16:46	08/26/15 21:26	1
Cobalt	ND		50	2.7	ug/L		08/24/15 16:46	08/26/15 21:26	1
Copper	ND		25	2.1	ug/L		08/24/15 16:46	08/26/15 21:26	1
Lead	ND		10	0.60	ug/L		08/24/15 16:46	08/26/15 21:26	1
Magnesium	ND		1.0	0.051	mg/L		08/24/15 16:46	08/26/15 21:26	1
Manganese	ND		15	1.0	ug/L		08/24/15 16:46	08/26/15 21:26	1
Nickel	ND		0.040	0.0026	mg/L		08/24/15 16:46	08/26/15 21:26	1
Selenium	ND		15	2.1	ug/L		08/24/15 16:46	08/26/15 21:26	1
Silver	ND		10	0.99	ug/L		08/24/15 16:46	08/26/15 21:26	1
Thallium	ND		20	2.4	ug/L		08/24/15 16:46	08/26/15 21:26	1
Tin	ND		100	5.0	ug/L		08/24/15 16:46	08/26/15 21:26	1
Vanadium	ND		50	4.4	ug/L		08/24/15 16:46	08/26/15 21:26	1
Zinc	ND		20	8.3	ug/L		08/24/15 16:46	08/26/15 21:26	1

Preliminary Data

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

Lab Sample ID: LCS 160-207421/2-A
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207421

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	510	^	ug/L		102	80 - 120
Arsenic	1000	930		ug/L		93	80 - 120
Barium	1000	1010		ug/L		101	80 - 120
Beryllium	1000	979		ug/L		98	80 - 120
Boron	2000	1970	^	ug/L		99	80 - 120
Cadmium	1000	998		ug/L		100	80 - 120
Chromium	1000	1060		ug/L		106	80 - 120
Cobalt	1000	1060		ug/L		106	80 - 120
Copper	1000	998		ug/L		100	80 - 120
Lead	1000	996		ug/L		100	80 - 120
Magnesium	10.0	9.76		mg/L		98	80 - 120
Manganese	1000	1030		ug/L		103	80 - 120
Nickel	1.00	1.06		mg/L		106	80 - 120
Selenium	500	474		ug/L		95	80 - 120
Silver	200	208		ug/L		104	80 - 120
Thallium	200	210		ug/L		105	80 - 120
Tin	1000	990		ug/L		99	80 - 120
Vanadium	1000	974		ug/L		97	80 - 120
Zinc	1000	996		ug/L		100	80 - 120

Lab Sample ID: 160-13506-B-4-B MS
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 207421

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	51	J ^ B	500	519	^	ug/L		94	75 - 125
Arsenic	27	J	1000	995		ug/L		97	75 - 125
Barium	150	J	1000	1150		ug/L		100	75 - 125
Beryllium	ND		1000	998		ug/L		100	75 - 125
Boron	94	J ^	2000	2020	^	ug/L		96	75 - 125
Cadmium	ND		1000	1040		ug/L		104	75 - 125
Chromium	ND		1000	1110		ug/L		111	75 - 125
Cobalt	ND		1000	1090		ug/L		109	75 - 125
Copper	ND		1000	1060		ug/L		106	75 - 125
Lead	ND		1000	1050		ug/L		105	75 - 125
Magnesium	50		10.0	59.8	4	mg/L		97	75 - 125
Manganese	13	J	1000	1060		ug/L		104	75 - 125
Nickel	ND		1.00	1.10		mg/L		110	75 - 125
Selenium	24	J	500	493		ug/L		94	75 - 125
Silver	ND		200	208		ug/L		104	75 - 125
Thallium	ND		200	227		ug/L		113	75 - 125
Tin	ND		1000	1030		ug/L		103	75 - 125
Vanadium	ND		1000	923		ug/L		92	75 - 125
Zinc	ND		1000	1070		ug/L		107	75 - 125

Preliminary Data

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

Lab Sample ID: 160-13506-B-4-C MSD
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 207421

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	51	J ^ B	500	564	^	ug/L		103	75 - 125	8	20
Arsenic	27	J	1000	990		ug/L		96	75 - 125	1	20
Barium	150	J	1000	1150		ug/L		100	75 - 125	0	20
Beryllium	ND		1000	1000		ug/L		100	75 - 125	0	20
Boron	94	J ^	2000	2060	^	ug/L		98	75 - 125	2	20
Cadmium	ND		1000	1040		ug/L		104	75 - 125	0	20
Chromium	ND		1000	1120		ug/L		112	75 - 125	1	20
Cobalt	ND		1000	1100		ug/L		110	75 - 125	1	20
Copper	ND		1000	1090		ug/L		109	75 - 125	3	20
Lead	ND		1000	1040		ug/L		104	75 - 125	0	20
Magnesium	50		10.0	59.9	4	mg/L		97	75 - 125	0	20
Manganese	13	J	1000	1070		ug/L		106	75 - 125	1	20
Nickel	ND		1.00	1.11		mg/L		111	75 - 125	0	20
Selenium	24	J	500	540		ug/L		103	75 - 125	9	20
Silver	ND		200	211		ug/L		106	75 - 125	1	20
Thallium	ND		200	234		ug/L		117	75 - 125	3	20
Tin	ND		1000	1030		ug/L		103	75 - 125	1	20
Vanadium	ND		1000	936		ug/L		94	75 - 125	1	20
Zinc	ND		1000	1070		ug/L		107	75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-207717/1-A
Matrix: Water
Analysis Batch: 207921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/25/15 12:47	08/25/15 21:56	1

Lab Sample ID: LCS 160-207717/2-A
Matrix: Water
Analysis Batch: 207921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.85		ug/L		97	80 - 120

Lab Sample ID: 160-13505-1 MS
Matrix: Water
Analysis Batch: 207921

Client Sample ID: MO-1-SS
Prep Type: Total/NA
Prep Batch: 207717

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.20		5.00	5.16		ug/L		99	80 - 120

Lab Sample ID: 160-13505-1 MSD
Matrix: Water
Analysis Batch: 207921

Client Sample ID: MO-1-SS
Prep Type: Total/NA
Prep Batch: 207717

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.20		5.00	5.11		ug/L		98	80 - 120	1	20

Preliminary Data

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 160-207699/1-A
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207699

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	2.9	ug/L		08/25/15 15:15	08/26/15 19:07	1

Lab Sample ID: HLCS 160-207699/3-A
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	400	362		ug/L		90	90 - 110

Lab Sample ID: LCS 160-207699/2-A
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	200	180		ug/L		90	90 - 110

Lab Sample ID: 160-13457-J-1-C MS
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	3.6	J	200	172		ug/L		84	66 - 120

Lab Sample ID: 160-13457-J-1-B DU
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	3.6	J	3.76	J	ug/L		4	20

Method: 376.1 - Sulfide

Lab Sample ID: MB 160-208227/1
Matrix: Water
Analysis Batch: 208227

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.45	mg/L			08/27/15 15:58	1

Lab Sample ID: LCS 160-208227/2
Matrix: Water
Analysis Batch: 208227

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	10.0	9.67		mg/L		97	90 - 110

Preliminary Data

Method: 376.1 - Sulfide (Continued)

Lab Sample ID: LCSD 160-208227/3
Matrix: Water
Analysis Batch: 208227

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	10.0	9.67		mg/L		97	90 - 110	0	

Preliminary Data

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

GC/MS VOA

Analysis Batch: 207022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	8260C	
160-13505-2	MO-1-SDR	Total/NA	Water	8260C	
160-13506-A-4 MS	Matrix Spike	Total/NA	Water	8260C	
160-13506-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 160-207022/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-207022/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-207022/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 207165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1 - RA	MO-1-SS	Total/NA	Water	8260C	
160-13506-B-11 MS	Matrix Spike	Total/NA	Water	8260C	
160-13506-B-11 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 160-207165/4	Lab Control Sample	Total/NA	Water	8260C	
MB 160-207165/6	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 207677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13499-B-1-A MS	Matrix Spike	Total/NA	Water	3510C	
160-13499-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	
160-13505-1	MO-1-SS	Total/NA	Water	3510C	
160-13505-2	MO-1-SDR	Total/NA	Water	3510C	
LCS 160-207677/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 160-207677/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 207735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13499-B-1-A MS	Matrix Spike	Total/NA	Water	8270D	207677
160-13499-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	8270D	207677
160-13505-1	MO-1-SS	Total/NA	Water	8270D	207677
160-13505-2	MO-1-SDR	Total/NA	Water	8270D	207677
LCS 160-207677/2-A	Lab Control Sample	Total/NA	Water	8270D	207677
MB 160-207677/1-A	Method Blank	Total/NA	Water	8270D	207677

Analysis Batch: 207950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	8270D	207677
160-13505-2	MO-1-SDR	Total/NA	Water	8270D	207677
MB 160-207677/1-A	Method Blank	Total/NA	Water	8270D	207677

GC Semi VOA

Prep Batch: 207377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	8151A	
160-13505-2	MO-1-SDR	Total/NA	Water	8151A	
LCS 160-207377/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 160-207377/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	

Preliminary Data

GC Semi VOA (Continued)

Prep Batch: 207377 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-207377/1-A	Method Blank	Total/NA	Water	8151A	

Prep Batch: 207387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	3510C	
160-13505-2	MO-1-SDR	Total/NA	Water	3510C	
LCS 160-207387/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 160-207387/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-207387/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 207683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	8081B	207387
160-13505-2	MO-1-SDR	Total/NA	Water	8081B	207387
LCS 160-207387/2-A	Lab Control Sample	Total/NA	Water	8081B	207387
LCSD 160-207387/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	207387
MB 160-207387/1-A	Method Blank	Total/NA	Water	8081B	207387

Prep Batch: 207737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	3510C	
160-13505-2	MO-1-SDR	Total/NA	Water	3510C	
LCS 160-207737/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 160-207737/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-207737/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 207944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	8082A	207737
160-13505-2	MO-1-SDR	Total/NA	Water	8082A	207737
LCS 160-207737/2-A	Lab Control Sample	Total/NA	Water	8082A	207737
LCSD 160-207737/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	207737
MB 160-207737/1-A	Method Blank	Total/NA	Water	8082A	207737

Analysis Batch: 207961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	8151A	207377
160-13505-2	MO-1-SDR	Total/NA	Water	8151A	207377
LCS 160-207377/2-A	Lab Control Sample	Total/NA	Water	8151A	207377
LCSD 160-207377/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	207377
MB 160-207377/1-A	Method Blank	Total/NA	Water	8151A	207377

HPLC/IC

Analysis Batch: 207770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1 - DL	MO-1-SS	Total/NA	Water	300.0	
160-13505-2 - DL	MO-1-SDR	Total/NA	Water	300.0	
160-13505-2 DU - DL	MO-1-SDR	Total/NA	Water	300.0	
160-13505-2 MS - DL	MO-1-SDR	Total/NA	Water	300.0	

Preliminary Data

HPLC/IC (Continued)

Analysis Batch: 207770 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-207770/10	Lab Control Sample	Total/NA	Water	300.0	
MB 160-207770/9	Method Blank	Total/NA	Water	300.0	

Specialty Organics

Prep Batch: 84116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	1613B	
160-13505-2	MO-1-SDR	Total/NA	Water	1613B	
LCS 320-84116/2-A	Lab Control Sample	Total/NA	Water	1613B	
MB 320-84116/1-A	Method Blank	Total/NA	Water	1613B	

Analysis Batch: 84514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	1613B	84116
160-13505-2	MO-1-SDR	Total/NA	Water	1613B	84116

Analysis Batch: 84518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-84116/2-A	Lab Control Sample	Total/NA	Water	1613B	84116
MB 320-84116/1-A	Method Blank	Total/NA	Water	1613B	84116

Metals

Prep Batch: 207421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	3010A	
160-13505-2	MO-1-SDR	Total/NA	Water	3010A	
160-13506-B-4-B MS	Matrix Spike	Total/NA	Water	3010A	
160-13506-B-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	
LCS 160-207421/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-207421/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 207717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	7470A	
160-13505-1 MS	MO-1-SS	Total/NA	Water	7470A	
160-13505-1 MSD	MO-1-SS	Total/NA	Water	7470A	
160-13505-2	MO-1-SDR	Total/NA	Water	7470A	
LCS 160-207717/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 160-207717/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 207921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	7470A	207717
160-13505-1 MS	MO-1-SS	Total/NA	Water	7470A	207717
160-13505-1 MSD	MO-1-SS	Total/NA	Water	7470A	207717
160-13505-2	MO-1-SDR	Total/NA	Water	7470A	207717
LCS 160-207717/2-A	Lab Control Sample	Total/NA	Water	7470A	207717
MB 160-207717/1-A	Method Blank	Total/NA	Water	7470A	207717

Preliminary Data

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

Metals (Continued)

Analysis Batch: 208156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	6010C	207421
160-13505-2	MO-1-SDR	Total/NA	Water	6010C	207421
160-13506-B-4-B MS	Matrix Spike	Total/NA	Water	6010C	207421
160-13506-B-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	6010C	207421
LCS 160-207421/2-A	Lab Control Sample	Total/NA	Water	6010C	207421
MB 160-207421/1-A	Method Blank	Total/NA	Water	6010C	207421

General Chemistry

Prep Batch: 207699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-J-1-B DU	Duplicate	Total/NA	Water	Distill/CN	
160-13457-J-1-C MS	Matrix Spike	Total/NA	Water	Distill/CN	
160-13505-1	MO-1-SS	Total/NA	Water	Distill/CN	
160-13505-2	MO-1-SDR	Total/NA	Water	Distill/CN	
HLCS 160-207699/3-A	Lab Control Sample	Total/NA	Water	Distill/CN	
LCS 160-207699/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 160-207699/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 208193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-J-1-B DU	Duplicate	Total/NA	Water	335.4	207699
160-13457-J-1-C MS	Matrix Spike	Total/NA	Water	335.4	207699
160-13505-1	MO-1-SS	Total/NA	Water	335.4	207699
160-13505-2	MO-1-SDR	Total/NA	Water	335.4	207699
HLCS 160-207699/3-A	Lab Control Sample	Total/NA	Water	335.4	207699
LCS 160-207699/2-A	Lab Control Sample	Total/NA	Water	335.4	207699
MB 160-207699/1-A	Method Blank	Total/NA	Water	335.4	207699

Analysis Batch: 208227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-1	MO-1-SS	Total/NA	Water	376.1	
160-13505-2	MO-1-SDR	Total/NA	Water	376.1	
LCS 160-208227/2	Lab Control Sample	Total/NA	Water	376.1	
LCSD 160-208227/3	Lab Control Sample Dup	Total/NA	Water	376.1	
MB 160-208227/1	Method Blank	Total/NA	Water	376.1	

Preliminary Data

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	12DCE	TOL
Lab Sample ID	Client Sample ID	(75-123)	(80-120)	(78-127)	(80-120)
160-13505-1	MO-1-SS	115	112	104	116
160-13505-1 - RA	MO-1-SS	92	97	94	102
160-13505-2	MO-1-SDR	118	116	106	111
160-13506-A-4 MS	Matrix Spike	111	101	107	106
160-13506-A-4 MSD	Matrix Spike Duplicate	118	97	100	108
160-13506-B-11 MS	Matrix Spike	102	103	95	104
160-13506-B-11 MSD	Matrix Spike Duplicate	105	102	90	108
LCS 160-207022/4	Lab Control Sample	113	95	100	105
LCS 160-207165/4	Lab Control Sample	99	99	92	105
LCSD 160-207022/5	Lab Control Sample Dup	119	95	100	107
MB 160-207022/7	Method Blank	129 X	104	101	113
MB 160-207165/6	Method Blank	97	96	88	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(43-108)	(15-59)	(50-101)	(10-50)	(21-97)	(37-120)
160-13499-B-1-A MS	Matrix Spike	71	33	72	21	71	89
160-13499-C-1-A MSD	Matrix Spike Duplicate	85	40	86	26	85	106
160-13505-1	MO-1-SS	37 X	18	37 X	13	17 X	42
160-13505-2	MO-1-SDR	75	37	74	23	61	93
LCS 160-207677/2-A	Lab Control Sample	78	44	84	29	83	105
MB 160-207677/1-A	Method Blank	73	40	74	25	70	91

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB2	TCX2
Lab Sample ID	Client Sample ID	(44-112)	(49-104)
160-13505-1	MO-1-SS	11 X	34 X
160-13505-2	MO-1-SDR	53	67
LCS 160-207387/2-A	Lab Control Sample	84	85
LCSD 160-207387/3-A	Lab Control Sample Dup	77	86

Preliminary Data

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB2	TCX2
Lab Sample ID	Client Sample ID	(44-112)	(49-104)
MB 160-207387/1-A	Method Blank	83	89

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)
TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		DCB1
Lab Sample ID	Client Sample ID	(52-150)
160-13505-1	MO-1-SS	72
160-13505-2	MO-1-SDR	80
LCS 160-207737/2-A	Lab Control Sample	90
LCSD 160-207737/3-A	Lab Control Sample Dup	81
MB 160-207737/1-A	Method Blank	104

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		DCPA1
Lab Sample ID	Client Sample ID	(60-128)
160-13505-1	MO-1-SS	77
160-13505-2	MO-1-SDR	99
LCS 160-207377/2-A	Lab Control Sample	103
LCSD 160-207377/3-A	Lab Control Sample Dup	104
MB 160-207377/1-A	Method Blank	108

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		37TCDD
Lab Sample ID	Client Sample ID	(42-164)
160-13505-1	MO-1-SS	106
160-13505-2	MO-1-SDR	99
LCS 320-84116/2-A	Lab Control Sample	101
MB 320-84116/1-A	Method Blank	101

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Preliminary Data

Isotope Dilution Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13505-1

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**TCDD (31-137)**
160-13505-1	MO-1-SS	65
160-13505-2	MO-1-SDR	71
MB 320-84116/1-A	Method Blank	65

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**TCDD (25-141)**
LCS 320-84116/2-A	Lab Control Sample	67

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

Preliminary Data

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT



TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-13506-1
Client Project/Site: Groundwater Samples

For:
Missouri Attorney General's Office
PO BOX 899
Jefferson City, Missouri 65102

Attn: Brenna McDonald

Authorized for release by:
9/1/2015 4:41:51 PM

Chenise Lambert-Sykes, Project Manager I
(314)298-8566
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Preliminary Data

LINKS

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Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Preliminary Data

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Price - 0000430
Page 3 of 98
9/1/2015

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: Brenna McDonald
Company: Missouri Department of Natural Resources
Address: 111 Fairgounds Road PO BOX 250
City: Rolla
State, Zip: MO, 65402
Phone: 573-368-2163
E-mail: brenna.mcdonald@dnr.mo.gov
Project Name: Groundwater Samples
Site: Bridgeton LF

Sampler: Lynn Milberg
Phone: 573.522.4681
Lab PM: Lambert-Sykes, Chenise Y
E-Mail: chenise.lambert-sykes@testamericainc.com
Carrier Tracking No(s):
COC No: 160-3116-1450.1
Page: Page 1 of 3
Job #:
Due Date Requested: ASAP
TAT Requested (days): ASAP
PO #: Purchase Order not required
WO #:
Project #: 16004530
SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D - Sulfate	415.1 - Total Organic Carbon	6010C, 7470A	8260C - (MOD) OLM 4.2	8081B, 8082A, 8161A, 8270D	335.4 - Cyanide, Total	376.1 - Sulfide	1613B_Tetras - TCDD only	6010C - (MOD) Standard List	Total Number of containers	Special Instructions/Note:
	Preservation Code:						N	S	D	A	N	B	CB	N	D		
PZ-211-SD	8/20/15	0915	G	Water	N		X								X		
PZ-104-SS	8/20/15	1037	G	Water	N		X								X		
PZ-104-SD	8/20/15	1206	G	Water	N		X								X		
PZ-106-SS	8/20/15	1445	G	Water	N					X					X		
PZ-106-SD	8/20/15	1527	G	Water	N	Y				X					X		
PZ-116-SS	8/20/15	1611	G	Water	N					X					X		
PZ-105-SS	8/20/15	1654	G	Water	N					X					X		
PZ-202-SS	8/20/15	1730	G	Water	N					X					X		
PZ-107-SS	8/21/15	0910	G	Water	N					X					X		
MW-1204	8/21/15	1010	G	Water	N					X					X		
082115	8/21/15	1010	G	Water	N					X					X		

Appen. I per sampler packaging 8.21.15

please run w/ grnd water toggle
please run w/ qualifiers into Laboratory

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements:

Deliverable Requested: I, II, III, IV, Other (specify)

Method of Shipment:

Empty Kit Relinquished by: Date: Time:

Relinquished by: Date/Time: 8/21/2015 1525 Company: DNR
Received by: Date/Time: 8/21/15 1525 Company: TA

Relinquished by: Date/Time: Company:
Received by: Date/Time: Company:

Relinquished by: Date/Time: Company:
Received by: Date/Time: Company:

Custody Seals Intact: △ Yes △ No
Custody Seal No.:

160-13506 Chain of Custody

and Other Remarks:

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9/1/2015

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information

Client Contact: Brenna McDonald
Company: Missouri Department of Natural Resources
Address: 111 Fairgounds Road PO BOX 250
City: Rolla
State, Zip: MO, 65402
Phone: 573-368-2163
Email: brenna.mcdonald@dnr.mo.gov
Project Name: Groundwater Samples
Site: Bridgeton LF

Sampler: Lynn Milberg
Phone: 573.522.4681
Lab PM: Lambert-Sykes, Chenise Y
E-Mail: chenise.lambert-sykes@testamericainc.com
Carrier Tracking No(s):
COC No: 160-3116-1450.2
Page: Page 2 of 3
Job #:

Due Date Requested: ASAP
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #: 16004530
SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D - Sulfate	4416.1 - Total Organic Carbon	6010C, 7470A	8260C - (MOD) OLM 4.2	8081B, 8082A, 8151A, 8270D	335.4 - Cyanide, Total	376.1 - Sulfide	1613B_Tetras - TCDD only	6010C - (MOD) Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	N	B	CB	N	D		
PZ-203-SS	8/21/15	1112	G	Water						X					X		Append 1 per sample packaging 8.21.15
PZ-103-SS	8/21/15	1202	G	Water						X					X		
PZ-204-SS	8/21/15	1300	G	Water						X					X		
				Water													
				Water													
				Water													
				Water													
				Water													
				Water													
				Water													
				Water													

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)
Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: Lynn Milberg	Date/Time: 8/21/2015 1525	Company: DNR	Received by:		Date/Time: 8/21/15 1525	Company: TA	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:				

Pre-Litigation Data

Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-13506-1

Login Number: 13506
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	Refer to Job Narrative for details.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Preliminary Data

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Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-13506-1

Login Number: 13506
List Number: 2
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 08/25/15 05:38 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Preliminary Data

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
X	Surrogate is outside control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Preliminary Data

Method Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SL
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SL
8081B	Organochlorine Pesticides (GC)	SW846	TAL SL
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SL
8151A	Herbicides (GC)	SW846	TAL SL
300.0	Anions, Ion Chromatography	MCAWW	TAL SL
1613B	Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS	40CFR136A	TAL SAC
6010C	Metals (ICP)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL
335.4	Cyanide, Total	MCAWW	TAL SL
376.1	Sulfide	MCAWW	TAL SL
415.1	TOC	MCAWW	TAL SL

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Preliminary Data

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Sample Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-13506-1	PZ-211-SD	Water	08/20/15 09:15	08/21/15 15:25
160-13506-2	PZ-104-SS	Water	08/20/15 10:37	08/21/15 15:25
160-13506-3	PZ-104-SD	Water	08/20/15 12:06	08/21/15 15:25
160-13506-4	PZ-106-SS	Water	08/20/15 14:45	08/21/15 15:25
160-13506-5	PZ-106-SD	Water	08/20/15 15:27	08/21/15 15:25
160-13506-6	PZ-116-SS	Water	08/20/15 16:11	08/21/15 15:25
160-13506-7	PZ-105-SS	Water	08/20/15 16:54	08/21/15 15:25
160-13506-8	PZ-202-SS	Water	08/20/15 17:30	08/21/15 15:25
160-13506-9	PZ-107-SS	Water	08/21/15 09:10	08/21/15 15:25
160-13506-10	MW-1204	Water	08/21/15 10:10	08/21/15 15:25
160-13506-11	082115	Water	08/21/15 10:10	08/21/15 15:25
160-13506-12	PZ-203-SS	Water	08/21/15 11:12	08/21/15 15:25
160-13506-13	PZ-103-SS	Water	08/21/15 12:02	08/21/15 15:25
160-13506-14	PZ-204-SS	Water	08/21/15 13:00	08/21/15 15:25
160-13506-15	TRIP BLANK	Water	08/21/15 00:00	08/21/15 15:25

Preliminary Data

Detection Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-211-SD

Lab Sample ID: 160-13506-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.1	J	5.0	0.25	ug/L	1		8260C	Total/NA
Carbon disulfide	0.73	J	5.0	0.37	ug/L	1		8260C	Total/NA
Trichloroethene	0.82	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Sulfate - DL	72		25	2.5	mg/L	50		300.0	Total/NA
Antimony	4.5	J B ^	10	3.7	ug/L	1		6010C	Total/NA
Arsenic	4.3	J	10	1.8	ug/L	1		6010C	Total/NA
Barium	42	J	50	2.1	ug/L	1		6010C	Total/NA
Boron	140	^	50	7.2	ug/L	1		6010C	Total/NA
Chromium	6.1	J	10	3.4	ug/L	1		6010C	Total/NA
Lead	0.60	J	10	0.60	ug/L	1		6010C	Total/NA
Magnesium	30		1.0	0.051	mg/L	1		6010C	Total/NA
Manganese	49		15	1.0	ug/L	1		6010C	Total/NA
Nickel	0.0033	J	0.040	0.0026	mg/L	1		6010C	Total/NA
Thallium	2.6	J	20	2.4	ug/L	1		6010C	Total/NA
Mercury	0.074	J	0.20	0.060	ug/L	1		7470A	Total/NA
Cyanide, Total	4.1	J	10	2.9	ug/L	1		335.4	Total/NA
Sulfide	3.9		1.0	0.45	mg/L	1		376.1	Total/NA
Total Organic Carbon	0.97	J	1.0	0.35	mg/L	1		415.1	Total/NA

Client Sample ID: PZ-104-SS

Lab Sample ID: 160-13506-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	2.6	J	5.0	0.38	ug/L	1		8260C	Total/NA
Ethylbenzene	20		5.0	0.30	ug/L	1		8260C	Total/NA
Toluene	39		5.0	1.0	ug/L	1		8260C	Total/NA
Trichloroethene	0.67	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Xylenes, Total	28		10	0.85	ug/L	1		8260C	Total/NA
Benzene - DL	680		25	1.3	ug/L	5		8260C	Total/NA
Phenol	3.7	J	9.6	1.9	ug/L	1		8270D	Total/NA
Sulfate - DL	14		1.0	0.10	mg/L	2		300.0	Total/NA
Antimony	4.4	J B ^	10	3.7	ug/L	1		6010C	Total/NA
Arsenic	2.8	J	10	1.8	ug/L	1		6010C	Total/NA
Barium	110		50	2.1	ug/L	1		6010C	Total/NA
Boron	130	^	50	7.2	ug/L	1		6010C	Total/NA
Chromium	4.2	J	10	3.4	ug/L	1		6010C	Total/NA
Lead	1.1	J	10	0.60	ug/L	1		6010C	Total/NA
Magnesium	52		1.0	0.051	mg/L	1		6010C	Total/NA
Manganese	33		15	1.0	ug/L	1		6010C	Total/NA
Nickel	0.0041	J	0.040	0.0026	mg/L	1		6010C	Total/NA
Selenium	2.9	J	15	2.1	ug/L	1		6010C	Total/NA
Mercury	0.073	J	0.20	0.060	ug/L	1		7470A	Total/NA
Cyanide, Total	7.4	J	10	2.9	ug/L	1		335.4	Total/NA
Sulfide	6.5		1.0	0.45	mg/L	1		376.1	Total/NA
Total Organic Carbon	2.1		1.0	0.35	mg/L	1		415.1	Total/NA

Client Sample ID: PZ-104-SD

Lab Sample ID: 160-13506-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroethane	1.2	J	10	0.38	ug/L	1		8260C	Total/NA
1,4-Dichlorobenzene	2.5	J	5.0	0.35	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Preliminary Data

Detection Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-104-SD (Continued)

Lab Sample ID: 160-13506-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	5.1		5.0	0.30	ug/L	1		8260C	Total/NA
Toluene	15		5.0	1.0	ug/L	1		8260C	Total/NA
Trichloroethene	0.90	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Xylenes, Total	18		10	0.85	ug/L	1		8260C	Total/NA
Benzene - DL	580		25	1.3	ug/L	5		8260C	Total/NA
2,4-Dimethylphenol	1.2	J	9.7	0.97	ug/L	1		8270D	Total/NA
Phenol	2.0	J	9.7	1.9	ug/L	1		8270D	Total/NA
Heptachlor	0.021	J p	0.048	0.0096	ug/L	1		8081B	Total/NA
Sulfate - DL	15		1.0	0.10	mg/L	2		300.0	Total/NA
Antimony	5.6	J B ^	10	3.7	ug/L	1		6010C	Total/NA
Arsenic	18		10	1.8	ug/L	1		6010C	Total/NA
Barium	630		50	2.1	ug/L	1		6010C	Total/NA
Boron	930	^	50	7.2	ug/L	1		6010C	Total/NA
Chromium	18		10	3.4	ug/L	1		6010C	Total/NA
Cobalt	4.5	J	50	2.7	ug/L	1		6010C	Total/NA
Lead	2.0	J	10	0.60	ug/L	1		6010C	Total/NA
Magnesium	70		1.0	0.051	mg/L	1		6010C	Total/NA
Manganese	160		15	1.0	ug/L	1		6010C	Total/NA
Nickel	0.071		0.040	0.0026	mg/L	1		6010C	Total/NA
Vanadium	15	J	50	4.4	ug/L	1		6010C	Total/NA
Zinc	17	J	20	8.3	ug/L	1		6010C	Total/NA
Mercury	0.081	J	0.20	0.060	ug/L	1		7470A	Total/NA
Cyanide, Total	8.1	J	10	2.9	ug/L	1		335.4	Total/NA
Sulfide	6.5		1.0	0.45	mg/L	1		376.1	Total/NA
Total Organic Carbon - DL	34		5.0	1.8	mg/L	5		415.1	Total/NA

Client Sample ID: PZ-106-SS

Lab Sample ID: 160-13506-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	51	J B ^	100	37	ug/L	10		6010C	Total/NA
Arsenic	27	J	100	18	ug/L	10		6010C	Total/NA
Barium	150	J	500	21	ug/L	10		6010C	Total/NA
Boron	94	J ^	500	72	ug/L	10		6010C	Total/NA
Calcium	110000		10000	540	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	490000		50000	17000	ug/L	10		6010C	Total/NA
Magnesium	50		10	0.51	mg/L	10		6010C	Total/NA
Manganese	13	J	150	10	ug/L	10		6010C	Total/NA
Selenium	24	J	150	21	ug/L	10		6010C	Total/NA
Sodium	14000		10000	1100	ug/L	10		6010C	Total/NA

Client Sample ID: PZ-106-SD

Lab Sample ID: 160-13506-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	21		20	6.7	ug/L	1		8260C	Total/NA
Benzene	6.0		5.0	0.25	ug/L	1		8260C	Total/NA
Trichloroethene	1.0	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Antimony	50	J B ^	100	37	ug/L	10		6010C	Total/NA
Barium	1800		500	21	ug/L	10		6010C	Total/NA
Boron	3600	^	500	72	ug/L	10		6010C	Total/NA
Calcium	190000		10000	540	ug/L	10		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Preliminary Data

Detection Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-106-SD (Continued)

Lab Sample ID: 160-13506-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	71	J	100	34	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	1100000		50000	17000	ug/L	10		6010C	Total/NA
Magnesium	170		10	0.51	mg/L	10		6010C	Total/NA
Manganese	24	J	150	10	ug/L	10		6010C	Total/NA
Nickel	0.087	J	0.40	0.026	mg/L	10		6010C	Total/NA
Phosphorus	280	J B	2500	140	ug/L	10		6010C	Total/NA
Sodium	670000		10000	1100	ug/L	10		6010C	Total/NA

Client Sample ID: PZ-116-SS

Lab Sample ID: 160-13506-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.92	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Antimony	6.6	J B ^	10	3.7	ug/L	1		6010C	Total/NA
Arsenic	2.8	J	10	1.8	ug/L	1		6010C	Total/NA
Barium	69		50	2.1	ug/L	1		6010C	Total/NA
Boron	340	^	50	7.2	ug/L	1		6010C	Total/NA
Calcium	47000		1000	54	ug/L	1		6010C	Total/NA
Chromium	8.3	J	10	3.4	ug/L	1		6010C	Total/NA
Copper	2.7	J	25	2.1	ug/L	1		6010C	Total/NA
Hardness (as CaCO3)	250000		5000	1700	ug/L	1		6010C	Total/NA
Lead	1.6	J	10	0.60	ug/L	1		6010C	Total/NA
Magnesium	31		1.0	0.051	mg/L	1		6010C	Total/NA
Manganese	15		15	1.0	ug/L	1		6010C	Total/NA
Nickel	0.0059	J	0.040	0.0026	mg/L	1		6010C	Total/NA
Phosphorus	260	B	250	14	ug/L	1		6010C	Total/NA
Sodium	52000		1000	110	ug/L	1		6010C	Total/NA
Zinc	19	J	20	8.3	ug/L	1		6010C	Total/NA

Client Sample ID: PZ-105-SS

Lab Sample ID: 160-13506-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.85	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Antimony	37	J B ^	100	37	ug/L	10		6010C	Total/NA
Arsenic	26	J	100	18	ug/L	10		6010C	Total/NA
Barium	160	J	500	21	ug/L	10		6010C	Total/NA
Calcium	100000		10000	540	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	460000		50000	17000	ug/L	10		6010C	Total/NA
Magnesium	50		10	0.51	mg/L	10		6010C	Total/NA
Sodium	52000		10000	1100	ug/L	10		6010C	Total/NA

Client Sample ID: PZ-202-SS

Lab Sample ID: 160-13506-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	110		5.0	0.25	ug/L	1		8260C	Total/NA
Toluene	3.7	J	5.0	1.0	ug/L	1		8260C	Total/NA
Trichloroethene	0.91	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Antimony	55	J B ^	100	37	ug/L	10		6010C	Total/NA
Arsenic	33	J	100	18	ug/L	10		6010C	Total/NA
Barium	1800		500	21	ug/L	10		6010C	Total/NA
Boron	88	J ^	500	72	ug/L	10		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Preliminary Data

Detection Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-202-SS (Continued)

Lab Sample ID: 160-13506-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	520000		10000	540	ug/L	10		6010C	Total/NA
Chromium	36	J	100	34	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	2200000		50000	17000	ug/L	10		6010C	Total/NA
Magnesium	210		10	0.51	mg/L	10		6010C	Total/NA
Manganese	2900		150	10	ug/L	10		6010C	Total/NA
Nickel	0.055	J	0.40	0.026	mg/L	10		6010C	Total/NA
Phosphorus	180	J B	2500	140	ug/L	10		6010C	Total/NA
Sodium	64000		10000	1100	ug/L	10		6010C	Total/NA

Client Sample ID: PZ-107-SS

Lab Sample ID: 160-13506-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.0	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Barium	590		500	21	ug/L	10		6010C	Total/NA
Boron	260	J ^	500	72	ug/L	10		6010C	Total/NA
Calcium	250000		10000	540	ug/L	10		6010C	Total/NA
Chromium	34	J	100	34	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	1100000		50000	17000	ug/L	10		6010C	Total/NA
Magnesium	120		10	0.51	mg/L	10		6010C	Total/NA
Manganese	100	J	150	10	ug/L	10		6010C	Total/NA
Nickel	0.048	J	0.40	0.026	mg/L	10		6010C	Total/NA
Phosphorus	140	J B	2500	140	ug/L	10		6010C	Total/NA
Sodium	78000		10000	1100	ug/L	10		6010C	Total/NA

Client Sample ID: MW-1204

Lab Sample ID: 160-13506-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.4		5.0	0.25	ug/L	1		8260C	Total/NA
Carbon disulfide	0.79	J	5.0	0.37	ug/L	1		8260C	Total/NA
Chlorobenzene	0.88	J	5.0	0.38	ug/L	1		8260C	Total/NA
2-Hexanone	8.2	J	20	0.59	ug/L	1		8260C	Total/NA
Methyl ethyl ketone (MEK)	160		20	0.39	ug/L	1		8260C	Total/NA
4-Methyl-2-pentanone (MIBK)	7.9	J	20	0.33	ug/L	1		8260C	Total/NA
Toluene	71		5.0	1.0	ug/L	1		8260C	Total/NA
Trichloroethene	0.97	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Acetone - DL	1200		200	67	ug/L	10		8260C	Total/NA
Barium	3500		500	21	ug/L	10		6010C	Total/NA
Boron	1800	^	500	72	ug/L	10		6010C	Total/NA
Calcium	570000		10000	540	ug/L	10		6010C	Total/NA
Chromium	86	J	100	34	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	1900000		50000	17000	ug/L	10		6010C	Total/NA
Magnesium	130		10	0.51	mg/L	10		6010C	Total/NA
Manganese	1300		150	10	ug/L	10		6010C	Total/NA
Nickel	0.028	J	0.40	0.026	mg/L	10		6010C	Total/NA
Phosphorus	650	J B	2500	140	ug/L	10		6010C	Total/NA
Sodium	260000		10000	1100	ug/L	10		6010C	Total/NA

Client Sample ID: 082115

Lab Sample ID: 160-13506-11

Preliminary Data

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: 082115 (Continued)

Lab Sample ID: 160-13506-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	9.9		5.0	0.25	ug/L	1		8260C	Total/NA
Carbon disulfide	0.98	J	5.0	0.37	ug/L	1		8260C	Total/NA
Chlorobenzene	1.3	J	5.0	0.38	ug/L	1		8260C	Total/NA
2-Hexanone	16	J	20	0.59	ug/L	1		8260C	Total/NA
4-Methyl-2-pentanone (MIBK)	19	J	20	0.33	ug/L	1		8260C	Total/NA
Toluene	140	F1	5.0	1.0	ug/L	1		8260C	Total/NA
Trichloroethene	0.96	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Acetone - DL	1800		400	130	ug/L	20		8260C	Total/NA
Methyl ethyl ketone (MEK) - DL	790		400	7.8	ug/L	20		8260C	Total/NA
Antimony	41	J B ^	100	37	ug/L	10		6010C	Total/NA
Arsenic	20	J	100	18	ug/L	10		6010C	Total/NA
Barium	3300		500	21	ug/L	10		6010C	Total/NA
Boron	1600	^	500	72	ug/L	10		6010C	Total/NA
Calcium	530000		10000	540	ug/L	10		6010C	Total/NA
Chromium	88	J	100	34	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	1800000		50000	17000	ug/L	10		6010C	Total/NA
Magnesium	110		10	0.51	mg/L	10		6010C	Total/NA
Manganese	1200		150	10	ug/L	10		6010C	Total/NA
Phosphorus	580	J B	2500	140	ug/L	10		6010C	Total/NA
Selenium	21	J	150	21	ug/L	10		6010C	Total/NA
Sodium	240000		10000	1100	ug/L	10		6010C	Total/NA

Client Sample ID: PZ-203-SS

Lab Sample ID: 160-13506-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.74	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Barium	100	J	500	21	ug/L	10		6010C	Total/NA
Boron	100	J ^	500	72	ug/L	10		6010C	Total/NA
Calcium	110000		10000	540	ug/L	10		6010C	Total/NA
Hardness (as CaCO3)	440000		50000	17000	ug/L	10		6010C	Total/NA
Magnesium	44		10	0.51	mg/L	10		6010C	Total/NA
Manganese	21	J	150	10	ug/L	10		6010C	Total/NA
Sodium	8000	J	10000	1100	ug/L	10		6010C	Total/NA

Client Sample ID: PZ-103-SS

Lab Sample ID: 160-13506-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	1.2	J	5.0	0.38	ug/L	1		8260C	Total/NA
1,4-Dichlorobenzene	7.3		5.0	0.35	ug/L	1		8260C	Total/NA
Ethylbenzene	6.8		5.0	0.30	ug/L	1		8260C	Total/NA
Methyl ethyl ketone (MEK)	3.1	J	20	0.39	ug/L	1		8260C	Total/NA
Toluene	19		5.0	1.0	ug/L	1		8260C	Total/NA
Trichloroethene	0.95	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Xylenes, Total	12		10	0.85	ug/L	1		8260C	Total/NA
Benzene - DL	240		10	0.50	ug/L	2		8260C	Total/NA
Antimony	41	J B ^	100	37	ug/L	10		6010C	Total/NA
Barium	600		500	21	ug/L	10		6010C	Total/NA
Boron	350	J ^	500	72	ug/L	10		6010C	Total/NA
Calcium	230000		10000	540	ug/L	10		6010C	Total/NA
Chromium	66	J	100	34	ug/L	10		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Preliminary Data

Detection Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-103-SS (Continued)

Lab Sample ID: 160-13506-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Hardness (as CaCO3)	880000		50000	17000	ug/L	10		6010C	Total/NA
Lead	7.0	J	100	6.0	ug/L	10		6010C	Total/NA
Magnesium	73		10	0.51	mg/L	10		6010C	Total/NA
Manganese	620		150	10	ug/L	10		6010C	Total/NA
Nickel	0.072	J	0.40	0.026	mg/L	10		6010C	Total/NA
Phosphorus	1500	J B	2500	140	ug/L	10		6010C	Total/NA
Sodium	92000		10000	1100	ug/L	10		6010C	Total/NA
Zinc	260		200	83	ug/L	10		6010C	Total/NA

Client Sample ID: PZ-204-SS

Lab Sample ID: 160-13506-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.1	J B	5.0	0.29	ug/L	1		8260C	Total/NA
Antimony	5.6	J B ^	10	3.7	ug/L	1		6010C	Total/NA
Barium	170		50	2.1	ug/L	1		6010C	Total/NA
Boron	87	^	50	7.2	ug/L	1		6010C	Total/NA
Calcium	76000		1000	54	ug/L	1		6010C	Total/NA
Chromium	6.6	J	10	3.4	ug/L	1		6010C	Total/NA
Hardness (as CaCO3)	400000		5000	1700	ug/L	1		6010C	Total/NA
Lead	2.1	J	10	0.60	ug/L	1		6010C	Total/NA
Magnesium	52		1.0	0.051	mg/L	1		6010C	Total/NA
Manganese	26		15	1.0	ug/L	1		6010C	Total/NA
Nickel	0.0048	J	0.040	0.0026	mg/L	1		6010C	Total/NA
Phosphorus	190	J B	250	14	ug/L	1		6010C	Total/NA
Selenium	4.9	J	15	2.1	ug/L	1		6010C	Total/NA
Sodium	29000		1000	110	ug/L	1		6010C	Total/NA
Zinc	8.3	J	20	8.3	ug/L	1		6010C	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-13506-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.74	J B	5.0	0.29	ug/L	1		8260C	Total/NA

Preliminary Data

This Detection Summary does not include radiochemical test results.

State of MO v. Republic Services, Inc. et al
Price - 0000442

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-211-SD

Date Collected: 08/20/15 09:15
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 18:20	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 18:20	1
Acrolein	ND		50	3.1	ug/L			08/22/15 18:20	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 18:20	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 18:20	1
Benzene	**3.1**	**J**	5.0	0.25	ug/L			08/22/15 18:20	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 18:20	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 18:20	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 18:20	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 18:20	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 18:20	1
Carbon disulfide	**0.73**	**J**	5.0	0.37	ug/L			08/22/15 18:20	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 18:20	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 18:20	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 18:20	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 18:20	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 18:20	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 18:20	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 18:20	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 18:20	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 18:20	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 18:20	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 18:20	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 18:20	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 18:20	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 18:20	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 18:20	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 18:20	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 18:20	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 18:20	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 18:20	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 18:20	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 18:20	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 18:20	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 18:20	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 18:20	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 18:20	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 18:20	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 18:20	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 18:20	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 18:20	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 18:20	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 18:20	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 18:20	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 18:20	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 18:20	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 18:20	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 18:20	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 18:20	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-211-SD
Date Collected: 08/20/15 09:15
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 18:20	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 18:20	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 18:20	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 18:20	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 18:20	1
Trichloroethene	**0.82**	**J B**	5.0	0.29	ug/L			08/22/15 18:20	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 18:20	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 18:20	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 18:20	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 18:20	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*75 - 123*		*08/22/15 18:20*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*08/22/15 18:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*78 - 127*		*08/22/15 18:20*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*		*08/22/15 18:20*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Acenaphthylene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Acetophenone	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2-Acetylaminofluorene	ND		98	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
alpha,alpha-Dimethyl phenethylamine	ND		49	22	ug/L		08/25/15 09:36	08/25/15 21:52	1
4-Aminobiphenyl	ND		49	1.0	ug/L		08/25/15 09:36	08/25/15 21:52	1
Anthracene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Benzo[a]anthracene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Benzo[a]pyrene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Benzo[b]fluoranthene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Benzo[g,h,i]perylene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Benzo[k]fluoranthene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Benzyl alcohol	ND		9.8	2.9	ug/L		08/25/15 09:36	08/25/15 21:52	1
Bis(2-chloroethoxy)methane	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Bis(2-chloroethyl)ether	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
bis(2 chloro-1-methylethyl) ether	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Bis(2-ethylhexyl) phthalate	ND		9.8	1.8	ug/L		08/25/15 09:36	08/25/15 21:52	1
4-Bromophenyl phenyl ether	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Butyl benzyl phthalate	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
4-Chloroaniline	ND		9.8	2.0	ug/L		08/25/15 09:36	08/25/15 21:52	1
Chlorobenzilate	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
4-Chloro-3-methylphenol	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2-Chloronaphthalene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2-Chlorophenol	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
4-Chlorophenyl phenyl ether	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Chrysene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Diallate	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 21:52	1
Dibenz(a,h)anthracene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Dibenzofuran	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
3,3'-Dichlorobenzidine	ND		49	1.3	ug/L		08/25/15 09:36	08/25/15 21:52	1

Preliminary Data

Client Sample ID: PZ-211-SD

Date Collected: 08/20/15 09:15
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2,6-Dichlorophenol	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Diethyl phthalate	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Dimethoate	ND		20	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
7,12-Dimethylbenz(a)anthracene	ND		20	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
3,3'-Dimethylbenzidine	ND		49	2.6	ug/L		08/25/15 09:36	08/25/15 21:52	1
2,4-Dimethylphenol	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Dimethyl phthalate	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Di-n-butyl phthalate	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
1,3-Dinitrobenzene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
1,4-Dinitrobenzene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
4,6-Dinitro-2-methylphenol	ND		9.8	1.2	ug/L		08/25/15 09:36	08/25/15 21:52	1
2,4-Dinitrophenol	ND		49	2.0	ug/L		08/25/15 09:36	08/25/15 21:52	1
2,4-Dinitrotoluene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2,6-Dinitrotoluene	ND		9.8	2.1	ug/L		08/25/15 09:36	08/25/15 21:52	1
Di-n-octyl phthalate	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Dinoseb	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 21:52	1
Diphenylamine	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Disulfoton	ND		49	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Ethyl methanesulfonate	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Famphur	ND		98	1.7	ug/L		08/25/15 09:36	08/25/15 21:52	1
Fluoranthene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Fluorene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Hexachlorobenzene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Hexachlorobutadiene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Hexachlorocyclopentadiene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Hexachloroethane	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Hexachlorophene	ND		240	9.8	ug/L		08/25/15 09:36	08/26/15 19:47	1
Hexachloropropene	ND		98	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Indeno[1,2,3-cd]pyrene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Isodrin	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Isophorone	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Isosafrole	ND		20	4.9	ug/L		08/25/15 09:36	08/25/15 21:52	1
Kepone	ND		98	20	ug/L		08/25/15 09:36	08/26/15 19:47	1
Methapyrilene	ND		49	1.2	ug/L		08/25/15 09:36	08/25/15 21:52	1
3-Methylcholanthrene	ND		20	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Methyl methanesulfonate	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2-Methylnaphthalene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Methyl parathion	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2-Methylphenol	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
3 & 4 Methylphenol	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 21:52	1
Naphthalene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
1,4-Naphthoquinone	ND		49	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
1-Naphthylamine	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2-Naphthylamine	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2-Nitroaniline	ND		9.8	1.1	ug/L		08/25/15 09:36	08/25/15 21:52	1
3-Nitroaniline	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
4-Nitroaniline	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Nitrobenzene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1

Preliminary Data

Client Sample ID: PZ-211-SD

Date Collected: 08/20/15 09:15
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
5-Nitro-o-toluidine	ND		20	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2-Nitrophenol	ND		9.8	1.5	ug/L		08/25/15 09:36	08/25/15 21:52	1
4-Nitrophenol	ND		9.8	2.0	ug/L		08/25/15 09:36	08/25/15 21:52	1
N-Nitrosodiethylamine	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
N-Nitrosodimethylamine	ND		9.8	2.0	ug/L		08/25/15 09:36	08/25/15 21:52	1
N-Nitrosodi-n-butylamine	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
N-Nitrosodi-n-propylamine	ND		9.8	1.5	ug/L		08/25/15 09:36	08/25/15 21:52	1
N-Nitrosomethylethylamine	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
N-Nitrosomorpholine	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
N-Nitrosopiperidine	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
N-Nitrosopyrrolidine	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
o,o',o''-Triethylphosphorothioate	ND		49	1.1	ug/L		08/25/15 09:36	08/25/15 21:52	1
o-Toluidine	ND		20	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Parathion	ND		49	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
p-Dimethylamino azobenzene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Pentachlorobenzene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Pentachloroethane	ND		49	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Pentachloronitrobenzene	ND		49	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Pentachlorophenol	ND		9.8	1.2	ug/L		08/25/15 09:36	08/25/15 21:52	1
Phenacetin	ND		20	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Phenanthrene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Phenol	ND		9.8	2.0	ug/L		08/25/15 09:36	08/25/15 21:52	1
Phorate	ND		49	2.0	ug/L		08/25/15 09:36	08/25/15 21:52	1
p-Phenylene diamine	ND		98	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Pronamide	ND		20	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Pyrene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
Pyridine	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 21:52	1
Safrole	ND		20	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
1,2,4,5-Tetrachlorobenzene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2,3,4,6-Tetrachlorophenol	ND		49	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
1,2,4-Trichlorobenzene	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2,4,5-Trichlorophenol	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
2,4,6-Trichlorophenol	ND		9.8	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1
1,3,5-Trinitrobenzene	ND		49	0.98	ug/L		08/25/15 09:36	08/25/15 21:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*43 - 108*	*08/25/15 09:36*	*08/25/15 21:52*	*1*
2-Fluorophenol (Surr)	*34*		*15 - 59*	*08/25/15 09:36*	*08/25/15 21:52*	*1*
Nitrobenzene-d5 (Surr)	*73*		*50 - 101*	*08/25/15 09:36*	*08/25/15 21:52*	*1*
Phenol-d5 (Surr)	*22*		*10 - 50*	*08/25/15 09:36*	*08/25/15 21:52*	*1*
Terphenyl-d14 (Surr)	*60*		*21 - 97*	*08/25/15 09:36*	*08/25/15 21:52*	*1*
2,4,6-Tribromophenol (Surr)	*89*		*37 - 120*	*08/25/15 09:36*	*08/25/15 21:52*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1
alpha-BHC	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1
beta-BHC	ND		0.051	0.013	ug/L		08/24/15 14:06	08/25/15 16:49	1
delta-BHC	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1
gamma-BHC (Lindane)	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1

Preliminary Data

Client Sample ID: PZ-211-SD

Date Collected: 08/20/15 09:15
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-1

Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.051	0.015	ug/L		08/24/15 14:06	08/25/15 16:49	1
gamma-Chlordane	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1
4,4'-DDD	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1
4,4'-DDE	ND		0.051	0.014	ug/L		08/24/15 14:06	08/25/15 16:49	1
4,4'-DDT	ND		0.051	0.024	ug/L		08/24/15 14:06	08/25/15 16:49	1
Dieldrin	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1
Endosulfan I	ND		0.051	0.019	ug/L		08/24/15 14:06	08/25/15 16:49	1
Endosulfan II	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1
Endosulfan sulfate	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1
Endrin	ND		0.051	0.018	ug/L		08/24/15 14:06	08/25/15 16:49	1
Endrin aldehyde	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1
Endrin ketone	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1
Heptachlor	ND		0.051	0.010	ug/L		08/24/15 14:06	08/25/15 16:49	1
Heptachlor epoxide	ND		0.051	0.017	ug/L		08/24/15 14:06	08/25/15 16:49	1
Methoxychlor	ND		0.51	0.013	ug/L		08/24/15 14:06	08/25/15 16:49	1
Toxaphene	ND		2.0	0.28	ug/L		08/24/15 14:06	08/25/15 16:49	1
Technical Chlordane	ND		0.51	0.10	ug/L		08/24/15 14:06	08/25/15 16:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*51*		*44 - 112*	*08/24/15 14:06*	*08/25/15 16:49*	*1*
Tetrachloro-m-xylene	*80*		*49 - 104*	*08/24/15 14:06*	*08/25/15 16:49*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.37	ug/L		08/25/15 13:16	08/27/15 11:34	1
PCB-1221	ND		1.0	0.37	ug/L		08/25/15 13:16	08/27/15 11:34	1
PCB-1232	ND		1.0	0.37	ug/L		08/25/15 13:16	08/27/15 11:34	1
PCB-1242	ND		1.0	0.37	ug/L		08/25/15 13:16	08/27/15 11:34	1
PCB-1248	ND		1.0	0.37	ug/L		08/25/15 13:16	08/27/15 11:34	1
PCB-1254	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 11:34	1
PCB-1260	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 11:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*110*		*52 - 150*	*08/25/15 13:16*	*08/27/15 11:34*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.26	ug/L		08/24/15 12:55	08/27/15 08:24	1
2,4-D	ND		7.6	4.0	ug/L		08/24/15 12:55	08/27/15 08:24	1
Silvex (2,4,5-TP)	ND		0.95	0.18	ug/L		08/24/15 12:55	08/27/15 08:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*78*		*60 - 128*	*08/24/15 12:55*	*08/27/15 08:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	72		25	2.5	mg/L			08/25/15 23:41	50

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.27	pg/L		08/26/15 11:38	08/28/15 09:03	1

Preliminary Data

Client Sample ID: PZ-211-SD

Date Collected: 08/20/15 09:15
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-1

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	75		31 - 137	08/26/15 11:38	08/28/15 09:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	104		42 - 164	08/26/15 11:38	08/28/15 09:03	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	4.5	J B ^	10	3.7	ug/L		08/24/15 16:46	08/26/15 21:54	1
Arsenic	4.3	J	10	1.8	ug/L		08/24/15 16:46	08/26/15 21:54	1
Barium	42	J	50	2.1	ug/L		08/24/15 16:46	08/26/15 21:54	1
Beryllium	ND		5.0	0.28	ug/L		08/24/15 16:46	08/26/15 21:54	1
Boron	140	^	50	7.2	ug/L		08/24/15 16:46	08/26/15 21:54	1
Cadmium	ND		5.0	0.34	ug/L		08/24/15 16:46	08/26/15 21:54	1
Chromium	6.1	J	10	3.4	ug/L		08/24/15 16:46	08/26/15 21:54	1
Cobalt	ND		50	2.7	ug/L		08/24/15 16:46	08/26/15 21:54	1
Copper	ND		25	2.1	ug/L		08/24/15 16:46	08/26/15 21:54	1
Lead	0.60	J	10	0.60	ug/L		08/24/15 16:46	08/26/15 21:54	1
Magnesium	30		1.0	0.051	mg/L		08/24/15 16:46	08/26/15 21:54	1
Manganese	49		15	1.0	ug/L		08/24/15 16:46	08/26/15 21:54	1
Nickel	0.0033	J	0.040	0.0026	mg/L		08/24/15 16:46	08/26/15 21:54	1
Selenium	ND		15	2.1	ug/L		08/24/15 16:46	08/26/15 21:54	1
Silver	ND		10	0.99	ug/L		08/24/15 16:46	08/26/15 21:54	1
Thallium	2.6	J	20	2.4	ug/L		08/24/15 16:46	08/26/15 21:54	1
Tin	ND		100	5.0	ug/L		08/24/15 16:46	08/26/15 21:54	1
Vanadium	ND		50	4.4	ug/L		08/24/15 16:46	08/26/15 21:54	1
Zinc	ND		20	8.3	ug/L		08/24/15 16:46	08/26/15 21:54	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.074	J	0.20	0.060	ug/L		08/25/15 12:47	08/25/15 22:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	4.1	J	10	2.9	ug/L		08/25/15 15:15	08/26/15 19:54	1
Sulfide	3.9		1.0	0.45	mg/L			08/27/15 16:43	1
Total Organic Carbon	0.97	J	1.0	0.35	mg/L			09/01/15 12:53	1

Client Sample ID: PZ-104-SS

Date Collected: 08/20/15 10:37
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 18:44	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 18:44	1
Acrolein	ND		50	3.1	ug/L			08/22/15 18:44	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 18:44	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 18:44	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 18:44	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 18:44	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 18:44	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 18:44	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-104-SS
Date Collected: 08/20/15 10:37
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 18:44	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 18:44	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 18:44	1
Chlorobenzene	**2.6**	**J**	5.0	0.38	ug/L			08/22/15 18:44	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 18:44	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 18:44	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 18:44	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 18:44	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 18:44	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 18:44	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 18:44	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 18:44	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 18:44	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 18:44	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 18:44	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 18:44	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 18:44	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 18:44	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 18:44	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 18:44	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 18:44	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 18:44	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 18:44	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 18:44	1
Ethylbenzene	**20**		5.0	0.30	ug/L			08/22/15 18:44	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 18:44	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 18:44	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 18:44	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 18:44	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 18:44	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 18:44	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 18:44	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 18:44	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 18:44	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 18:44	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 18:44	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 18:44	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 18:44	1
Toluene	**39**		5.0	1.0	ug/L			08/22/15 18:44	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 18:44	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 18:44	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 18:44	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 18:44	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 18:44	1
Trichloroethene	**0.67**	**J B**	5.0	0.29	ug/L			08/22/15 18:44	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 18:44	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 18:44	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 18:44	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 18:44	1

Preliminary Data

Client Sample ID: PZ-104-SS

Date Collected: 08/20/15 10:37
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	28		10	0.85	ug/L			08/22/15 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*	*X*	*75 - 123*		*08/22/15 18:44*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 120*		*08/22/15 18:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*78 - 127*		*08/22/15 18:44*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*08/22/15 18:44*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	680		25	1.3	ug/L			08/23/15 21:00	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*75 - 123*		*08/23/15 21:00*	*5*
Dibromofluoromethane (Surr)	*91*		*80 - 120*		*08/23/15 21:00*	*5*
1,2-Dichloroethane-d4 (Surr)	*90*		*78 - 127*		*08/23/15 21:00*	*5*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/23/15 21:00*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Acenaphthylene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Acetophenone	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2-Acetylaminofluorene	ND		96	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
alpha,alpha-Dimethyl phenethylamine	ND		48	21	ug/L		08/25/15 09:36	08/25/15 22:25	1
4-Aminobiphenyl	ND		48	1.0	ug/L		08/25/15 09:36	08/25/15 22:25	1
Anthracene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Benzo[a]anthracene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Benzo[a]pyrene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Benzo[b]fluoranthene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Benzo[g,h,i]perylene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Benzo[k]fluoranthene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Benzyl alcohol	ND		9.6	2.9	ug/L		08/25/15 09:36	08/25/15 22:25	1
Bis(2-chloroethoxy)methane	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Bis(2-chloroethyl)ether	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
bis(2 chloro-1-methylethyl) ether	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Bis(2-ethylhexyl) phthalate	ND		9.6	1.8	ug/L		08/25/15 09:36	08/25/15 22:25	1
4-Bromophenyl phenyl ether	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Butyl benzyl phthalate	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
4-Chloroaniline	ND		9.6	1.9	ug/L		08/25/15 09:36	08/25/15 22:25	1
Chlorobenzilate	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
4-Chloro-3-methylphenol	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2-Chloronaphthalene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2-Chlorophenol	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
4-Chlorophenyl phenyl ether	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Chrysene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Diallate	ND		19	1.9	ug/L		08/25/15 09:36	08/25/15 22:25	1
Dibenz(a,h)anthracene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Dibenzofuran	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
3,3'-Dichlorobenzidine	ND		48	1.2	ug/L		08/25/15 09:36	08/25/15 22:25	1

Preliminary Data

Client Sample ID: PZ-104-SS

Date Collected: 08/20/15 10:37
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2,6-Dichlorophenol	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Diethyl phthalate	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Dimethoate	ND		19	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
3,3'-Dimethylbenzidine	ND		48	2.5	ug/L		08/25/15 09:36	08/25/15 22:25	1
2,4-Dimethylphenol	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Dimethyl phthalate	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Di-n-butyl phthalate	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
1,3-Dinitrobenzene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
1,4-Dinitrobenzene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
4,6-Dinitro-2-methylphenol	ND		9.6	1.2	ug/L		08/25/15 09:36	08/25/15 22:25	1
2,4-Dinitrophenol	ND		48	1.9	ug/L		08/25/15 09:36	08/25/15 22:25	1
2,4-Dinitrotoluene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2,6-Dinitrotoluene	ND		9.6	2.1	ug/L		08/25/15 09:36	08/25/15 22:25	1
Di-n-octyl phthalate	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Dinoseb	ND		19	1.9	ug/L		08/25/15 09:36	08/25/15 22:25	1
Diphenylamine	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Disulfoton	ND		48	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Ethyl methanesulfonate	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Famphur	ND		96	1.6	ug/L		08/25/15 09:36	08/25/15 22:25	1
Fluoranthene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Fluorene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Hexachlorobenzene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Hexachlorobutadiene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Hexachlorocyclopentadiene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Hexachloroethane	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Hexachlorophene	ND		240	9.6	ug/L		08/25/15 09:36	08/26/15 20:20	1
Hexachloropropene	ND		96	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Indeno[1,2,3-cd]pyrene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Isodrin	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Isophorone	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Isosafrole	ND		19	4.8	ug/L		08/25/15 09:36	08/25/15 22:25	1
Kepone	ND		96	19	ug/L		08/25/15 09:36	08/26/15 20:20	1
Methapyrilene	ND		48	1.2	ug/L		08/25/15 09:36	08/25/15 22:25	1
3-Methylcholanthrene	ND		19	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Methyl methanesulfonate	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2-Methylnaphthalene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Methyl parathion	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2-Methylphenol	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
3 & 4 Methylphenol	ND		19	1.9	ug/L		08/25/15 09:36	08/25/15 22:25	1
Naphthalene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
1,4-Naphthoquinone	ND		48	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
1-Naphthylamine	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2-Naphthylamine	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2-Nitroaniline	ND		9.6	1.1	ug/L		08/25/15 09:36	08/25/15 22:25	1
3-Nitroaniline	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
4-Nitroaniline	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Nitrobenzene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1

Preliminary Data

Client Sample ID: PZ-104-SS

Date Collected: 08/20/15 10:37
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
5-Nitro-o-toluidine	ND		19	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2-Nitrophenol	ND		9.6	1.5	ug/L		08/25/15 09:36	08/25/15 22:25	1
4-Nitrophenol	ND		9.6	1.9	ug/L		08/25/15 09:36	08/25/15 22:25	1
N-Nitrosodiethylamine	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
N-Nitrosodimethylamine	ND		9.6	1.9	ug/L		08/25/15 09:36	08/25/15 22:25	1
N-Nitrosodi-n-butylamine	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
N-Nitrosodi-n-propylamine	ND		9.6	1.4	ug/L		08/25/15 09:36	08/25/15 22:25	1
N-Nitrosomethylethylamine	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
N-Nitrosomorpholine	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
N-Nitrosopiperidine	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
N-Nitrosopyrrolidine	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
o,o',o''-Triethylphosphorothioate	ND		48	1.1	ug/L		08/25/15 09:36	08/25/15 22:25	1
o-Toluidine	ND		19	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Parathion	ND		48	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
p-Dimethylamino azobenzene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Pentachlorobenzene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Pentachloroethane	ND		48	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Pentachloronitrobenzene	ND		48	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Pentachlorophenol	ND		9.6	1.2	ug/L		08/25/15 09:36	08/25/15 22:25	1
Phenacetin	ND		19	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Phenanthrene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Phenol	3.7	J	9.6	1.9	ug/L		08/25/15 09:36	08/25/15 22:25	1
Phorate	ND		48	1.9	ug/L		08/25/15 09:36	08/25/15 22:25	1
p-Phenylene diamine	ND		96	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Pronamide	ND		19	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Pyrene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
Pyridine	ND		19	1.9	ug/L		08/25/15 09:36	08/25/15 22:25	1
Safrole	ND		19	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
1,2,4,5-Tetrachlorobenzene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2,3,4,6-Tetrachlorophenol	ND		48	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
1,2,4-Trichlorobenzene	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2,4,5-Trichlorophenol	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
2,4,6-Trichlorophenol	ND		9.6	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1
1,3,5-Trinitrobenzene	ND		48	0.96	ug/L		08/25/15 09:36	08/25/15 22:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*78*		*43 - 108*	*08/25/15 09:36*	*08/25/15 22:25*	*1*
2-Fluorophenol (Surr)	*36*		*15 - 59*	*08/25/15 09:36*	*08/25/15 22:25*	*1*
Nitrobenzene-d5 (Surr)	*78*		*50 - 101*	*08/25/15 09:36*	*08/25/15 22:25*	*1*
Phenol-d5 (Surr)	*23*		*10 - 50*	*08/25/15 09:36*	*08/25/15 22:25*	*1*
Terphenyl-d14 (Surr)	*62*		*21 - 97*	*08/25/15 09:36*	*08/25/15 22:25*	*1*
2,4,6-Tribromophenol (Surr)	*98*		*37 - 120*	*08/25/15 09:36*	*08/25/15 22:25*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1
alpha-BHC	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1
beta-BHC	ND		0.049	0.013	ug/L		08/24/15 14:06	08/25/15 17:09	1
delta-BHC	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1
gamma-BHC (Lindane)	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1

Preliminary Data

Client Sample ID: PZ-104-SS

Date Collected: 08/20/15 10:37
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-2

Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.049	0.015	ug/L		08/24/15 14:06	08/25/15 17:09	1
gamma-Chlordane	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1
4,4'-DDD	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1
4,4'-DDE	ND		0.049	0.014	ug/L		08/24/15 14:06	08/25/15 17:09	1
4,4'-DDT	ND		0.049	0.023	ug/L		08/24/15 14:06	08/25/15 17:09	1
Dieldrin	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1
Endosulfan I	ND		0.049	0.019	ug/L		08/24/15 14:06	08/25/15 17:09	1
Endosulfan II	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1
Endosulfan sulfate	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1
Endrin	ND		0.049	0.018	ug/L		08/24/15 14:06	08/25/15 17:09	1
Endrin aldehyde	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1
Endrin ketone	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1
Heptachlor	ND		0.049	0.0099	ug/L		08/24/15 14:06	08/25/15 17:09	1
Heptachlor epoxide	ND		0.049	0.017	ug/L		08/24/15 14:06	08/25/15 17:09	1
Methoxychlor	ND		0.49	0.013	ug/L		08/24/15 14:06	08/25/15 17:09	1
Toxaphene	ND		2.0	0.27	ug/L		08/24/15 14:06	08/25/15 17:09	1
Technical Chlordane	ND		0.49	0.099	ug/L		08/24/15 14:06	08/25/15 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*48*		*44 - 112*	*08/24/15 14:06*	*08/25/15 17:09*	*1*
Tetrachloro-m-xylene	*77*		*49 - 104*	*08/24/15 14:06*	*08/25/15 17:09*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.35	ug/L		08/25/15 13:26	08/27/15 11:50	1
PCB-1221	ND		1.0	0.35	ug/L		08/25/15 13:26	08/27/15 11:50	1
PCB-1232	ND		1.0	0.35	ug/L		08/25/15 13:26	08/27/15 11:50	1
PCB-1242	ND		1.0	0.35	ug/L		08/25/15 13:26	08/27/15 11:50	1
PCB-1248	ND		1.0	0.35	ug/L		08/25/15 13:26	08/27/15 11:50	1
PCB-1254	ND		1.0	0.17	ug/L		08/25/15 13:26	08/27/15 11:50	1
PCB-1260	ND		1.0	0.17	ug/L		08/25/15 13:26	08/27/15 11:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*107*		*52 - 150*	*08/25/15 13:26*	*08/27/15 11:50*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.98	0.26	ug/L		08/24/15 12:55	08/27/15 08:54	1
2,4-D	ND		7.8	4.1	ug/L		08/24/15 12:55	08/27/15 08:54	1
Silvex (2,4,5-TP)	ND		0.98	0.18	ug/L		08/24/15 12:55	08/27/15 08:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*84*		*60 - 128*	*08/24/15 12:55*	*08/27/15 08:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	14		1.0	0.10	mg/L			08/25/15 23:55	2

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.8	0.30	pg/L		08/26/15 11:38	08/28/15 09:49	1

Preliminary Data

Client Sample ID: PZ-104-SS

Date Collected: 08/20/15 10:37
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-2

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	74		31 - 137	08/26/15 11:38	08/28/15 09:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	100		42 - 164	08/26/15 11:38	08/28/15 09:49	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	4.4	J B ^	10	3.7	ug/L		08/24/15 16:46	08/26/15 21:58	1
Arsenic	2.8	J	10	1.8	ug/L		08/24/15 16:46	08/26/15 21:58	1
Barium	110		50	2.1	ug/L		08/24/15 16:46	08/26/15 21:58	1
Beryllium	ND		5.0	0.28	ug/L		08/24/15 16:46	08/26/15 21:58	1
Boron	130	^	50	7.2	ug/L		08/24/15 16:46	08/26/15 21:58	1
Cadmium	ND		5.0	0.34	ug/L		08/24/15 16:46	08/26/15 21:58	1
Chromium	4.2	J	10	3.4	ug/L		08/24/15 16:46	08/26/15 21:58	1
Cobalt	ND		50	2.7	ug/L		08/24/15 16:46	08/26/15 21:58	1
Copper	ND		25	2.1	ug/L		08/24/15 16:46	08/26/15 21:58	1
Lead	1.1	J	10	0.60	ug/L		08/24/15 16:46	08/26/15 21:58	1
Magnesium	52		1.0	0.051	mg/L		08/24/15 16:46	08/26/15 21:58	1
Manganese	33		15	1.0	ug/L		08/24/15 16:46	08/26/15 21:58	1
Nickel	0.0041	J	0.040	0.0026	mg/L		08/24/15 16:46	08/26/15 21:58	1
Selenium	2.9	J	15	2.1	ug/L		08/24/15 16:46	08/26/15 21:58	1
Silver	ND		10	0.99	ug/L		08/24/15 16:46	08/26/15 21:58	1
Thallium	ND		20	2.4	ug/L		08/24/15 16:46	08/26/15 21:58	1
Tin	ND		100	5.0	ug/L		08/24/15 16:46	08/26/15 21:58	1
Vanadium	ND		50	4.4	ug/L		08/24/15 16:46	08/26/15 21:58	1
Zinc	ND		20	8.3	ug/L		08/24/15 16:46	08/26/15 21:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.073	J	0.20	0.060	ug/L		08/25/15 12:47	08/25/15 22:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	7.4	J	10	2.9	ug/L		08/25/15 15:15	08/26/15 19:58	1
Sulfide	6.5		1.0	0.45	mg/L			08/27/15 16:52	1
Total Organic Carbon	2.1		1.0	0.35	mg/L			09/01/15 12:58	1

Client Sample ID: PZ-104-SD

Date Collected: 08/20/15 12:06
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 19:09	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 19:09	1
Acrolein	ND		50	3.1	ug/L			08/22/15 19:09	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 19:09	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 19:09	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 19:09	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 19:09	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 19:09	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 19:09	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-104-SD
Date Collected: 08/20/15 12:06
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 19:09	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 19:09	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 19:09	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 19:09	1
Chloroethane	**1.2**	**J**	10	0.38	ug/L			08/22/15 19:09	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 19:09	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 19:09	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 19:09	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 19:09	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 19:09	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 19:09	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 19:09	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 19:09	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 19:09	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 19:09	1
1,4-Dichlorobenzene	**2.5**	**J**	5.0	0.35	ug/L			08/22/15 19:09	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 19:09	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 19:09	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 19:09	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 19:09	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 19:09	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 19:09	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 19:09	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 19:09	1
Ethylbenzene	**5.1**		5.0	0.30	ug/L			08/22/15 19:09	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 19:09	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 19:09	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 19:09	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 19:09	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 19:09	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 19:09	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 19:09	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 19:09	1
Propionitrile	ND		50	2.4	ug/L			08/22/15 19:09	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 19:09	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 19:09	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 19:09	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 19:09	1
Toluene	**15**		5.0	1.0	ug/L			08/22/15 19:09	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 19:09	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 19:09	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 19:09	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 19:09	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 19:09	1
Trichloroethene	**0.90**	**J B**	5.0	0.29	ug/L			08/22/15 19:09	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 19:09	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 19:09	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 19:09	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 19:09	1

Preliminary Data

Client Sample ID: PZ-104-SD

Date Collected: 08/20/15 12:06
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	18		10	0.85	ug/L			08/22/15 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*137*	*X*	*75 - 123*		*08/22/15 19:09*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 120*		*08/22/15 19:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*78 - 127*		*08/22/15 19:09*	*1*
Toluene-d8 (Surr)	*111*		*80 - 120*		*08/22/15 19:09*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	580		25	1.3	ug/L			08/23/15 21:26	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*75 - 123*		*08/23/15 21:26*	*5*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*08/23/15 21:26*	*5*
1,2-Dichloroethane-d4 (Surr)	*99*		*78 - 127*		*08/23/15 21:26*	*5*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/23/15 21:26*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Acenaphthylene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Acetophenone	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2-Acetylaminofluorene	ND		97	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
alpha,alpha-Dimethyl phenethylamine	ND		49	21	ug/L		08/25/15 09:36	08/25/15 22:57	1
4-Aminobiphenyl	ND		49	1.0	ug/L		08/25/15 09:36	08/25/15 22:57	1
Anthracene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Benzo[a]anthracene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Benzo[a]pyrene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Benzo[b]fluoranthene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Benzo[g,h,i]perylene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Benzo[k]fluoranthene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Benzyl alcohol	ND		9.7	2.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
Bis(2-chloroethoxy)methane	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Bis(2-chloroethyl)ether	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
bis(2 chloro-1-methylethyl) ether	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Bis(2-ethylhexyl) phthalate	ND		9.7	1.8	ug/L		08/25/15 09:36	08/25/15 22:57	1
4-Bromophenyl phenyl ether	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Butyl benzyl phthalate	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
4-Chloroaniline	ND		9.7	1.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
Chlorobenzilate	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
4-Chloro-3-methylphenol	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2-Chloronaphthalene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2-Chlorophenol	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
4-Chlorophenyl phenyl ether	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Chrysene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Diallate	ND		19	1.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
Dibenz(a,h)anthracene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Dibenzofuran	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
3,3'-Dichlorobenzidine	ND		49	1.3	ug/L		08/25/15 09:36	08/25/15 22:57	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-104-SD
Date Collected: 08/20/15 12:06
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2,6-Dichlorophenol	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Diethyl phthalate	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Dimethoate	ND		19	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
3,3'-Dimethylbenzidine	ND		49	2.5	ug/L		08/25/15 09:36	08/25/15 22:57	1
2,4-Dimethylphenol	**1.2**	**J**	9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Dimethyl phthalate	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Di-n-butyl phthalate	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
1,3-Dinitrobenzene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
1,4-Dinitrobenzene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
4,6-Dinitro-2-methylphenol	ND		9.7	1.2	ug/L		08/25/15 09:36	08/25/15 22:57	1
2,4-Dinitrophenol	ND		49	1.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
2,4-Dinitrotoluene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2,6-Dinitrotoluene	ND		9.7	2.1	ug/L		08/25/15 09:36	08/25/15 22:57	1
Di-n-octyl phthalate	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Dinoseb	ND		19	1.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
Diphenylamine	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Disulfoton	ND		49	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Ethyl methanesulfonate	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Famphur	ND		97	1.7	ug/L		08/25/15 09:36	08/25/15 22:57	1
Fluoranthene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Fluorene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Hexachlorobenzene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Hexachlorobutadiene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Hexachlorocyclopentadiene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Hexachloroethane	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Hexachlorophene	ND		240	9.7	ug/L		08/25/15 09:36	08/26/15 20:53	1
Hexachloropropene	ND		97	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Indeno[1,2,3-cd]pyrene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Isodrin	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Isophorone	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Isosafrole	ND		19	4.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
Kepone	ND		97	19	ug/L		08/25/15 09:36	08/26/15 20:53	1
Methapyrilene	ND		49	1.2	ug/L		08/25/15 09:36	08/25/15 22:57	1
3-Methylcholanthrene	ND		19	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Methyl methanesulfonate	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2-Methylnaphthalene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Methyl parathion	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2-Methylphenol	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
3 & 4 Methylphenol	ND		19	1.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
Naphthalene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
1,4-Naphthoquinone	ND		49	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
1-Naphthylamine	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2-Naphthylamine	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2-Nitroaniline	ND		9.7	1.1	ug/L		08/25/15 09:36	08/25/15 22:57	1
3-Nitroaniline	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
4-Nitroaniline	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Nitrobenzene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1

Preliminary Data

Client Sample ID: PZ-104-SD

Date Collected: 08/20/15 12:06
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
5-Nitro-o-toluidine	ND		19	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2-Nitrophenol	ND		9.7	1.5	ug/L		08/25/15 09:36	08/25/15 22:57	1
4-Nitrophenol	ND		9.7	1.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
N-Nitrosodiethylamine	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
N-Nitrosodimethylamine	ND		9.7	1.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
N-Nitrosodi-n-butylamine	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
N-Nitrosodi-n-propylamine	ND		9.7	1.5	ug/L		08/25/15 09:36	08/25/15 22:57	1
N-Nitrosomethylethylamine	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
N-Nitrosomorpholine	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
N-Nitrosopiperidine	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
N-Nitrosopyrrolidine	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
o,o',o''-Triethylphosphorothioate	ND		49	1.1	ug/L		08/25/15 09:36	08/25/15 22:57	1
o-Toluidine	ND		19	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Parathion	ND		49	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
p-Dimethylamino azobenzene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Pentachlorobenzene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Pentachloroethane	ND		49	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Pentachloronitrobenzene	ND		49	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Pentachlorophenol	ND		9.7	1.2	ug/L		08/25/15 09:36	08/25/15 22:57	1
Phenacetin	ND		19	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Phenanthrene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Phenol	2.0	J	9.7	1.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
Phorate	ND		49	1.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
p-Phenylene diamine	ND		97	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Pronamide	ND		19	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Pyrene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
Pyridine	ND		19	1.9	ug/L		08/25/15 09:36	08/25/15 22:57	1
Safrole	ND		19	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
1,2,4,5-Tetrachlorobenzene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2,3,4,6-Tetrachlorophenol	ND		49	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
1,2,4-Trichlorobenzene	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2,4,5-Trichlorophenol	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
2,4,6-Trichlorophenol	ND		9.7	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1
1,3,5-Trinitrobenzene	ND		49	0.97	ug/L		08/25/15 09:36	08/25/15 22:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*82*		*43 - 108*	*08/25/15 09:36*	*08/25/15 22:57*	*1*
2-Fluorophenol (Surr)	*40*		*15 - 59*	*08/25/15 09:36*	*08/25/15 22:57*	*1*
Nitrobenzene-d5 (Surr)	*84*		*50 - 101*	*08/25/15 09:36*	*08/25/15 22:57*	*1*
Phenol-d5 (Surr)	*27*		*10 - 50*	*08/25/15 09:36*	*08/25/15 22:57*	*1*
Terphenyl-d14 (Surr)	*65*		*21 - 97*	*08/25/15 09:36*	*08/25/15 22:57*	*1*
2,4,6-Tribromophenol (Surr)	*105*		*37 - 120*	*08/25/15 09:36*	*08/25/15 22:57*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1
alpha-BHC	ND		0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1
beta-BHC	ND		0.048	0.012	ug/L		08/24/15 14:06	08/25/15 18:29	1
delta-BHC	ND		0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1
gamma-BHC (Lindane)	ND		0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1

Preliminary Data

Client Sample ID: PZ-104-SD

Date Collected: 08/20/15 12:06
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-3

Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		0.048	0.014	ug/L		08/24/15 14:06	08/25/15 18:29	1
gamma-Chlordane	ND		0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1
4,4'-DDD	ND		0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1
4,4'-DDE	ND		0.048	0.013	ug/L		08/24/15 14:06	08/25/15 18:29	1
4,4'-DDT	ND		0.048	0.022	ug/L		08/24/15 14:06	08/25/15 18:29	1
Dieldrin	ND		0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1
Endosulfan I	ND		0.048	0.018	ug/L		08/24/15 14:06	08/25/15 18:29	1
Endosulfan II	ND		0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1
Endosulfan sulfate	ND		0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1
Endrin	ND		0.048	0.017	ug/L		08/24/15 14:06	08/25/15 18:29	1
Endrin aldehyde	ND		0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1
Endrin ketone	ND		0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1
Heptachlor	**0.021**	**J p**	0.048	0.0096	ug/L		08/24/15 14:06	08/25/15 18:29	1
Heptachlor epoxide	ND		0.048	0.016	ug/L		08/24/15 14:06	08/25/15 18:29	1
Methoxychlor	ND		0.48	0.012	ug/L		08/24/15 14:06	08/25/15 18:29	1
Toxaphene	ND		1.9	0.26	ug/L		08/24/15 14:06	08/25/15 18:29	1
Technical Chlordane	ND		0.48	0.096	ug/L		08/24/15 14:06	08/25/15 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*18*	*X*	*44 - 112*	*08/24/15 14:06*	*08/25/15 18:29*	*1*
Tetrachloro-m-xylene	*36*	*X*	*49 - 104*	*08/24/15 14:06*	*08/25/15 18:29*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.99	0.35	ug/L		08/25/15 13:26	08/27/15 12:06	1
PCB-1221	ND		0.99	0.35	ug/L		08/25/15 13:26	08/27/15 12:06	1
PCB-1232	ND		0.99	0.35	ug/L		08/25/15 13:26	08/27/15 12:06	1
PCB-1242	ND		0.99	0.35	ug/L		08/25/15 13:26	08/27/15 12:06	1
PCB-1248	ND		0.99	0.35	ug/L		08/25/15 13:26	08/27/15 12:06	1
PCB-1254	ND		0.99	0.16	ug/L		08/25/15 13:26	08/27/15 12:06	1
PCB-1260	ND		0.99	0.16	ug/L		08/25/15 13:26	08/27/15 12:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*87*		*52 - 150*	*08/25/15 13:26*	*08/27/15 12:06*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.98	0.26	ug/L		08/24/15 12:55	08/27/15 09:24	1
2,4-D	ND		7.8	4.1	ug/L		08/24/15 12:55	08/27/15 09:24	1
Silvex (2,4,5-TP)	ND		0.98	0.18	ug/L		08/24/15 12:55	08/27/15 09:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*109*		*60 - 128*	*08/24/15 12:55*	*08/27/15 09:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**15**		1.0	0.10	mg/L			08/26/15 00:23	2

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.34	pg/L		08/26/15 11:38	08/28/15 10:35	1

Preliminary Data

Client Sample ID: PZ-104-SD

Date Collected: 08/20/15 12:06
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-3

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	65		31 - 137	08/26/15 11:38	08/28/15 10:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	101		42 - 164	08/26/15 11:38	08/28/15 10:35	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.6	J B ^	10	3.7	ug/L		08/24/15 16:46	08/26/15 22:03	1
Arsenic	18		10	1.8	ug/L		08/24/15 16:46	08/26/15 22:03	1
Barium	630		50	2.1	ug/L		08/24/15 16:46	08/26/15 22:03	1
Beryllium	ND		5.0	0.28	ug/L		08/24/15 16:46	08/26/15 22:03	1
Boron	930	^	50	7.2	ug/L		08/24/15 16:46	08/26/15 22:03	1
Cadmium	ND		5.0	0.34	ug/L		08/24/15 16:46	08/26/15 22:03	1
Chromium	18		10	3.4	ug/L		08/24/15 16:46	08/26/15 22:03	1
Cobalt	4.5	J	50	2.7	ug/L		08/24/15 16:46	08/26/15 22:03	1
Copper	ND		25	2.1	ug/L		08/24/15 16:46	08/26/15 22:03	1
Lead	2.0	J	10	0.60	ug/L		08/24/15 16:46	08/26/15 22:03	1
Magnesium	70		1.0	0.051	mg/L		08/24/15 16:46	08/26/15 22:03	1
Manganese	160		15	1.0	ug/L		08/24/15 16:46	08/26/15 22:03	1
Nickel	0.071		0.040	0.0026	mg/L		08/24/15 16:46	08/26/15 22:03	1
Selenium	ND		15	2.1	ug/L		08/24/15 16:46	08/26/15 22:03	1
Silver	ND		10	0.99	ug/L		08/24/15 16:46	08/26/15 22:03	1
Thallium	ND		20	2.4	ug/L		08/24/15 16:46	08/26/15 22:03	1
Tin	ND		100	5.0	ug/L		08/24/15 16:46	08/26/15 22:03	1
Vanadium	15	J	50	4.4	ug/L		08/24/15 16:46	08/26/15 22:03	1
Zinc	17	J	20	8.3	ug/L		08/24/15 16:46	08/26/15 22:03	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.081	J	0.20	0.060	ug/L		08/25/15 12:47	08/25/15 22:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	8.1	J	10	2.9	ug/L		08/25/15 15:15	08/26/15 20:01	1
Sulfide	6.5		1.0	0.45	mg/L			08/27/15 17:01	1

General Chemistry - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	34		5.0	1.8	mg/L			09/01/15 13:50	5

Client Sample ID: PZ-106-SS

Date Collected: 08/20/15 14:45
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-4

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 21:37	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 21:37	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 21:37	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 21:37	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 21:37	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 21:37	1

Preliminary Data

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-106-SS

Date Collected: 08/20/15 14:45
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 21:37	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 21:37	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 21:37	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 21:37	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 21:37	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 21:37	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 21:37	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 21:37	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 21:37	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 21:37	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 21:37	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 21:37	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 21:37	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 21:37	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 21:37	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 21:37	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 21:37	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 21:37	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 21:37	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 21:37	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 21:37	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 21:37	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 21:37	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/22/15 21:37	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 21:37	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 21:37	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 21:37	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 21:37	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 21:37	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 21:37	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 21:37	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 21:37	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 21:37	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 21:37	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 21:37	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 21:37	1
Trichloroethene	ND		5.0	0.29	ug/L			08/22/15 21:37	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 21:37	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 21:37	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 21:37	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 21:37	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*75 - 123*		*08/22/15 21:37*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*08/22/15 21:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*78 - 127*		*08/22/15 21:37*	*1*
Toluene-d8 (Surr)	*112*		*80 - 120*		*08/22/15 21:37*	*1*

Preliminary Data

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-106-SS

Date Collected: 08/20/15 14:45
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-4

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	51	J B ^	100	37	ug/L		08/24/15 16:46	08/26/15 22:07	10
Arsenic	27	J	100	18	ug/L		08/24/15 16:46	08/26/15 22:07	10
Barium	150	J	500	21	ug/L		08/24/15 16:46	08/26/15 22:07	10
Beryllium	ND		50	2.8	ug/L		08/24/15 16:46	08/26/15 22:07	10
Boron	94	J ^	500	72	ug/L		08/24/15 16:46	08/26/15 22:07	10
Cadmium	ND		50	3.4	ug/L		08/24/15 16:46	08/26/15 22:07	10
Calcium	110000		10000	540	ug/L		08/24/15 16:46	08/26/15 22:07	10
Chromium	ND		100	34	ug/L		08/24/15 16:46	08/26/15 22:07	10
Cobalt	ND		500	27	ug/L		08/24/15 16:46	08/26/15 22:07	10
Copper	ND		250	21	ug/L		08/24/15 16:46	08/26/15 22:07	10
Hardness (as CaCO3)	490000		50000	17000	ug/L		08/24/15 16:46	08/26/15 22:07	10
Lead	ND		100	6.0	ug/L		08/24/15 16:46	08/26/15 22:07	10
Magnesium	50		10	0.51	mg/L		08/24/15 16:46	08/26/15 22:07	10
Manganese	13	J	150	10	ug/L		08/24/15 16:46	08/26/15 22:07	10
Nickel	ND		0.40	0.026	mg/L		08/24/15 16:46	08/26/15 22:07	10
Phosphorus	ND		2500	140	ug/L		08/24/15 16:46	08/26/15 22:07	10
Selenium	24	J	150	21	ug/L		08/24/15 16:46	08/26/15 22:07	10
Silver	ND		100	9.9	ug/L		08/24/15 16:46	08/26/15 22:07	10
Sodium	14000		10000	1100	ug/L		08/24/15 16:46	08/26/15 22:07	10
Thallium	ND		200	24	ug/L		08/24/15 16:46	08/26/15 22:07	10
Vanadium	ND		500	44	ug/L		08/24/15 16:46	08/26/15 22:07	10
Zinc	ND		200	83	ug/L		08/24/15 16:46	08/26/15 22:07	10
Tin	ND		1000	50	ug/L		08/24/15 16:46	08/26/15 22:07	10

Client Sample ID: PZ-106-SD

Date Collected: 08/20/15 15:27
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-5

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	21		20	6.7	ug/L			08/22/15 19:34	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 19:34	1
Benzene	6.0		5.0	0.25	ug/L			08/22/15 19:34	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 19:34	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 19:34	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 19:34	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 19:34	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 19:34	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 19:34	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 19:34	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 19:34	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 19:34	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 19:34	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 19:34	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 19:34	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 19:34	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 19:34	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 19:34	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 19:34	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 19:34	1

Preliminary Data

Client Sample ID: PZ-106-SD

Date Collected: 08/20/15 15:27
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 19:34	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 19:34	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 19:34	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 19:34	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 19:34	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 19:34	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 19:34	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 19:34	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 19:34	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/22/15 19:34	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 19:34	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 19:34	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 19:34	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 19:34	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 19:34	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 19:34	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 19:34	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 19:34	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 19:34	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/22/15 19:34	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 19:34	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 19:34	1
Trichloroethene	1.0	J B	5.0	0.29	ug/L			08/22/15 19:34	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 19:34	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 19:34	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 19:34	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 19:34	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*75 - 123*		*08/22/15 19:34*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*08/22/15 19:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*78 - 127*		*08/22/15 19:34*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*08/22/15 19:34*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**50**	J B ^	100	37	ug/L		08/24/15 16:46	08/26/15 22:23	10
Arsenic	ND		100	18	ug/L		08/24/15 16:46	08/26/15 22:23	10
Barium	**1800**		500	21	ug/L		08/24/15 16:46	08/26/15 22:23	10
Beryllium	ND		50	2.8	ug/L		08/24/15 16:46	08/26/15 22:23	10
Boron	**3600**	^	500	72	ug/L		08/24/15 16:46	08/26/15 22:23	10
Cadmium	ND		50	3.4	ug/L		08/24/15 16:46	08/26/15 22:23	10
Calcium	**190000**		10000	540	ug/L		08/24/15 16:46	08/26/15 22:23	10
Chromium	**71**	J	100	34	ug/L		08/24/15 16:46	08/26/15 22:23	10
Cobalt	ND		500	27	ug/L		08/24/15 16:46	08/26/15 22:23	10
Copper	ND		250	21	ug/L		08/24/15 16:46	08/26/15 22:23	10
Hardness (as CaCO3)	**1100000**		50000	17000	ug/L		08/24/15 16:46	08/26/15 22:23	10
Lead	ND		100	6.0	ug/L		08/24/15 16:46	08/26/15 22:23	10
Magnesium	**170**		10	0.51	mg/L		08/24/15 16:46	08/26/15 22:23	10

Preliminary Data

Client Sample ID: PZ-106-SD

Date Collected: 08/20/15 15:27
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	24	J	150	10	ug/L		08/24/15 16:46	08/26/15 22:23	10
Nickel	0.087	J	0.40	0.026	mg/L		08/24/15 16:46	08/26/15 22:23	10
Phosphorus	280	J B	2500	140	ug/L		08/24/15 16:46	08/26/15 22:23	10
Selenium	ND		150	21	ug/L		08/24/15 16:46	08/26/15 22:23	10
Silver	ND		100	9.9	ug/L		08/24/15 16:46	08/26/15 22:23	10
Sodium	670000		10000	1100	ug/L		08/24/15 16:46	08/26/15 22:23	10
Thallium	ND		200	24	ug/L		08/24/15 16:46	08/26/15 22:23	10
Vanadium	ND		500	44	ug/L		08/24/15 16:46	08/26/15 22:23	10
Zinc	ND		200	83	ug/L		08/24/15 16:46	08/26/15 22:23	10

Client Sample ID: PZ-116-SS

Date Collected: 08/20/15 16:11
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 19:59	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 19:59	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 19:59	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 19:59	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 19:59	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 19:59	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 19:59	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 19:59	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 19:59	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 19:59	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 19:59	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 19:59	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 19:59	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 19:59	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 19:59	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 19:59	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 19:59	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 19:59	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 19:59	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 19:59	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 19:59	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 19:59	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 19:59	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 19:59	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 19:59	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 19:59	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 19:59	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 19:59	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 19:59	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/22/15 19:59	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 19:59	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 19:59	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 19:59	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 19:59	1

Preliminary Data

Client Sample ID: PZ-116-SS

Date Collected: 08/20/15 16:11
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 19:59	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 19:59	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 19:59	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 19:59	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 19:59	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 19:59	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 19:59	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 19:59	1
Trichloroethene	**0.92**	**J B**	5.0	0.29	ug/L			08/22/15 19:59	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 19:59	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 19:59	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 19:59	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 19:59	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 19:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*138*	*X*	*75 - 123*		*08/22/15 19:59*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*08/22/15 19:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*78 - 127*		*08/22/15 19:59*	*1*
Toluene-d8 (Surr)	*116*		*80 - 120*		*08/22/15 19:59*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**6.6**	**J B ^**	10	3.7	ug/L		08/24/15 16:46	08/26/15 22:27	1
Arsenic	**2.8**	**J**	10	1.8	ug/L		08/24/15 16:46	08/26/15 22:27	1
Barium	**69**		50	2.1	ug/L		08/24/15 16:46	08/26/15 22:27	1
Beryllium	ND		5.0	0.28	ug/L		08/24/15 16:46	08/26/15 22:27	1
Boron	**340**	**^**	50	7.2	ug/L		08/24/15 16:46	08/26/15 22:27	1
Cadmium	ND		5.0	0.34	ug/L		08/24/15 16:46	08/26/15 22:27	1
Calcium	**47000**		1000	54	ug/L		08/24/15 16:46	08/26/15 22:27	1
Chromium	**8.3**	**J**	10	3.4	ug/L		08/24/15 16:46	08/26/15 22:27	1
Cobalt	ND		50	2.7	ug/L		08/24/15 16:46	08/26/15 22:27	1
Copper	**2.7**	**J**	25	2.1	ug/L		08/24/15 16:46	08/26/15 22:27	1
Hardness (as CaCO3)	**250000**		5000	1700	ug/L		08/24/15 16:46	08/26/15 22:27	1
Lead	**1.6**	**J**	10	0.60	ug/L		08/24/15 16:46	08/26/15 22:27	1
Magnesium	**31**		1.0	0.051	mg/L		08/24/15 16:46	08/26/15 22:27	1
Manganese	**15**		15	1.0	ug/L		08/24/15 16:46	08/26/15 22:27	1
Nickel	**0.0059**	**J**	0.040	0.0026	mg/L		08/24/15 16:46	08/26/15 22:27	1
Phosphorus	**260**	**B**	250	14	ug/L		08/24/15 16:46	08/26/15 22:27	1
Selenium	ND		15	2.1	ug/L		08/24/15 16:46	08/26/15 22:27	1
Silver	ND		10	0.99	ug/L		08/24/15 16:46	08/26/15 22:27	1
Sodium	**52000**		1000	110	ug/L		08/24/15 16:46	08/26/15 22:27	1
Thallium	ND		20	2.4	ug/L		08/24/15 16:46	08/26/15 22:27	1
Vanadium	ND		50	4.4	ug/L		08/24/15 16:46	08/26/15 22:27	1
Zinc	**19**	**J**	20	8.3	ug/L		08/24/15 16:46	08/26/15 22:27	1

Preliminary Data

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-105-SS

Date Collected: 08/20/15 16:54
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-7

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 20:23	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 20:23	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 20:23	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 20:23	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 20:23	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 20:23	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 20:23	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 20:23	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 20:23	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 20:23	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 20:23	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 20:23	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 20:23	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 20:23	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 20:23	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 20:23	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 20:23	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 20:23	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 20:23	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 20:23	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 20:23	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 20:23	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 20:23	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 20:23	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 20:23	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 20:23	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 20:23	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 20:23	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 20:23	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/22/15 20:23	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 20:23	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 20:23	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 20:23	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 20:23	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 20:23	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 20:23	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 20:23	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 20:23	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 20:23	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 20:23	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 20:23	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 20:23	1
Trichloroethene	**0.85**	**J B**	5.0	0.29	ug/L			08/22/15 20:23	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 20:23	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 20:23	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 20:23	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 20:23	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 20:23	1

Preliminary Data

Client Sample ID: PZ-105-SS

Date Collected: 08/20/15 16:54
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-7

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*126*	*X*	*75 - 123*		*08/22/15 20:23*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/22/15 20:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*78 - 127*		*08/22/15 20:23*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*		*08/22/15 20:23*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**37**	**J B ^**	100	37	ug/L		08/24/15 16:46	08/26/15 22:31	10
Arsenic	**26**	**J**	100	18	ug/L		08/24/15 16:46	08/26/15 22:31	10
Barium	**160**	**J**	500	21	ug/L		08/24/15 16:46	08/26/15 22:31	10
Beryllium	ND		50	2.8	ug/L		08/24/15 16:46	08/26/15 22:31	10
Boron	ND	^	500	72	ug/L		08/24/15 16:46	08/26/15 22:31	10
Cadmium	ND		50	3.4	ug/L		08/24/15 16:46	08/26/15 22:31	10
Calcium	**100000**		10000	540	ug/L		08/24/15 16:46	08/26/15 22:31	10
Chromium	ND		100	34	ug/L		08/24/15 16:46	08/26/15 22:31	10
Cobalt	ND		500	27	ug/L		08/24/15 16:46	08/26/15 22:31	10
Copper	ND		250	21	ug/L		08/24/15 16:46	08/26/15 22:31	10
Hardness (as CaCO3)	**460000**		50000	17000	ug/L		08/24/15 16:46	08/26/15 22:31	10
Lead	ND		100	6.0	ug/L		08/24/15 16:46	08/26/15 22:31	10
Magnesium	**50**		10	0.51	mg/L		08/24/15 16:46	08/26/15 22:31	10
Manganese	ND		150	10	ug/L		08/24/15 16:46	08/26/15 22:31	10
Nickel	ND		0.40	0.026	mg/L		08/24/15 16:46	08/26/15 22:31	10
Phosphorus	ND		2500	140	ug/L		08/24/15 16:46	08/26/15 22:31	10
Selenium	ND		150	21	ug/L		08/24/15 16:46	08/26/15 22:31	10
Silver	ND		100	9.9	ug/L		08/24/15 16:46	08/26/15 22:31	10
Sodium	**52000**		10000	1100	ug/L		08/24/15 16:46	08/26/15 22:31	10
Thallium	ND		200	24	ug/L		08/24/15 16:46	08/26/15 22:31	10
Vanadium	ND		500	44	ug/L		08/24/15 16:46	08/26/15 22:31	10
Zinc	ND		200	83	ug/L		08/24/15 16:46	08/26/15 22:31	10

Preliminary Data

Client Sample ID: PZ-202-SS

Date Collected: 08/20/15 17:30
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-8

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 20:48	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 20:48	1
Benzene	**110**		5.0	0.25	ug/L			08/22/15 20:48	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 20:48	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 20:48	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 20:48	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 20:48	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 20:48	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 20:48	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 20:48	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 20:48	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 20:48	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 20:48	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 20:48	1

Client Sample ID: PZ-202-SS

Date Collected: 08/20/15 17:30
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-8

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 20:48	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 20:48	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 20:48	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 20:48	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 20:48	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 20:48	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 20:48	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 20:48	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 20:48	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 20:48	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 20:48	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 20:48	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 20:48	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 20:48	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 20:48	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/22/15 20:48	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 20:48	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 20:48	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 20:48	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 20:48	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 20:48	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 20:48	1
Toluene	3.7	J	5.0	1.0	ug/L			08/22/15 20:48	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 20:48	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 20:48	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 20:48	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 20:48	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 20:48	1
Trichloroethene	0.91	J B	5.0	0.29	ug/L			08/22/15 20:48	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 20:48	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 20:48	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 20:48	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 20:48	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 20:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*	*X*	*75 - 123*		*08/22/15 20:48*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 120*		*08/22/15 20:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*78 - 127*		*08/22/15 20:48*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*08/22/15 20:48*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	55	J B ^	100	37	ug/L		08/24/15 16:46	08/26/15 22:48	10
Arsenic	33	J	100	18	ug/L		08/24/15 16:46	08/26/15 22:48	10
Barium	1800		500	21	ug/L		08/24/15 16:46	08/26/15 22:48	10
Beryllium	ND		50	2.8	ug/L		08/24/15 16:46	08/26/15 22:48	10
Boron	88	J ^	500	72	ug/L		08/24/15 16:46	08/26/15 22:48	10
Cadmium	ND		50	3.4	ug/L		08/24/15 16:46	08/26/15 22:48	10
Calcium	520000		10000	540	ug/L		08/24/15 16:46	08/26/15 22:48	10

Preliminary Data

Client Sample ID: PZ-202-SS

Date Collected: 08/20/15 17:30
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-8

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	36	J	100	34	ug/L		08/24/15 16:46	08/26/15 22:48	10
Cobalt	ND		500	27	ug/L		08/24/15 16:46	08/26/15 22:48	10
Copper	ND		250	21	ug/L		08/24/15 16:46	08/26/15 22:48	10
Hardness (as CaCO3)	2200000		50000	17000	ug/L		08/24/15 16:46	08/26/15 22:48	10
Lead	ND		100	6.0	ug/L		08/24/15 16:46	08/26/15 22:48	10
Magnesium	210		10	0.51	mg/L		08/24/15 16:46	08/26/15 22:48	10
Manganese	2900		150	10	ug/L		08/24/15 16:46	08/26/15 22:48	10
Nickel	0.055	J	0.40	0.026	mg/L		08/24/15 16:46	08/26/15 22:48	10
Phosphorus	180	J B	2500	140	ug/L		08/24/15 16:46	08/26/15 22:48	10
Selenium	ND		150	21	ug/L		08/24/15 16:46	08/26/15 22:48	10
Silver	ND		100	9.9	ug/L		08/24/15 16:46	08/26/15 22:48	10
Sodium	64000		10000	1100	ug/L		08/24/15 16:46	08/26/15 22:48	10
Thallium	ND		200	24	ug/L		08/24/15 16:46	08/26/15 22:48	10
Vanadium	ND		500	44	ug/L		08/24/15 16:46	08/26/15 22:48	10
Zinc	ND		200	83	ug/L		08/24/15 16:46	08/26/15 22:48	10

Client Sample ID: PZ-107-SS

Date Collected: 08/21/15 09:10
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-9

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 21:12	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 21:12	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 21:12	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 21:12	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 21:12	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 21:12	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 21:12	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 21:12	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 21:12	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 21:12	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 21:12	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 21:12	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 21:12	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 21:12	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 21:12	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 21:12	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 21:12	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 21:12	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 21:12	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 21:12	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 21:12	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 21:12	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 21:12	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 21:12	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 21:12	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 21:12	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 21:12	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 21:12	1

Preliminary Data

Client Sample ID: PZ-107-SS

Date Collected: 08/21/15 09:10
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 21:12	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/22/15 21:12	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 21:12	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 21:12	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 21:12	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 21:12	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 21:12	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 21:12	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 21:12	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 21:12	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 21:12	1
trans-1,3-Dichloropropene	ND	*	5.0	0.35	ug/L			08/22/15 21:12	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 21:12	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 21:12	1
Trichloroethene	**1.0**	**J B**	5.0	0.29	ug/L			08/22/15 21:12	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 21:12	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 21:12	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 21:12	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 21:12	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 21:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*75 - 123*		*08/22/15 21:12*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/22/15 21:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*78 - 127*		*08/22/15 21:12*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*		*08/22/15 21:12*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	^	100	37	ug/L		08/24/15 16:46	08/26/15 22:52	10
Arsenic	ND		100	18	ug/L		08/24/15 16:46	08/26/15 22:52	10
Barium	**590**		500	21	ug/L		08/24/15 16:46	08/26/15 22:52	10
Beryllium	ND		50	2.8	ug/L		08/24/15 16:46	08/26/15 22:52	10
Boron	**260**	**J ^**	500	72	ug/L		08/24/15 16:46	08/26/15 22:52	10
Cadmium	ND		50	3.4	ug/L		08/24/15 16:46	08/26/15 22:52	10
Calcium	**250000**		10000	540	ug/L		08/24/15 16:46	08/26/15 22:52	10
Chromium	**34**	**J**	100	34	ug/L		08/24/15 16:46	08/26/15 22:52	10
Cobalt	ND		500	27	ug/L		08/24/15 16:46	08/26/15 22:52	10
Copper	ND		250	21	ug/L		08/24/15 16:46	08/26/15 22:52	10
Hardness (as CaCO3)	**1100000**		50000	17000	ug/L		08/24/15 16:46	08/26/15 22:52	10
Lead	ND		100	6.0	ug/L		08/24/15 16:46	08/26/15 22:52	10
Magnesium	**120**		10	0.51	mg/L		08/24/15 16:46	08/26/15 22:52	10
Manganese	**100**	**J**	150	10	ug/L		08/24/15 16:46	08/26/15 22:52	10
Nickel	**0.048**	**J**	0.40	0.026	mg/L		08/24/15 16:46	08/26/15 22:52	10
Phosphorus	**140**	**J B**	2500	140	ug/L		08/24/15 16:46	08/26/15 22:52	10
Selenium	ND		150	21	ug/L		08/24/15 16:46	08/26/15 22:52	10
Silver	ND		100	9.9	ug/L		08/24/15 16:46	08/26/15 22:52	10
Sodium	**78000**		10000	1100	ug/L		08/24/15 16:46	08/26/15 22:52	10
Thallium	ND		200	24	ug/L		08/24/15 16:46	08/26/15 22:52	10
Vanadium	ND		500	44	ug/L		08/24/15 16:46	08/26/15 22:52	10

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-107-SS

Date Collected: 08/21/15 09:10
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		200	83	ug/L		08/24/15 16:46	08/26/15 22:52	10

Client Sample ID: MW-1204

Date Collected: 08/21/15 10:10
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-10
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrylonitrile	ND		50	1.7	ug/L			08/23/15 23:33	1
Benzene	**6.4**		5.0	0.25	ug/L			08/23/15 23:33	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/23/15 23:33	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/23/15 23:33	1
Bromoform	ND		5.0	0.37	ug/L			08/23/15 23:33	1
Carbon disulfide	**0.79**	**J**	5.0	0.37	ug/L			08/23/15 23:33	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/23/15 23:33	1
Chlorobenzene	**0.88**	**J**	5.0	0.38	ug/L			08/23/15 23:33	1
Chloroethane	ND		10	0.38	ug/L			08/23/15 23:33	1
Chloroform	ND		5.0	0.15	ug/L			08/23/15 23:33	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/23/15 23:33	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/23/15 23:33	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/23/15 23:33	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/23/15 23:33	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/23/15 23:33	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/23/15 23:33	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/23/15 23:33	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/23/15 23:33	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/23/15 23:33	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/23/15 23:33	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/23/15 23:33	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/23/15 23:33	1
2-Hexanone	**8.2**	**J**	20	0.59	ug/L			08/23/15 23:33	1
Methacrylonitrile	ND		50	2.1	ug/L			08/23/15 23:33	1
Methyl bromide	ND		10	0.40	ug/L			08/23/15 23:33	1
Methyl chloride	ND		10	0.55	ug/L			08/23/15 23:33	1
Methylene bromide	ND		5.0	0.41	ug/L			08/23/15 23:33	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/23/15 23:33	1
Methyl ethyl ketone (MEK)	**160**		20	0.39	ug/L			08/23/15 23:33	1
Methyl iodide	ND		5.0	1.5	ug/L			08/23/15 23:33	1
4-Methyl-2-pentanone (MIBK)	**7.9**	**J**	20	0.33	ug/L			08/23/15 23:33	1
Styrene	ND		5.0	0.35	ug/L			08/23/15 23:33	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/23/15 23:33	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/23/15 23:33	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/23/15 23:33	1
Toluene	**71**		5.0	1.0	ug/L			08/23/15 23:33	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/23/15 23:33	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/23/15 23:33	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/23/15 23:33	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/23/15 23:33	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/23/15 23:33	1
Trichloroethene	**0.97**	**J B**	5.0	0.29	ug/L			08/23/15 23:33	1

Preliminary Data

Client Sample ID: MW-1204

Date Collected: 08/21/15 10:10
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/23/15 23:33	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/23/15 23:33	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/23/15 23:33	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/23/15 23:33	1
Xylenes, Total	ND		10	0.85	ug/L			08/23/15 23:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*75 - 123*		*08/23/15 23:33*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/23/15 23:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*78 - 127*		*08/23/15 23:33*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*08/23/15 23:33*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**1200**		200	67	ug/L			08/27/15 00:03	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*75 - 123*		*08/27/15 00:03*	*10*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/27/15 00:03*	*10*
1,2-Dichloroethane-d4 (Surr)	*88*		*78 - 127*		*08/27/15 00:03*	*10*
Toluene-d8 (Surr)	*102*		*80 - 120*		*08/27/15 00:03*	*10*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	^	100	37	ug/L		08/24/15 16:46	08/26/15 22:56	10
Arsenic	ND		100	18	ug/L		08/24/15 16:46	08/26/15 22:56	10
Barium	**3500**		500	21	ug/L		08/24/15 16:46	08/26/15 22:56	10
Beryllium	ND		50	2.8	ug/L		08/24/15 16:46	08/26/15 22:56	10
Boron	**1800**	^	500	72	ug/L		08/24/15 16:46	08/26/15 22:56	10
Cadmium	ND		50	3.4	ug/L		08/24/15 16:46	08/26/15 22:56	10
Calcium	**570000**		10000	540	ug/L		08/24/15 16:46	08/26/15 22:56	10
Chromium	**86**	J	100	34	ug/L		08/24/15 16:46	08/26/15 22:56	10
Cobalt	ND		500	27	ug/L		08/24/15 16:46	08/26/15 22:56	10
Copper	ND		250	21	ug/L		08/24/15 16:46	08/26/15 22:56	10
Hardness (as CaCO3)	**1900000**		50000	17000	ug/L		08/24/15 16:46	08/26/15 22:56	10
Lead	ND		100	6.0	ug/L		08/24/15 16:46	08/26/15 22:56	10
Magnesium	**130**		10	0.51	mg/L		08/24/15 16:46	08/26/15 22:56	10
Manganese	**1300**		150	10	ug/L		08/24/15 16:46	08/26/15 22:56	10
Nickel	**0.028**	J	0.40	0.026	mg/L		08/24/15 16:46	08/26/15 22:56	10
Phosphorus	**650**	J B	2500	140	ug/L		08/24/15 16:46	08/26/15 22:56	10
Selenium	ND		150	21	ug/L		08/24/15 16:46	08/26/15 22:56	10
Silver	ND		100	9.9	ug/L		08/24/15 16:46	08/26/15 22:56	10
Sodium	**260000**		10000	1100	ug/L		08/24/15 16:46	08/26/15 22:56	10
Thallium	ND		200	24	ug/L		08/24/15 16:46	08/26/15 22:56	10
Vanadium	ND		500	44	ug/L		08/24/15 16:46	08/26/15 22:56	10
Zinc	ND		200	83	ug/L		08/24/15 16:46	08/26/15 22:56	10

Preliminary Data

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: 082115
Date Collected: 08/21/15 10:10
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-11
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrylonitrile	ND		50	1.7	ug/L			08/23/15 21:51	1
Benzene	**9.9**		5.0	0.25	ug/L			08/23/15 21:51	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/23/15 21:51	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/23/15 21:51	1
Bromoform	ND		5.0	0.37	ug/L			08/23/15 21:51	1
Carbon disulfide	**0.98**	**J**	5.0	0.37	ug/L			08/23/15 21:51	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/23/15 21:51	1
Chlorobenzene	**1.3**	**J**	5.0	0.38	ug/L			08/23/15 21:51	1
Chloroethane	ND		10	0.38	ug/L			08/23/15 21:51	1
Chloroform	ND		5.0	0.15	ug/L			08/23/15 21:51	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/23/15 21:51	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/23/15 21:51	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/23/15 21:51	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/23/15 21:51	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/23/15 21:51	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/23/15 21:51	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/23/15 21:51	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/23/15 21:51	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/23/15 21:51	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/23/15 21:51	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/23/15 21:51	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/23/15 21:51	1
2-Hexanone	**16**	**J**	20	0.59	ug/L			08/23/15 21:51	1
Methacrylonitrile	ND		50	2.1	ug/L			08/23/15 21:51	1
Methyl bromide	ND		10	0.40	ug/L			08/23/15 21:51	1
Methyl chloride	ND	F1	10	0.55	ug/L			08/23/15 21:51	1
Methylene bromide	ND		5.0	0.41	ug/L			08/23/15 21:51	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/23/15 21:51	1
Methyl iodide	ND		5.0	1.5	ug/L			08/23/15 21:51	1
4-Methyl-2-pentanone (MIBK)	**19**	**J**	20	0.33	ug/L			08/23/15 21:51	1
Styrene	ND		5.0	0.35	ug/L			08/23/15 21:51	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/23/15 21:51	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/23/15 21:51	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/23/15 21:51	1
Toluene	**140**	**F1**	5.0	1.0	ug/L			08/23/15 21:51	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/23/15 21:51	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/23/15 21:51	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/23/15 21:51	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/23/15 21:51	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/23/15 21:51	1
Trichloroethene	**0.96**	**J B**	5.0	0.29	ug/L			08/23/15 21:51	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/23/15 21:51	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/23/15 21:51	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/23/15 21:51	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/23/15 21:51	1
Xylenes, Total	ND		10	0.85	ug/L			08/23/15 21:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*75 - 123*		*08/23/15 21:51*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/23/15 21:51*	*1*

Preliminary Data

Client Sample ID: 082115

Date Collected: 08/21/15 10:10
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-11

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		78 - 127		08/23/15 21:51	1
Toluene-d8 (Surr)	102		80 - 120		08/23/15 21:51	1

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1800		400	130	ug/L			08/24/15 01:15	20
Methyl ethyl ketone (MEK)	790		400	7.8	ug/L			08/24/15 01:15	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		75 - 123		08/24/15 01:15	20
Dibromofluoromethane (Surr)	103		80 - 120		08/24/15 01:15	20
1,2-Dichloroethane-d4 (Surr)	94		78 - 127		08/24/15 01:15	20
Toluene-d8 (Surr)	106		80 - 120		08/24/15 01:15	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	41	J B ^	100	37	ug/L		08/24/15 16:46	08/26/15 23:00	10
Arsenic	20	J	100	18	ug/L		08/24/15 16:46	08/26/15 23:00	10
Barium	3300		500	21	ug/L		08/24/15 16:46	08/26/15 23:00	10
Beryllium	ND		50	2.8	ug/L		08/24/15 16:46	08/26/15 23:00	10
Boron	1600	^	500	72	ug/L		08/24/15 16:46	08/26/15 23:00	10
Cadmium	ND		50	3.4	ug/L		08/24/15 16:46	08/26/15 23:00	10
Calcium	530000		10000	540	ug/L		08/24/15 16:46	08/26/15 23:00	10
Chromium	88	J	100	34	ug/L		08/24/15 16:46	08/26/15 23:00	10
Cobalt	ND		500	27	ug/L		08/24/15 16:46	08/26/15 23:00	10
Copper	ND		250	21	ug/L		08/24/15 16:46	08/26/15 23:00	10
Hardness (as CaCO3)	1800000		50000	17000	ug/L		08/24/15 16:46	08/26/15 23:00	10
Lead	ND		100	6.0	ug/L		08/24/15 16:46	08/26/15 23:00	10
Magnesium	110		10	0.51	mg/L		08/24/15 16:46	08/26/15 23:00	10
Manganese	1200		150	10	ug/L		08/24/15 16:46	08/26/15 23:00	10
Nickel	ND		0.40	0.026	mg/L		08/24/15 16:46	08/26/15 23:00	10
Phosphorus	580	J B	2500	140	ug/L		08/24/15 16:46	08/26/15 23:00	10
Selenium	21	J	150	21	ug/L		08/24/15 16:46	08/26/15 23:00	10
Silver	ND		100	9.9	ug/L		08/24/15 16:46	08/26/15 23:00	10
Sodium	240000		10000	1100	ug/L		08/24/15 16:46	08/26/15 23:00	10
Thallium	ND		200	24	ug/L		08/24/15 16:46	08/26/15 23:00	10
Vanadium	ND		500	44	ug/L		08/24/15 16:46	08/26/15 23:00	10
Zinc	ND		200	83	ug/L		08/24/15 16:46	08/26/15 23:00	10

Client Sample ID: PZ-203-SS

Date Collected: 08/21/15 11:12
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-12

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/23/15 23:59	1
Acrylonitrile	ND		50	1.7	ug/L			08/23/15 23:59	1
Benzene	ND		5.0	0.25	ug/L			08/23/15 23:59	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/23/15 23:59	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/23/15 23:59	1

Preliminary Data

Client Sample ID: PZ-203-SS

Date Collected: 08/21/15 11:12
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-12

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		5.0	0.37	ug/L			08/23/15 23:59	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/23/15 23:59	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/23/15 23:59	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/23/15 23:59	1
Chloroethane	ND		10	0.38	ug/L			08/23/15 23:59	1
Chloroform	ND		5.0	0.15	ug/L			08/23/15 23:59	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/23/15 23:59	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/23/15 23:59	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/23/15 23:59	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/23/15 23:59	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/23/15 23:59	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/23/15 23:59	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/23/15 23:59	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/23/15 23:59	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/23/15 23:59	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/23/15 23:59	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/23/15 23:59	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/23/15 23:59	1
2-Hexanone	ND		20	0.59	ug/L			08/23/15 23:59	1
Methacrylonitrile	ND		50	2.1	ug/L			08/23/15 23:59	1
Methyl bromide	ND		10	0.40	ug/L			08/23/15 23:59	1
Methyl chloride	ND		10	0.55	ug/L			08/23/15 23:59	1
Methylene bromide	ND		5.0	0.41	ug/L			08/23/15 23:59	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/23/15 23:59	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/23/15 23:59	1
Methyl iodide	ND		5.0	1.5	ug/L			08/23/15 23:59	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/23/15 23:59	1
Styrene	ND		5.0	0.35	ug/L			08/23/15 23:59	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/23/15 23:59	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/23/15 23:59	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/23/15 23:59	1
Toluene	ND		5.0	1.0	ug/L			08/23/15 23:59	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/23/15 23:59	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/23/15 23:59	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/23/15 23:59	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/23/15 23:59	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/23/15 23:59	1
Trichloroethene	**0.74**	**J B**	5.0	0.29	ug/L			08/23/15 23:59	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/23/15 23:59	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/23/15 23:59	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/23/15 23:59	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/23/15 23:59	1
Xylenes, Total	ND		10	0.85	ug/L			08/23/15 23:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*75 - 123*		*08/23/15 23:59*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/23/15 23:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*78 - 127*		*08/23/15 23:59*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*08/23/15 23:59*	*1*

Preliminary Data

Client Sample ID: PZ-203-SS

Date Collected: 08/21/15 11:12
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-12

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	^	100	37	ug/L		08/24/15 16:46	08/26/15 23:04	10
Arsenic	ND		100	18	ug/L		08/24/15 16:46	08/26/15 23:04	10
Barium	**100**	**J**	500	21	ug/L		08/24/15 16:46	08/26/15 23:04	10
Beryllium	ND		50	2.8	ug/L		08/24/15 16:46	08/26/15 23:04	10
Boron	**100**	**J ^**	500	72	ug/L		08/24/15 16:46	08/26/15 23:04	10
Cadmium	ND		50	3.4	ug/L		08/24/15 16:46	08/26/15 23:04	10
Calcium	**110000**		10000	540	ug/L		08/24/15 16:46	08/26/15 23:04	10
Chromium	ND		100	34	ug/L		08/24/15 16:46	08/26/15 23:04	10
Cobalt	ND		500	27	ug/L		08/24/15 16:46	08/26/15 23:04	10
Copper	ND		250	21	ug/L		08/24/15 16:46	08/26/15 23:04	10
Hardness (as CaCO3)	**440000**		50000	17000	ug/L		08/24/15 16:46	08/26/15 23:04	10
Lead	ND		100	6.0	ug/L		08/24/15 16:46	08/26/15 23:04	10
Magnesium	**44**		10	0.51	mg/L		08/24/15 16:46	08/26/15 23:04	10
Manganese	**21**	**J**	150	10	ug/L		08/24/15 16:46	08/26/15 23:04	10
Nickel	ND		0.40	0.026	mg/L		08/24/15 16:46	08/26/15 23:04	10
Phosphorus	ND		2500	140	ug/L		08/24/15 16:46	08/26/15 23:04	10
Selenium	ND		150	21	ug/L		08/24/15 16:46	08/26/15 23:04	10
Silver	ND		100	9.9	ug/L		08/24/15 16:46	08/26/15 23:04	10
Sodium	**8000**	**J**	10000	1100	ug/L		08/24/15 16:46	08/26/15 23:04	10
Thallium	ND		200	24	ug/L		08/24/15 16:46	08/26/15 23:04	10
Vanadium	ND		500	44	ug/L		08/24/15 16:46	08/26/15 23:04	10
Zinc	ND		200	83	ug/L		08/24/15 16:46	08/26/15 23:04	10

Client Sample ID: PZ-103-SS

Date Collected: 08/21/15 12:02
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-13

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/24/15 00:24	1
Acrylonitrile	ND		50	1.7	ug/L			08/24/15 00:24	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/24/15 00:24	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/24/15 00:24	1
Bromoform	ND		5.0	0.37	ug/L			08/24/15 00:24	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/24/15 00:24	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/24/15 00:24	1
Chlorobenzene	**1.2**	**J**	5.0	0.38	ug/L			08/24/15 00:24	1
Chloroethane	ND		10	0.38	ug/L			08/24/15 00:24	1
Chloroform	ND		5.0	0.15	ug/L			08/24/15 00:24	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/24/15 00:24	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/24/15 00:24	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/24/15 00:24	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/24/15 00:24	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/24/15 00:24	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/24/15 00:24	1
1,4-Dichlorobenzene	**7.3**		5.0	0.35	ug/L			08/24/15 00:24	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/24/15 00:24	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/24/15 00:24	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/24/15 00:24	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/24/15 00:24	1

Preliminary Data

Client Sample ID: PZ-103-SS

Date Collected: 08/21/15 12:02
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-13

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	6.8		5.0	0.30	ug/L			08/24/15 00:24	1
2-Hexanone	ND		20	0.59	ug/L			08/24/15 00:24	1
Methacrylonitrile	ND		50	2.1	ug/L			08/24/15 00:24	1
Methyl bromide	ND		10	0.40	ug/L			08/24/15 00:24	1
Methyl chloride	ND		10	0.55	ug/L			08/24/15 00:24	1
Methylene bromide	ND		5.0	0.41	ug/L			08/24/15 00:24	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/24/15 00:24	1
Methyl ethyl ketone (MEK)	3.1	J	20	0.39	ug/L			08/24/15 00:24	1
Methyl iodide	ND		5.0	1.5	ug/L			08/24/15 00:24	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/24/15 00:24	1
Styrene	ND		5.0	0.35	ug/L			08/24/15 00:24	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/24/15 00:24	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/24/15 00:24	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/24/15 00:24	1
Toluene	19		5.0	1.0	ug/L			08/24/15 00:24	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/24/15 00:24	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/24/15 00:24	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/24/15 00:24	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/24/15 00:24	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/24/15 00:24	1
Trichloroethene	0.95	J B	5.0	0.29	ug/L			08/24/15 00:24	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/24/15 00:24	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/24/15 00:24	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/24/15 00:24	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/24/15 00:24	1
Xylenes, Total	12		10	0.85	ug/L			08/24/15 00:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*75 - 123*		*08/24/15 00:24*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/24/15 00:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*78 - 127*		*08/24/15 00:24*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/24/15 00:24*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	240		10	0.50	ug/L			08/26/15 22:23	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*75 - 123*		*08/26/15 22:23*	*2*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*08/26/15 22:23*	*2*
1,2-Dichloroethane-d4 (Surr)	*90*		*78 - 127*		*08/26/15 22:23*	*2*
Toluene-d8 (Surr)	*103*		*80 - 120*		*08/26/15 22:23*	*2*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	41	J B ^	100	37	ug/L		08/24/15 16:46	08/26/15 23:08	10
Arsenic	ND		100	18	ug/L		08/24/15 16:46	08/26/15 23:08	10
Barium	600		500	21	ug/L		08/24/15 16:46	08/26/15 23:08	10
Beryllium	ND		50	2.8	ug/L		08/24/15 16:46	08/26/15 23:08	10
Boron	350	J ^	500	72	ug/L		08/24/15 16:46	08/26/15 23:08	10

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: PZ-103-SS

Date Collected: 08/21/15 12:02
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-13

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		50	3.4	ug/L		08/24/15 16:46	08/26/15 23:08	10
Calcium	**230000**		10000	540	ug/L		08/24/15 16:46	08/26/15 23:08	10
Chromium	**66**	**J**	100	34	ug/L		08/24/15 16:46	08/26/15 23:08	10
Cobalt	ND		500	27	ug/L		08/24/15 16:46	08/26/15 23:08	10
Copper	ND		250	21	ug/L		08/24/15 16:46	08/26/15 23:08	10
Hardness (as CaCO3)	**880000**		50000	17000	ug/L		08/24/15 16:46	08/26/15 23:08	10
Lead	**7.0**	**J**	100	6.0	ug/L		08/24/15 16:46	08/26/15 23:08	10
Magnesium	**73**		10	0.51	mg/L		08/24/15 16:46	08/26/15 23:08	10
Manganese	**620**		150	10	ug/L		08/24/15 16:46	08/26/15 23:08	10
Nickel	**0.072**	**J**	0.40	0.026	mg/L		08/24/15 16:46	08/26/15 23:08	10
Phosphorus	**1500**	**J B**	2500	140	ug/L		08/24/15 16:46	08/26/15 23:08	10
Selenium	ND		150	21	ug/L		08/24/15 16:46	08/26/15 23:08	10
Silver	ND		100	9.9	ug/L		08/24/15 16:46	08/26/15 23:08	10
Sodium	**92000**		10000	1100	ug/L		08/24/15 16:46	08/26/15 23:08	10
Thallium	ND		200	24	ug/L		08/24/15 16:46	08/26/15 23:08	10
Vanadium	ND		500	44	ug/L		08/24/15 16:46	08/26/15 23:08	10
Zinc	**260**		200	83	ug/L		08/24/15 16:46	08/26/15 23:08	10

Client Sample ID: PZ-204-SS

Date Collected: 08/21/15 13:00
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-14

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/24/15 00:50	1
Acrylonitrile	ND		50	1.7	ug/L			08/24/15 00:50	1
Benzene	ND		5.0	0.25	ug/L			08/24/15 00:50	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/24/15 00:50	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/24/15 00:50	1
Bromoform	ND		5.0	0.37	ug/L			08/24/15 00:50	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/24/15 00:50	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/24/15 00:50	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/24/15 00:50	1
Chloroethane	ND		10	0.38	ug/L			08/24/15 00:50	1
Chloroform	ND		5.0	0.15	ug/L			08/24/15 00:50	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/24/15 00:50	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/24/15 00:50	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/24/15 00:50	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/24/15 00:50	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/24/15 00:50	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/24/15 00:50	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/24/15 00:50	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/24/15 00:50	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/24/15 00:50	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/24/15 00:50	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/24/15 00:50	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/24/15 00:50	1
2-Hexanone	ND		20	0.59	ug/L			08/24/15 00:50	1
Methacrylonitrile	ND		50	2.1	ug/L			08/24/15 00:50	1
Methyl bromide	ND		10	0.40	ug/L			08/24/15 00:50	1

Preliminary Data

Client Sample ID: PZ-204-SS

Date Collected: 08/21/15 13:00
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-14

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl chloride	ND		10	0.55	ug/L			08/24/15 00:50	1
Methylene bromide	ND		5.0	0.41	ug/L			08/24/15 00:50	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/24/15 00:50	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/24/15 00:50	1
Methyl iodide	ND		5.0	1.5	ug/L			08/24/15 00:50	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/24/15 00:50	1
Styrene	ND		5.0	0.35	ug/L			08/24/15 00:50	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/24/15 00:50	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/24/15 00:50	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/24/15 00:50	1
Toluene	ND		5.0	1.0	ug/L			08/24/15 00:50	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/24/15 00:50	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/24/15 00:50	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/24/15 00:50	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/24/15 00:50	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/24/15 00:50	1
Trichloroethene	**1.1**	**J B**	5.0	0.29	ug/L			08/24/15 00:50	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/24/15 00:50	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/24/15 00:50	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/24/15 00:50	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/24/15 00:50	1
Xylenes, Total	ND		10	0.85	ug/L			08/24/15 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*75 - 123*		*08/24/15 00:50*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*08/24/15 00:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*78 - 127*		*08/24/15 00:50*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*08/24/15 00:50*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**5.6**	**J B ^**	10	3.7	ug/L		08/24/15 16:46	08/26/15 23:12	1
Arsenic	ND		10	1.8	ug/L		08/24/15 16:46	08/26/15 23:12	1
Barium	**170**		50	2.1	ug/L		08/24/15 16:46	08/26/15 23:12	1
Beryllium	ND		5.0	0.28	ug/L		08/24/15 16:46	08/26/15 23:12	1
Boron	**87**	**^**	50	7.2	ug/L		08/24/15 16:46	08/26/15 23:12	1
Cadmium	ND		5.0	0.34	ug/L		08/24/15 16:46	08/26/15 23:12	1
Calcium	**76000**		1000	54	ug/L		08/24/15 16:46	08/26/15 23:12	1
Chromium	**6.6**	**J**	10	3.4	ug/L		08/24/15 16:46	08/26/15 23:12	1
Cobalt	ND		50	2.7	ug/L		08/24/15 16:46	08/26/15 23:12	1
Copper	ND		25	2.1	ug/L		08/24/15 16:46	08/26/15 23:12	1
Hardness (as CaCO3)	**400000**		5000	1700	ug/L		08/24/15 16:46	08/26/15 23:12	1
Lead	**2.1**	**J**	10	0.60	ug/L		08/24/15 16:46	08/26/15 23:12	1
Magnesium	**52**		1.0	0.051	mg/L		08/24/15 16:46	08/26/15 23:12	1
Manganese	**26**		15	1.0	ug/L		08/24/15 16:46	08/26/15 23:12	1
Nickel	**0.0048**	**J**	0.040	0.0026	mg/L		08/24/15 16:46	08/26/15 23:12	1
Phosphorus	**190**	**J B**	250	14	ug/L		08/24/15 16:46	08/26/15 23:12	1
Selenium	**4.9**	**J**	15	2.1	ug/L		08/24/15 16:46	08/26/15 23:12	1
Silver	ND		10	0.99	ug/L		08/24/15 16:46	08/26/15 23:12	1
Sodium	**29000**		1000	110	ug/L		08/24/15 16:46	08/26/15 23:12	1

Preliminary Data

Client Sample ID: PZ-204-SS

Date Collected: 08/21/15 13:00
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-14

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		20	2.4	ug/L		08/24/15 16:46	08/26/15 23:12	1
Vanadium	ND		50	4.4	ug/L		08/24/15 16:46	08/26/15 23:12	1
Zinc	8.3	J	20	8.3	ug/L		08/24/15 16:46	08/26/15 23:12	1

Client Sample ID: TRIP BLANK

Date Collected: 08/21/15 00:00
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-15

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/23/15 19:44	1
Acrylonitrile	ND		50	1.7	ug/L			08/23/15 19:44	1
Benzene	ND		5.0	0.25	ug/L			08/23/15 19:44	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/23/15 19:44	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/23/15 19:44	1
Bromoform	ND		5.0	0.37	ug/L			08/23/15 19:44	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/23/15 19:44	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/23/15 19:44	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/23/15 19:44	1
Chloroethane	ND		10	0.38	ug/L			08/23/15 19:44	1
Chloroform	ND		5.0	0.15	ug/L			08/23/15 19:44	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/23/15 19:44	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/23/15 19:44	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/23/15 19:44	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/23/15 19:44	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/23/15 19:44	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/23/15 19:44	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/23/15 19:44	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/23/15 19:44	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/23/15 19:44	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/23/15 19:44	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/23/15 19:44	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/23/15 19:44	1
2-Hexanone	ND		20	0.59	ug/L			08/23/15 19:44	1
Methacrylonitrile	ND		50	2.1	ug/L			08/23/15 19:44	1
Methyl bromide	ND		10	0.40	ug/L			08/23/15 19:44	1
Methyl chloride	ND		10	0.55	ug/L			08/23/15 19:44	1
Methylene bromide	ND		5.0	0.41	ug/L			08/23/15 19:44	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/23/15 19:44	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/23/15 19:44	1
Methyl iodide	ND		5.0	1.5	ug/L			08/23/15 19:44	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/23/15 19:44	1
Styrene	ND		5.0	0.35	ug/L			08/23/15 19:44	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/23/15 19:44	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/23/15 19:44	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/23/15 19:44	1
Toluene	ND		5.0	1.0	ug/L			08/23/15 19:44	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/23/15 19:44	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/23/15 19:44	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/23/15 19:44	1

Preliminary Data

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Client Sample ID: TRIP BLANK
Date Collected: 08/21/15 00:00
Date Received: 08/21/15 15:25

Lab Sample ID: 160-13506-15
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/23/15 19:44	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/23/15 19:44	1
Trichloroethene	0.74	J B	5.0	0.29	ug/L			08/23/15 19:44	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/23/15 19:44	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/23/15 19:44	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/23/15 19:44	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/23/15 19:44	1
Xylenes, Total	ND		10	0.85	ug/L			08/23/15 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*75 - 123*		*08/23/15 19:44*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*08/23/15 19:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*78 - 127*		*08/23/15 19:44*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/23/15 19:44*	*1*

Preliminary Data

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 160-207022/7
Matrix: Water
Analysis Batch: 207022

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/22/15 13:23	1
Acetonitrile	ND		50	7.3	ug/L			08/22/15 13:23	1
Acrolein	ND		50	3.1	ug/L			08/22/15 13:23	1
Acrylonitrile	ND		50	1.7	ug/L			08/22/15 13:23	1
Allyl chloride	ND		10	0.39	ug/L			08/22/15 13:23	1
Benzene	ND		5.0	0.25	ug/L			08/22/15 13:23	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/22/15 13:23	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/22/15 13:23	1
Bromoform	ND		5.0	0.37	ug/L			08/22/15 13:23	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/22/15 13:23	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/22/15 13:23	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/22/15 13:23	1
Chloroethane	ND		10	0.38	ug/L			08/22/15 13:23	1
Chloroform	ND		5.0	0.15	ug/L			08/22/15 13:23	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/22/15 13:23	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/22/15 13:23	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/22/15 13:23	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/22/15 13:23	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/22/15 13:23	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/22/15 13:23	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/22/15 13:23	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
Bromomethane	ND		10	0.40	ug/L			08/22/15 13:23	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/22/15 13:23	1
Methyl bromide	ND		10	0.40	ug/L			08/22/15 13:23	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/22/15 13:23	1
Chloromethane	ND		10	0.55	ug/L			08/22/15 13:23	1
Methyl chloride	ND		10	0.55	ug/L			08/22/15 13:23	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/22/15 13:23	1
Dibromomethane	ND		5.0	0.41	ug/L			08/22/15 13:23	1
Methylene bromide	ND		5.0	0.41	ug/L			08/22/15 13:23	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/22/15 13:23	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/22/15 13:23	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/22/15 13:23	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/22/15 13:23	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/22/15 13:23	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/22/15 13:23	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/22/15 13:23	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/22/15 13:23	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/22/15 13:23	1
2-Hexanone	ND		20	0.59	ug/L			08/22/15 13:23	1
Iodomethane	ND		5.0	1.5	ug/L			08/22/15 13:23	1
Methyl iodide	ND		5.0	1.5	ug/L			08/22/15 13:23	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/22/15 13:23	1
Methacrylonitrile	ND		50	2.1	ug/L			08/22/15 13:23	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/22/15 13:23	1
Methyl methacrylate	ND		10	0.51	ug/L			08/22/15 13:23	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/22/15 13:23	1

Preliminary Data

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

Lab Sample ID: MB 160-207022/7
Matrix: Water
Analysis Batch: 207022

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	ND		50	2.4	ug/L			08/22/15 13:23	1
Styrene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/22/15 13:23	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/22/15 13:23	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/22/15 13:23	1
Toluene	ND		5.0	1.0	ug/L			08/22/15 13:23	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/22/15 13:23	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/22/15 13:23	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/22/15 13:23	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/22/15 13:23	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/22/15 13:23	1
Trichloroethene	0.589	J	5.0	0.29	ug/L			08/22/15 13:23	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/22/15 13:23	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/22/15 13:23	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/22/15 13:23	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/22/15 13:23	1
Xylenes, Total	ND		10	0.85	ug/L			08/22/15 13:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*	*X*	*75 - 123*		*08/22/15 13:23*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/22/15 13:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*78 - 127*		*08/22/15 13:23*	*1*
Toluene-d8 (Surr)	*113*		*80 - 120*		*08/22/15 13:23*	*1*

Lab Sample ID: LCS 160-207022/4
Matrix: Water
Analysis Batch: 207022

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	50.1		ug/L		100	72 - 139
Acetonitrile	500	489		ug/L		98	75 - 129
Acrolein	248	252		ug/L		102	67 - 140
Acrylonitrile	500	489		ug/L		98	80 - 120
Allyl chloride	50.0	53.3		ug/L		107	75 - 127
Benzene	50.0	52.2		ug/L		104	80 - 120
Bromochloromethane	50.0	48.6		ug/L		97	80 - 120
Bromodichloromethane	50.0	50.1		ug/L		100	80 - 120
Bromoform	50.0	49.7		ug/L		99	80 - 120
Carbon disulfide	50.0	51.2		ug/L		102	79 - 120
Carbon tetrachloride	50.0	52.0		ug/L		104	74 - 128
Chlorobenzene	50.0	50.0		ug/L		100	80 - 120
Chloroethane	50.0	46.6		ug/L		93	55 - 140
Chloroform	50.0	47.9		ug/L		96	80 - 120
cis-1,2-Dichloroethene	50.0	50.4		ug/L		101	80 - 120
cis-1,3-Dichloropropene	50.0	54.1		ug/L		108	80 - 120
Dibromochloromethane	50.0	49.1		ug/L		98	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	46.8		ug/L		94	69 - 135
1,2-Dibromoethane (EDB)	50.0	49.7		ug/L		99	80 - 120

Preliminary Data

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

Lab Sample ID: LCS 160-207022/4
Matrix: Water
Analysis Batch: 207022

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	50.0	54.2		ug/L		108	76 - 122
1,3-Dichlorobenzene	50.0	54.2		ug/L		108	77 - 122
1,4-Dichlorobenzene	50.0	51.7		ug/L		103	80 - 120
Bromomethane	50.0	45.3		ug/L		91	48 - 140
Dichlorodifluoromethane	50.0	55.3		ug/L		111	49 - 140
Methyl bromide	50.0	45.3		ug/L		91	48 - 140
1,1-Dichloroethane	50.0	51.3		ug/L		103	80 - 120
Chloromethane	50.0	54.0		ug/L		108	72 - 123
Methyl chloride	50.0	54.0		ug/L		108	72 - 123
1,2-Dichloroethane	50.0	53.0		ug/L		106	80 - 120
Dibromomethane	50.0	49.2		ug/L		98	80 - 120
Methylene bromide	50.0	49.2		ug/L		98	80 - 120
1,1-Dichloroethene	50.0	52.3		ug/L		105	77 - 121
2-Butanone (MEK)	50.0	52.5		ug/L		105	68 - 128
Methyl ethyl ketone (MEK)	50.0	52.5		ug/L		105	68 - 128
1,2-Dichloropropane	50.0	51.2		ug/L		102	80 - 120
1,3-Dichloropropane	50.0	52.4		ug/L		105	80 - 120
2,2-Dichloropropane	50.0	57.1		ug/L		114	73 - 134
1,1-Dichloropropene	50.0	57.5		ug/L		115	80 - 120
Ethylbenzene	50.0	56.1		ug/L		112	80 - 120
Ethyl methacrylate	50.0	47.4		ug/L		95	72 - 134
2-Hexanone	50.0	48.1		ug/L		96	64 - 136
Iodomethane	50.0	52.7		ug/L		105	72 - 130
Methyl iodide	50.0	52.7		ug/L		105	72 - 130
Isobutyl alcohol	1250	1170		ug/L		94	69 - 130
Methacrylonitrile	500	509		ug/L		102	78 - 123
Methylene Chloride	50.0	48.8		ug/L		98	79 - 115
Methyl methacrylate	100	96.4		ug/L		96	64 - 127
4-Methyl-2-pentanone (MIBK)	50.0	53.0		ug/L		106	74 - 129
Propionitrile	500	454		ug/L		91	74 - 131
Styrene	50.0	57.0		ug/L		114	80 - 120
1,1,1,2-Tetrachloroethane	50.0	51.1		ug/L		102	80 - 120
1,1,2,2-Tetrachloroethane	50.0	50.0		ug/L		100	80 - 120
Tetrachloroethene	50.0	49.4		ug/L		99	80 - 120
Toluene	50.0	53.1		ug/L		106	80 - 120
trans-1,4-Dichloro-2-butene	50.0	48.9		ug/L		98	80 - 123
trans-1,2-Dichloroethene	50.0	51.3		ug/L		103	80 - 120
trans-1,3-Dichloropropene	50.0	52.5		ug/L		105	80 - 120
1,1,1-Trichloroethane	50.0	52.5		ug/L		105	75 - 127
1,1,2-Trichloroethane	50.0	46.2		ug/L		92	80 - 120
Trichloroethene	50.0	51.7		ug/L		103	80 - 120
Trichlorofluoromethane	50.0	49.2		ug/L		98	72 - 132
1,2,3-Trichloropropane	50.0	47.0		ug/L		94	80 - 120
Vinyl acetate	50.0	54.6		ug/L		109	43 - 140
Vinyl chloride	50.0	46.7		ug/L		93	68 - 120
Xylenes, Total	100	107		ug/L		107	80 - 120

Preliminary Data

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

Lab Sample ID: LCS 160-207022/4
Matrix: Water
Analysis Batch: 207022

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		75 - 123
Dibromofluoromethane (Surr)	95		80 - 120
1,2-Dichloroethane-d4 (Surr)	100		78 - 127
Toluene-d8 (Surr)	105		80 - 120

Lab Sample ID: LCSD 160-207022/5
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	46.8		ug/L		94	72 - 139	7	20
Acetonitrile	500	503		ug/L		101	75 - 129	3	20
Acrolein	248	255		ug/L		103	67 - 140	1	20
Acrylonitrile	500	487		ug/L		97	80 - 120	1	20
Allyl chloride	50.0	51.1		ug/L		102	75 - 127	4	20
Benzene	50.0	52.6		ug/L		105	80 - 120	1	20
Bromochloromethane	50.0	47.3		ug/L		95	80 - 120	3	20
Bromodichloromethane	50.0	52.1		ug/L		104	80 - 120	4	20
Bromoform	50.0	47.4		ug/L		95	80 - 120	5	20
Carbon disulfide	50.0	50.3		ug/L		101	79 - 120	2	20
Carbon tetrachloride	50.0	52.8		ug/L		106	74 - 128	2	20
Chlorobenzene	50.0	50.4		ug/L		101	80 - 120	1	20
Chloroethane	50.0	46.2		ug/L		92	55 - 140	1	20
Chloroform	50.0	50.8		ug/L		102	80 - 120	6	20
cis-1,2-Dichloroethene	50.0	51.8		ug/L		104	80 - 120	3	20
cis-1,3-Dichloropropene	50.0	55.0		ug/L		110	80 - 120	2	20
Dibromochloromethane	50.0	51.8		ug/L		104	80 - 120	5	20
1,2-Dibromo-3-Chloropropane	50.0	52.7		ug/L		105	69 - 135	12	20
1,2-Dibromoethane (EDB)	50.0	50.0		ug/L		100	80 - 120	1	20
1,2-Dichlorobenzene	50.0	53.3		ug/L		107	76 - 122	2	20
1,3-Dichlorobenzene	50.0	55.9		ug/L		112	77 - 122	3	20
1,4-Dichlorobenzene	50.0	52.3		ug/L		105	80 - 120	1	20
Bromomethane	50.0	45.4		ug/L		91	48 - 140	0	20
Dichlorodifluoromethane	50.0	56.3		ug/L		113	49 - 140	2	20
Methyl bromide	50.0	45.4		ug/L		91	48 - 140	0	20
1,1-Dichloroethane	50.0	50.4		ug/L		101	80 - 120	2	20
Chloromethane	50.0	54.7		ug/L		109	72 - 123	1	20
Methyl chloride	50.0	54.7		ug/L		109	72 - 123	1	20
1,2-Dichloroethane	50.0	50.6		ug/L		101	80 - 120	5	20
Dibromomethane	50.0	51.2		ug/L		102	80 - 120	4	20
Methylene bromide	50.0	51.2		ug/L		102	80 - 120	4	20
1,1-Dichloroethene	50.0	52.1		ug/L		104	77 - 121	0	20
2-Butanone (MEK)	50.0	53.5		ug/L		107	68 - 128	2	20
Methyl ethyl ketone (MEK)	50.0	53.5		ug/L		107	68 - 128	2	20
1,2-Dichloropropane	50.0	53.3		ug/L		107	80 - 120	4	20
1,3-Dichloropropane	50.0	54.0		ug/L		108	80 - 120	3	20
2,2-Dichloropropane	50.0	59.2		ug/L		118	73 - 134	4	20
1,1-Dichloropropene	50.0	57.9		ug/L		116	80 - 120	1	20

Preliminary Data

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

Lab Sample ID: LCSD 160-207022/5
Matrix: Water
Analysis Batch: 207022

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	50.0	57.0		ug/L		114	80 - 120	2	20
Ethyl methacrylate	50.0	52.7		ug/L		105	72 - 134	11	20
2-Hexanone	50.0	57.0		ug/L		114	64 - 136	17	20
Iodomethane	50.0	51.1		ug/L		102	72 - 130	3	20
Methyl iodide	50.0	51.1		ug/L		102	72 - 130	3	20
Isobutyl alcohol	1250	1180		ug/L		95	69 - 130	1	20
Methacrylonitrile	500	525		ug/L		105	78 - 123	3	20
Methylene Chloride	50.0	47.6		ug/L		95	79 - 115	2	20
Methyl methacrylate	100	104		ug/L		104	64 - 127	8	20
4-Methyl-2-pentanone (MIBK)	50.0	57.2		ug/L		114	74 - 129	8	20
Propionitrile	500	468		ug/L		94	74 - 131	3	20
Styrene	50.0	57.9		ug/L		116	80 - 120	1	20
1,1,1,2-Tetrachloroethane	50.0	51.6		ug/L		103	80 - 120	1	20
1,1,2,2-Tetrachloroethane	50.0	50.7		ug/L		101	80 - 120	1	20
Tetrachloroethene	50.0	50.1		ug/L		100	80 - 120	2	20
Toluene	50.0	54.2		ug/L		108	80 - 120	2	20
trans-1,4-Dichloro-2-butene	50.0	50.1		ug/L		100	80 - 123	2	20
trans-1,2-Dichloroethene	50.0	49.2		ug/L		98	80 - 120	4	20
trans-1,3-Dichloropropene	50.0	60.3	*	ug/L		121	80 - 120	14	20
1,1,1-Trichloroethane	50.0	52.0		ug/L		104	75 - 127	1	20
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	80 - 120	9	20
Trichloroethene	50.0	50.8		ug/L		102	80 - 120	2	20
Trichlorofluoromethane	50.0	47.8		ug/L		96	72 - 132	3	20
1,2,3-Trichloropropane	50.0	47.8		ug/L		96	80 - 120	2	20
Vinyl acetate	50.0	54.2		ug/L		108	43 - 140	1	20
Vinyl chloride	50.0	46.2		ug/L		92	68 - 120	1	20
Xylenes, Total	100	109		ug/L		109	80 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*75 - 123*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*78 - 127*
Toluene-d8 (Surr)	*107*		*80 - 120*

Lab Sample ID: 160-13506-4 MS
Matrix: Water
Analysis Batch: 207022

Client Sample ID: PZ-106-SS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		50.0	58.9		ug/L		118	54 - 140
Acrylonitrile	ND		500	554		ug/L		111	80 - 125
Benzene	ND		50.0	56.7		ug/L		113	72 - 123
Bromochloromethane	ND		50.0	52.2		ug/L		104	80 - 120
Bromodichloromethane	ND		50.0	57.0		ug/L		114	80 - 120
Bromoform	ND		50.0	50.4		ug/L		101	78 - 122
Carbon disulfide	ND		50.0	52.9		ug/L		106	80 - 120
Carbon tetrachloride	ND		50.0	53.1		ug/L		106	80 - 124
Chlorobenzene	ND		50.0	53.3		ug/L		107	80 - 120

Preliminary Data

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

Lab Sample ID: 160-13506-4 MS
Matrix: Water
Analysis Batch: 207022

Client Sample ID: PZ-106-SS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	ND		50.0	53.5		ug/L		107	53 - 148
Chloroform	ND		50.0	52.1		ug/L		104	80 - 120
cis-1,2-Dichloroethene	ND		50.0	55.3		ug/L		111	80 - 120
cis-1,3-Dichloropropene	ND		50.0	54.9		ug/L		110	80 - 120
Dibromochloromethane	ND		50.0	54.0		ug/L		108	80 - 120
1,2-Dibromo-3-Chloropropane	ND		50.0	51.7		ug/L		103	59 - 144
1,2-Dibromoethane (EDB)	ND		50.0	55.4		ug/L		111	80 - 120
1,2-Dichlorobenzene	ND		50.0	55.7		ug/L		111	77 - 117
1,4-Dichlorobenzene	ND		50.0	53.1		ug/L		106	80 - 120
1,1-Dichloroethane	ND		50.0	52.6		ug/L		105	80 - 120
1,2-Dichloroethane	ND		50.0	55.8		ug/L		112	80 - 120
1,1-Dichloroethene	ND		50.0	52.9		ug/L		106	80 - 120
1,2-Dichloropropane	ND		50.0	55.3		ug/L		111	80 - 120
Ethylbenzene	ND		50.0	58.2		ug/L		116	80 - 120
2-Hexanone	ND		50.0	59.5		ug/L		119	65 - 136
Methacrylonitrile	ND		500	605		ug/L		121	78 - 121
Methyl bromide	ND		50.0	51.0		ug/L		102	51 - 146
Methyl chloride	ND		50.0	50.7		ug/L		101	80 - 120
Methylene bromide	ND		50.0	57.6		ug/L		115	80 - 120
Methylene Chloride	ND		50.0	51.7		ug/L		103	80 - 120
Methyl ethyl ketone (MEK)	ND		50.0	57.3		ug/L		115	62 - 135
Methyl iodide	ND		50.0	52.3		ug/L		105	77 - 125
4-Methyl-2-pentanone (MIBK)	ND		50.0	59.5		ug/L		119	74 - 132
Styrene	ND		50.0	59.7		ug/L		119	80 - 120
1,1,1,2-Tetrachloroethane	ND		50.0	54.4		ug/L		109	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	54.9		ug/L		110	72 - 125
Tetrachloroethene	ND		50.0	50.5		ug/L		101	80 - 120
Toluene	ND		50.0	53.9		ug/L		108	80 - 120
trans-1,4-Dichloro-2-butene	ND		50.0	45.6		ug/L		91	73 - 125
trans-1,2-Dichloroethene	ND		50.0	48.7		ug/L		97	80 - 120
trans-1,3-Dichloropropene	ND	*	50.0	58.2		ug/L		116	77 - 122
1,1,1-Trichloroethane	ND		50.0	52.1		ug/L		104	81 - 123
1,1,2-Trichloroethane	ND		50.0	54.2		ug/L		108	76 - 119
Trichloroethene	ND		50.0	53.3		ug/L		107	80 - 120
Trichlorofluoromethane	ND		50.0	55.1		ug/L		110	79 - 128
1,2,3-Trichloropropane	ND		50.0	49.9		ug/L		100	72 - 120
Vinyl acetate	ND		50.0	57.9		ug/L		116	47 - 150
Vinyl chloride	ND		50.0	48.1		ug/L		96	75 - 118
Xylenes, Total	ND		100	109		ug/L		109	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*75 - 123*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*107*		*78 - 127*
Toluene-d8 (Surr)	*106*		*80 - 120*

Preliminary Data

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

Lab Sample ID: 160-13506-4 MSD
Matrix: Water
Analysis Batch: 207022

Client Sample ID: PZ-106-SS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		50.0	56.0		ug/L		112	54 - 140	5	20
Acrylonitrile	ND		500	507		ug/L		101	80 - 125	9	20
Benzene	ND		50.0	52.3		ug/L		105	72 - 123	8	20
Bromochloromethane	ND		50.0	49.6		ug/L		99	80 - 120	5	20
Bromodichloromethane	ND		50.0	55.6		ug/L		111	80 - 120	2	20
Bromoform	ND		50.0	54.1		ug/L		108	78 - 122	7	20
Carbon disulfide	ND		50.0	48.8		ug/L		98	80 - 120	8	20
Carbon tetrachloride	ND		50.0	51.5		ug/L		103	80 - 124	3	20
Chlorobenzene	ND		50.0	52.4		ug/L		105	80 - 120	2	20
Chloroethane	ND		50.0	48.3		ug/L		97	53 - 148	10	20
Chloroform	ND		50.0	50.2		ug/L		100	80 - 120	4	20
cis-1,2-Dichloroethene	ND		50.0	51.3		ug/L		103	80 - 120	8	20
cis-1,3-Dichloropropene	ND		50.0	54.9		ug/L		110	80 - 120	0	20
Dibromochloromethane	ND		50.0	54.7		ug/L		109	80 - 120	1	20
1,2-Dibromo-3-Chloropropane	ND		50.0	49.8		ug/L		100	59 - 144	4	20
1,2-Dibromoethane (EDB)	ND		50.0	55.5		ug/L		111	80 - 120	0	20
1,2-Dichlorobenzene	ND		50.0	53.8		ug/L		108	77 - 117	4	20
1,4-Dichlorobenzene	ND		50.0	52.8		ug/L		106	80 - 120	1	20
1,1-Dichloroethane	ND		50.0	50.1		ug/L		100	80 - 120	5	20
1,2-Dichloroethane	ND		50.0	56.0		ug/L		112	80 - 120	0	20
1,1-Dichloroethene	ND		50.0	49.4		ug/L		99	80 - 120	7	20
1,2-Dichloropropane	ND		50.0	55.3		ug/L		111	80 - 120	0	20
Ethylbenzene	ND		50.0	56.1		ug/L		112	80 - 120	4	20
2-Hexanone	ND		50.0	54.7		ug/L		109	65 - 136	8	20
Methacrylonitrile	ND		500	558		ug/L		112	78 - 121	8	20
Methyl bromide	ND		50.0	46.3		ug/L		93	51 - 146	10	20
Methyl chloride	ND		50.0	50.0		ug/L		100	80 - 120	1	20
Methylene bromide	ND		50.0	54.1		ug/L		108	80 - 120	6	20
Methylene Chloride	ND		50.0	49.2		ug/L		98	80 - 120	5	20
Methyl ethyl ketone (MEK)	ND		50.0	53.0		ug/L		106	62 - 135	8	20
Methyl iodide	ND		50.0	49.0		ug/L		98	77 - 125	7	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	57.9		ug/L		116	74 - 132	3	20
Styrene	ND		50.0	57.1		ug/L		114	80 - 120	5	20
1,1,1,2-Tetrachloroethane	ND		50.0	52.0		ug/L		104	80 - 120	4	20
1,1,2,2-Tetrachloroethane	ND		50.0	54.5		ug/L		109	72 - 125	1	20
Tetrachloroethene	ND		50.0	49.1		ug/L		98	80 - 120	3	20
Toluene	ND		50.0	53.9		ug/L		108	80 - 120	0	20
trans-1,4-Dichloro-2-butene	ND		50.0	53.2		ug/L		106	73 - 125	15	20
trans-1,2-Dichloroethene	ND		50.0	49.1		ug/L		98	80 - 120	1	20
trans-1,3-Dichloropropene	ND	*	50.0	60.1		ug/L		120	77 - 122	3	20
1,1,1-Trichloroethane	ND		50.0	52.2		ug/L		104	81 - 123	0	20
1,1,2-Trichloroethane	ND		50.0	52.8		ug/L		106	76 - 119	3	20
Trichloroethene	ND		50.0	50.9		ug/L		102	80 - 120	5	20
Trichlorofluoromethane	ND		50.0	50.1		ug/L		100	79 - 128	10	20
1,2,3-Trichloropropane	ND		50.0	50.6		ug/L		101	72 - 120	1	20
Vinyl acetate	ND		50.0	57.1		ug/L		114	47 - 150	1	20
Vinyl chloride	ND		50.0	47.5		ug/L		95	75 - 118	1	20
Xylenes, Total	ND		100	106		ug/L		106	80 - 120	4	20

Preliminary Data

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	118		75 - 123
Dibromofluoromethane (Surr)	97		80 - 120
1,2-Dichloroethane-d4 (Surr)	100		78 - 127
Toluene-d8 (Surr)	108		80 - 120

Lab Sample ID: MB 160-207165/6
Matrix: Water
Analysis Batch: 207165

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/23/15 19:19	1
Acetonitrile	ND		50	7.3	ug/L			08/23/15 19:19	1
Acrolein	ND		50	3.1	ug/L			08/23/15 19:19	1
Acrylonitrile	ND		50	1.7	ug/L			08/23/15 19:19	1
Allyl chloride	ND		10	0.39	ug/L			08/23/15 19:19	1
Benzene	ND		5.0	0.25	ug/L			08/23/15 19:19	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/23/15 19:19	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/23/15 19:19	1
Bromoform	ND		5.0	0.37	ug/L			08/23/15 19:19	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/23/15 19:19	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/23/15 19:19	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/23/15 19:19	1
Chloroethane	ND		10	0.38	ug/L			08/23/15 19:19	1
Chloroform	ND		5.0	0.15	ug/L			08/23/15 19:19	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/23/15 19:19	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/23/15 19:19	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/23/15 19:19	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/23/15 19:19	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/23/15 19:19	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/23/15 19:19	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			08/23/15 19:19	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/23/15 19:19	1
Bromomethane	ND		10	0.40	ug/L			08/23/15 19:19	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			08/23/15 19:19	1
Methyl bromide	ND		10	0.40	ug/L			08/23/15 19:19	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/23/15 19:19	1
Chloromethane	ND		10	0.55	ug/L			08/23/15 19:19	1
Methyl chloride	ND		10	0.55	ug/L			08/23/15 19:19	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/23/15 19:19	1
Dibromomethane	ND		5.0	0.41	ug/L			08/23/15 19:19	1
Methylene bromide	ND		5.0	0.41	ug/L			08/23/15 19:19	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/23/15 19:19	1
2-Butanone (MEK)	ND		20	0.39	ug/L			08/23/15 19:19	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/23/15 19:19	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/23/15 19:19	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			08/23/15 19:19	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			08/23/15 19:19	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			08/23/15 19:19	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/23/15 19:19	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			08/23/15 19:19	1
2-Hexanone	ND		20	0.59	ug/L			08/23/15 19:19	1
Iodomethane	ND		5.0	1.5	ug/L			08/23/15 19:19	1
Methyl iodide	ND		5.0	1.5	ug/L			08/23/15 19:19	1
Isobutyl alcohol	ND		200	7.3	ug/L			08/23/15 19:19	1

Preliminary Data

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

Lab Sample ID: MB 160-207165/6
Matrix: Water
Analysis Batch: 207165

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methacrylonitrile	ND		50	2.1	ug/L			08/23/15 19:19	1
Methylene Chloride	ND		5.0	1.7	ug/L			08/23/15 19:19	1
Methyl methacrylate	ND		10	0.51	ug/L			08/23/15 19:19	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/23/15 19:19	1
Propionitrile	ND		50	2.4	ug/L			08/23/15 19:19	1
Styrene	ND		5.0	0.35	ug/L			08/23/15 19:19	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/23/15 19:19	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/23/15 19:19	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/23/15 19:19	1
Toluene	ND		5.0	1.0	ug/L			08/23/15 19:19	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/23/15 19:19	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/23/15 19:19	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/23/15 19:19	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/23/15 19:19	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/23/15 19:19	1
Trichloroethene	0.783	J	5.0	0.29	ug/L			08/23/15 19:19	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/23/15 19:19	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/23/15 19:19	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/23/15 19:19	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/23/15 19:19	1
Xylenes, Total	ND		10	0.85	ug/L			08/23/15 19:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*75 - 123*		*08/23/15 19:19*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*08/23/15 19:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*78 - 127*		*08/23/15 19:19*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*08/23/15 19:19*	*1*

Lab Sample ID: LCS 160-207165/4
Matrix: Water
Analysis Batch: 207165

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	51.4		ug/L		103	72 - 139
Acetonitrile	500	453		ug/L		91	75 - 129
Acrolein	248	241		ug/L		97	67 - 140
Acrylonitrile	500	494		ug/L		99	80 - 120
Allyl chloride	50.0	44.8		ug/L		90	75 - 127
Benzene	50.0	49.6		ug/L		99	80 - 120
Bromochloromethane	50.0	49.1		ug/L		98	80 - 120
Bromodichloromethane	50.0	45.4		ug/L		91	80 - 120
Bromoform	50.0	49.5		ug/L		99	80 - 120
Carbon disulfide	50.0	52.3		ug/L		105	79 - 120
Carbon tetrachloride	50.0	44.6		ug/L		89	74 - 128
Chlorobenzene	50.0	48.7		ug/L		97	80 - 120
Chloroethane	50.0	43.7		ug/L		87	55 - 140
Chloroform	50.0	46.0		ug/L		92	80 - 120
cis-1,2-Dichloroethene	50.0	49.5		ug/L		99	80 - 120

Preliminary Data

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

Lab Sample ID: LCS 160-207165/4
Matrix: Water
Analysis Batch: 207165

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	50.0	48.8		ug/L		98	80 - 120
Dibromochloromethane	50.0	49.2		ug/L		98	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	51.3		ug/L		103	69 - 135
1,2-Dibromoethane (EDB)	50.0	49.6		ug/L		99	80 - 120
1,2-Dichlorobenzene	50.0	48.8		ug/L		98	76 - 122
1,3-Dichlorobenzene	50.0	49.4		ug/L		99	77 - 122
1,4-Dichlorobenzene	50.0	49.3		ug/L		99	80 - 120
Bromomethane	50.0	43.9		ug/L		88	48 - 140
Dichlorodifluoromethane	50.0	44.0		ug/L		88	49 - 140
Methyl bromide	50.0	43.9		ug/L		88	48 - 140
1,1-Dichloroethane	50.0	47.5		ug/L		95	80 - 120
Chloromethane	50.0	47.4		ug/L		95	72 - 123
Methyl chloride	50.0	47.4		ug/L		95	72 - 123
1,2-Dichloroethane	50.0	42.2		ug/L		84	80 - 120
Dibromomethane	50.0	46.1		ug/L		92	80 - 120
Methylene bromide	50.0	46.1		ug/L		92	80 - 120
1,1-Dichloroethene	50.0	52.7		ug/L		105	77 - 121
2-Butanone (MEK)	50.0	49.0		ug/L		98	68 - 128
Methyl ethyl ketone (MEK)	50.0	49.0		ug/L		98	68 - 128
1,2-Dichloropropane	50.0	48.3		ug/L		97	80 - 120
1,3-Dichloropropane	50.0	50.4		ug/L		101	80 - 120
2,2-Dichloropropane	50.0	42.6		ug/L		85	73 - 134
1,1-Dichloropropene	50.0	47.6		ug/L		95	80 - 120
Ethylbenzene	50.0	45.1		ug/L		90	80 - 120
Ethyl methacrylate	50.0	53.5		ug/L		107	72 - 134
2-Hexanone	50.0	49.8		ug/L		100	64 - 136
Iodomethane	50.0	50.0		ug/L		100	72 - 130
Methyl iodide	50.0	50.0		ug/L		100	72 - 130
Isobutyl alcohol	1250	1240		ug/L		99	69 - 130
Methacrylonitrile	500	446		ug/L		89	78 - 123
Methylene Chloride	50.0	50.6		ug/L		101	79 - 115
Methyl methacrylate	100	104		ug/L		104	64 - 127
4-Methyl-2-pentanone (MIBK)	50.0	50.8		ug/L		102	74 - 129
Propionitrile	500	478		ug/L		96	74 - 131
Styrene	50.0	51.0		ug/L		102	80 - 120
1,1,1,2-Tetrachloroethane	50.0	48.3		ug/L		97	80 - 120
1,1,2,2-Tetrachloroethane	50.0	51.8		ug/L		104	80 - 120
Tetrachloroethene	50.0	49.0		ug/L		98	80 - 120
Toluene	50.0	50.5		ug/L		101	80 - 120
trans-1,4-Dichloro-2-butene	50.0	48.9		ug/L		98	80 - 123
trans-1,2-Dichloroethene	50.0	50.6		ug/L		101	80 - 120
trans-1,3-Dichloropropene	50.0	49.9		ug/L		100	80 - 120
1,1,1-Trichloroethane	50.0	44.6		ug/L		89	75 - 127
1,1,2-Trichloroethane	50.0	50.3		ug/L		101	80 - 120
Trichloroethene	50.0	43.2		ug/L		86	80 - 120
Trichlorofluoromethane	50.0	49.6		ug/L		99	72 - 132
1,2,3-Trichloropropane	50.0	46.9		ug/L		94	80 - 120
Vinyl acetate	50.0	52.0		ug/L		104	43 - 140

Preliminary Data

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

Lab Sample ID: LCS 160-207165/4
Matrix: Water
Analysis Batch: 207165

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	50.0	46.7		ug/L		93	68 - 120
Xylenes, Total	100	99.6		ug/L		100	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*75 - 123*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*92*		*78 - 127*
Toluene-d8 (Surr)	*105*		*80 - 120*

Lab Sample ID: 160-13506-11 MS
Matrix: Water
Analysis Batch: 207165

Client Sample ID: 082115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetonitrile	ND		500	470		ug/L		94	71 - 135
Acrolein	ND		248	230		ug/L		93	52 - 150
Acrylonitrile	ND		500	500		ug/L		100	80 - 125
Allyl chloride	ND		50.0	48.2		ug/L		96	80 - 120
Benzene	9.9		50.0	61.8		ug/L		104	72 - 123
Bromochloromethane	ND		50.0	52.0		ug/L		104	80 - 120
Bromodichloromethane	ND		50.0	48.5		ug/L		97	80 - 120
Bromoform	ND		50.0	50.6		ug/L		101	78 - 122
Carbon disulfide	0.98	J	50.0	56.5		ug/L		111	80 - 120
Carbon tetrachloride	ND		50.0	45.0		ug/L		90	80 - 124
Chlorobenzene	1.3	J	50.0	52.1		ug/L		102	80 - 120
Chloroethane	ND		50.0	46.2		ug/L		92	53 - 148
Chloroform	ND		50.0	49.5		ug/L		99	80 - 120
cis-1,2-Dichloroethene	ND		50.0	52.9		ug/L		106	80 - 120
cis-1,3-Dichloropropene	ND		50.0	52.6		ug/L		105	80 - 120
Dibromochloromethane	ND		50.0	50.4		ug/L		101	80 - 120
1,2-Dibromo-3-Chloropropane	ND		50.0	53.2		ug/L		106	59 - 144
1,2-Dibromoethane (EDB)	ND		50.0	52.1		ug/L		104	80 - 120
1,2-Dichlorobenzene	ND		50.0	51.5		ug/L		103	77 - 117
1,3-Dichlorobenzene	ND		50.0	52.8		ug/L		106	80 - 120
1,4-Dichlorobenzene	ND		50.0	51.0		ug/L		102	80 - 120
Bromomethane	ND		50.0	40.6		ug/L		81	51 - 146
Dichlorodifluoromethane	ND		50.0	40.2		ug/L		80	70 - 131
Methyl bromide	ND		50.0	40.6		ug/L		81	51 - 146
1,1-Dichloroethane	ND		50.0	51.2		ug/L		102	80 - 120
Chloromethane	ND	F1	50.0	39.4	F1	ug/L		79	80 - 120
Methyl chloride	ND	F1	50.0	39.4	F1	ug/L		79	80 - 120
1,2-Dichloroethane	ND		50.0	44.5		ug/L		89	80 - 120
Dibromomethane	ND		50.0	48.7		ug/L		97	80 - 120
Methylene bromide	ND		50.0	48.7		ug/L		97	80 - 120
1,1-Dichloroethene	ND		50.0	55.5		ug/L		111	80 - 120
1,2-Dichloropropane	ND		50.0	52.0		ug/L		104	80 - 120
1,3-Dichloropropane	ND		50.0	51.3		ug/L		103	80 - 120
2,2-Dichloropropane	ND		50.0	45.2		ug/L		90	81 - 128

Preliminary Data

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

Lab Sample ID: 160-13506-11 MS
Matrix: Water
Analysis Batch: 207165

Client Sample ID: 082115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloropropene	ND		50.0	51.4		ug/L		103	80 - 120
Ethylbenzene	ND		50.0	46.9		ug/L		94	80 - 120
Ethyl methacrylate	ND		50.0	52.5		ug/L		105	73 - 128
2-Hexanone	16	J	50.0	62.5		ug/L		93	65 - 136
Iodomethane	ND		50.0	53.3		ug/L		107	77 - 125
Methyl iodide	ND		50.0	53.3		ug/L		107	77 - 125
Isobutyl alcohol	ND		1250	1260		ug/L		101	67 - 134
Methacrylonitrile	ND		500	458		ug/L		92	78 - 121
Methylene Chloride	ND		50.0	55.0		ug/L		110	80 - 120
Methyl methacrylate	ND		100	107		ug/L		107	69 - 124
4-Methyl-2-pentanone (MIBK)	19	J	50.0	70.7		ug/L		102	74 - 132
Propionitrile	ND		500	485		ug/L		97	76 - 127
Styrene	ND		50.0	52.5		ug/L		105	80 - 120
1,1,1,2-Tetrachloroethane	ND		50.0	52.4		ug/L		105	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	52.9		ug/L		106	72 - 125
Tetrachloroethene	ND		50.0	50.3		ug/L		101	80 - 120
Toluene	140	F1	50.0	170	F1	ug/L		68	80 - 120
trans-1,4-Dichloro-2-butene	ND		50.0	44.5		ug/L		89	73 - 125
trans-1,2-Dichloroethene	ND		50.0	52.9		ug/L		106	80 - 120
trans-1,3-Dichloropropene	ND		50.0	51.1		ug/L		102	77 - 122
1,1,1-Trichloroethane	ND		50.0	47.4		ug/L		95	81 - 123
1,1,2-Trichloroethane	ND		50.0	50.9		ug/L		102	76 - 119
Trichloroethene	0.96	J B	50.0	46.6		ug/L		91	80 - 120
Trichlorofluoromethane	ND		50.0	49.3		ug/L		99	79 - 128
1,2,3-Trichloropropane	ND		50.0	47.5		ug/L		95	72 - 120
Vinyl acetate	ND		50.0	56.8		ug/L		114	47 - 150
Vinyl chloride	ND		50.0	44.6		ug/L		89	75 - 118
Xylenes, Total	ND		100	106		ug/L		106	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*75 - 123*
Dibromofluoromethane (Surr)	*103*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*95*		*78 - 127*
Toluene-d8 (Surr)	*104*		*80 - 120*

Lab Sample ID: 160-13506-11 MSD
Matrix: Water
Analysis Batch: 207165

Client Sample ID: 082115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetonitrile	ND		500	491		ug/L		98	71 - 135	5	20
Acrolein	ND		248	222		ug/L		89	52 - 150	3	20
Acrylonitrile	ND		500	476		ug/L		95	80 - 125	5	20
Allyl chloride	ND		50.0	42.9		ug/L		86	80 - 120	12	20
Benzene	9.9		50.0	60.0		ug/L		100	72 - 123	3	20
Bromochloromethane	ND		50.0	51.0		ug/L		102	80 - 120	2	20
Bromodichloromethane	ND		50.0	46.9		ug/L		94	80 - 120	3	20
Bromoform	ND		50.0	50.3		ug/L		101	78 - 122	0	20

Preliminary Data

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

Lab Sample ID: 160-13506-11 MSD
Matrix: Water
Analysis Batch: 207165

Client Sample ID: 082115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon disulfide	0.98	J	50.0	56.5		ug/L		111	80 - 120	0	20
Carbon tetrachloride	ND		50.0	43.2		ug/L		86	80 - 124	4	20
Chlorobenzene	1.3	J	50.0	51.3		ug/L		100	80 - 120	2	20
Chloroethane	ND		50.0	42.1		ug/L		84	53 - 148	9	20
Chloroform	ND		50.0	47.0		ug/L		94	80 - 120	5	20
cis-1,2-Dichloroethene	ND		50.0	51.9		ug/L		104	80 - 120	2	20
cis-1,3-Dichloropropene	ND		50.0	50.0		ug/L		100	80 - 120	5	20
Dibromochloromethane	ND		50.0	50.2		ug/L		100	80 - 120	0	20
1,2-Dibromo-3-Chloropropane	ND		50.0	52.2		ug/L		104	59 - 144	2	20
1,2-Dibromoethane (EDB)	ND		50.0	51.6		ug/L		103	80 - 120	1	20
1,2-Dichlorobenzene	ND		50.0	51.3		ug/L		103	77 - 117	0	20
1,3-Dichlorobenzene	ND		50.0	51.8		ug/L		104	80 - 120	2	20
1,4-Dichlorobenzene	ND		50.0	50.4		ug/L		101	80 - 120	1	20
Bromomethane	ND		50.0	41.2		ug/L		82	51 - 146	1	20
Dichlorodifluoromethane	ND		50.0	36.1		ug/L		72	70 - 131	11	20
Methyl bromide	ND		50.0	41.2		ug/L		82	51 - 146	1	20
1,1-Dichloroethane	ND		50.0	48.5		ug/L		97	80 - 120	5	20
Chloromethane	ND	F1	50.0	37.0	F1	ug/L		74	80 - 120	6	20
Methyl chloride	ND	F1	50.0	37.0	F1	ug/L		74	80 - 120	6	20
1,2-Dichloroethane	ND		50.0	41.0		ug/L		82	80 - 120	8	20
Dibromomethane	ND		50.0	46.6		ug/L		93	80 - 120	4	20
Methylene bromide	ND		50.0	46.6		ug/L		93	80 - 120	4	20
1,1-Dichloroethene	ND		50.0	55.4		ug/L		111	80 - 120	0	20
1,2-Dichloropropane	ND		50.0	50.0		ug/L		100	80 - 120	4	20
1,3-Dichloropropane	ND		50.0	51.2		ug/L		102	80 - 120	0	20
2,2-Dichloropropane	ND		50.0	43.2		ug/L		86	81 - 128	4	20
1,1-Dichloropropene	ND		50.0	48.8		ug/L		98	80 - 120	5	20
Ethylbenzene	ND		50.0	45.2		ug/L		90	80 - 120	4	20
Ethyl methacrylate	ND		50.0	53.1		ug/L		106	73 - 128	1	20
2-Hexanone	16	J	50.0	63.6		ug/L		96	65 - 136	2	20
Iodomethane	ND		50.0	54.1		ug/L		108	77 - 125	1	20
Methyl iodide	ND		50.0	54.1		ug/L		108	77 - 125	1	20
Isobutyl alcohol	ND		1250	1180		ug/L		95	67 - 134	6	20
Methacrylonitrile	ND		500	420		ug/L		84	78 - 121	8	20
Methylene Chloride	ND		50.0	54.9		ug/L		110	80 - 120	0	20
Methyl methacrylate	ND		100	103		ug/L		103	69 - 124	4	20
4-Methyl-2-pentanone (MIBK)	19	J	50.0	67.0		ug/L		95	74 - 132	5	20
Propionitrile	ND		500	476		ug/L		95	76 - 127	2	20
Styrene	ND		50.0	50.9		ug/L		102	80 - 120	3	20
1,1,1,2-Tetrachloroethane	ND		50.0	50.8		ug/L		102	80 - 120	3	20
1,1,2,2-Tetrachloroethane	ND		50.0	53.5		ug/L		107	72 - 125	1	20
Tetrachloroethene	ND		50.0	49.8		ug/L		100	80 - 120	1	20
Toluene	140	F1	50.0	166	F1	ug/L		60	80 - 120	2	20
trans-1,4-Dichloro-2-butene	ND		50.0	42.8		ug/L		86	73 - 125	4	20
trans-1,2-Dichloroethene	ND		50.0	54.1		ug/L		108	80 - 120	2	20
trans-1,3-Dichloropropene	ND		50.0	49.9		ug/L		100	77 - 122	2	20
1,1,1-Trichloroethane	ND		50.0	45.2		ug/L		90	81 - 123	5	20
1,1,2-Trichloroethane	ND		50.0	50.1		ug/L		100	76 - 119	2	20

Preliminary Data

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

Lab Sample ID: 160-13506-11 MSD
Matrix: Water
Analysis Batch: 207165

Client Sample ID: 082115
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloroethene	0.96	J B	50.0	44.6		ug/L		87	80 - 120	5	20
Trichlorofluoromethane	ND		50.0	45.8		ug/L		92	79 - 128	7	20
1,2,3-Trichloropropane	ND		50.0	48.4		ug/L		97	72 - 120	2	20
Vinyl acetate	ND		50.0	52.6		ug/L		105	47 - 150	8	20
Vinyl chloride	ND		50.0	40.9		ug/L		82	75 - 118	9	20
Xylenes, Total	ND		100	104		ug/L		104	80 - 120	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*75 - 123*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*90*		*78 - 127*
Toluene-d8 (Surr)	*108*		*80 - 120*

Lab Sample ID: MB 160-208119/6
Matrix: Water
Analysis Batch: 208119

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			08/26/15 20:53	1
Acrylonitrile	ND		50	1.7	ug/L			08/26/15 20:53	1
Benzene	ND		5.0	0.25	ug/L			08/26/15 20:53	1
Bromochloromethane	ND		5.0	0.55	ug/L			08/26/15 20:53	1
Bromodichloromethane	ND		5.0	0.25	ug/L			08/26/15 20:53	1
Bromoform	ND		5.0	0.37	ug/L			08/26/15 20:53	1
Carbon disulfide	ND		5.0	0.37	ug/L			08/26/15 20:53	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			08/26/15 20:53	1
Chlorobenzene	ND		5.0	0.38	ug/L			08/26/15 20:53	1
Chloroethane	ND		10	0.38	ug/L			08/26/15 20:53	1
Chloroform	ND		5.0	0.15	ug/L			08/26/15 20:53	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			08/26/15 20:53	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			08/26/15 20:53	1
Dibromochloromethane	ND		5.0	0.33	ug/L			08/26/15 20:53	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			08/26/15 20:53	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			08/26/15 20:53	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			08/26/15 20:53	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			08/26/15 20:53	1
Methyl bromide	ND		10	0.40	ug/L			08/26/15 20:53	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			08/26/15 20:53	1
Methyl chloride	ND		10	0.55	ug/L			08/26/15 20:53	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			08/26/15 20:53	1
Methylene bromide	ND		5.0	0.41	ug/L			08/26/15 20:53	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			08/26/15 20:53	1
Methyl ethyl ketone (MEK)	ND		20	0.39	ug/L			08/26/15 20:53	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			08/26/15 20:53	1
Ethylbenzene	ND		5.0	0.30	ug/L			08/26/15 20:53	1
2-Hexanone	ND		20	0.59	ug/L			08/26/15 20:53	1
Methyl iodide	ND		5.0	1.5	ug/L			08/26/15 20:53	1
Methacrylonitrile	ND		50	2.1	ug/L			08/26/15 20:53	1

Preliminary Data

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

Lab Sample ID: MB 160-208119/6
Matrix: Water
Analysis Batch: 208119

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		5.0	1.7	ug/L			08/26/15 20:53	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			08/26/15 20:53	1
Styrene	ND		5.0	0.35	ug/L			08/26/15 20:53	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			08/26/15 20:53	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			08/26/15 20:53	1
Tetrachloroethene	ND		5.0	0.28	ug/L			08/26/15 20:53	1
Toluene	ND		5.0	1.0	ug/L			08/26/15 20:53	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			08/26/15 20:53	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			08/26/15 20:53	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			08/26/15 20:53	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			08/26/15 20:53	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			08/26/15 20:53	1
Trichloroethene	0.363	J	5.0	0.29	ug/L			08/26/15 20:53	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			08/26/15 20:53	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			08/26/15 20:53	1
Vinyl acetate	ND		5.0	0.61	ug/L			08/26/15 20:53	1
Vinyl chloride	ND		5.0	0.43	ug/L			08/26/15 20:53	1
Xylenes, Total	ND		10	0.85	ug/L			08/26/15 20:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*75 - 123*		*08/26/15 20:53*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*08/26/15 20:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*78 - 127*		*08/26/15 20:53*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/26/15 20:53*	*1*

Lab Sample ID: LCS 160-208119/3
Matrix: Water
Analysis Batch: 208119

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	48.2		ug/L		96	72 - 139
Acrylonitrile	500	473		ug/L		95	80 - 120
Benzene	50.0	49.5		ug/L		99	80 - 120
Bromochloromethane	50.0	49.2		ug/L		98	80 - 120
Bromodichloromethane	50.0	44.6		ug/L		89	80 - 120
Bromoform	50.0	49.5		ug/L		99	80 - 120
Carbon disulfide	50.0	56.8		ug/L		114	79 - 120
Carbon tetrachloride	50.0	43.3		ug/L		87	74 - 128
Chlorobenzene	50.0	47.7		ug/L		95	80 - 120
Chloroethane	50.0	37.8		ug/L		76	55 - 140
Chloroform	50.0	45.8		ug/L		92	80 - 120
cis-1,2-Dichloroethene	50.0	49.8		ug/L		100	80 - 120
cis-1,3-Dichloropropene	50.0	46.7		ug/L		93	80 - 120
Dibromochloromethane	50.0	47.6		ug/L		95	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	48.5		ug/L		97	69 - 135
1,2-Dibromoethane (EDB)	50.0	48.9		ug/L		98	80 - 120
1,2-Dichlorobenzene	50.0	48.7		ug/L		97	76 - 122
1,4-Dichlorobenzene	50.0	47.9		ug/L		96	80 - 120

Preliminary Data

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

Lab Sample ID: LCS 160-208119/3
Matrix: Water
Analysis Batch: 208119

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl bromide	50.0	40.0		ug/L		80	48 - 140
1,1-Dichloroethane	50.0	48.2		ug/L		96	80 - 120
Methyl chloride	50.0	47.8		ug/L		96	72 - 123
1,2-Dichloroethane	50.0	39.0	*	ug/L		78	80 - 120
Methylene bromide	50.0	43.5		ug/L		87	80 - 120
1,1-Dichloroethene	50.0	58.4		ug/L		117	77 - 121
Methyl ethyl ketone (MEK)	50.0	44.3		ug/L		89	68 - 128
1,2-Dichloropropane	50.0	46.4		ug/L		93	80 - 120
Ethylbenzene	50.0	43.9		ug/L		88	80 - 120
2-Hexanone	50.0	46.4		ug/L		93	64 - 136
Methyl iodide	50.0	54.0		ug/L		108	72 - 130
Methacrylonitrile	500	401		ug/L		80	78 - 123
Methylene Chloride	50.0	53.8		ug/L		108	79 - 115
4-Methyl-2-pentanone (MIBK)	50.0	46.4		ug/L		93	74 - 129
Styrene	50.0	50.3		ug/L		101	80 - 120
1,1,1,2-Tetrachloroethane	50.0	48.1		ug/L		96	80 - 120
1,1,2,2-Tetrachloroethane	50.0	51.1		ug/L		102	80 - 120
Tetrachloroethene	50.0	49.6		ug/L		99	80 - 120
Toluene	50.0	51.3		ug/L		103	80 - 120
trans-1,4-Dichloro-2-butene	50.0	45.0		ug/L		90	80 - 123
trans-1,2-Dichloroethene	50.0	53.4		ug/L		107	80 - 120
trans-1,3-Dichloropropene	50.0	48.7		ug/L		97	80 - 120
1,1,1-Trichloroethane	50.0	43.8		ug/L		88	75 - 127
1,1,2-Trichloroethane	50.0	49.0		ug/L		98	80 - 120
Trichloroethene	50.0	42.3		ug/L		85	80 - 120
Trichlorofluoromethane	50.0	47.6		ug/L		95	72 - 132
1,2,3-Trichloropropane	50.0	46.7		ug/L		93	80 - 120
Vinyl acetate	50.0	47.5		ug/L		95	43 - 140
Vinyl chloride	50.0	41.6		ug/L		83	68 - 120
Xylenes, Total	100	98.7		ug/L		99	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*75 - 123*
Dibromofluoromethane (Surr)	*98*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*85*		*78 - 127*
Toluene-d8 (Surr)	*107*		*80 - 120*

Lab Sample ID: LCSD 160-208119/4
Matrix: Water
Analysis Batch: 208119

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	42.2		ug/L		84	72 - 139	13	20
Acrylonitrile	500	465		ug/L		93	80 - 120	2	20
Benzene	50.0	49.2		ug/L		98	80 - 120	1	20
Bromochloromethane	50.0	48.0		ug/L		96	80 - 120	2	20
Bromodichloromethane	50.0	45.7		ug/L		91	80 - 120	2	20
Bromoform	50.0	50.9		ug/L		102	80 - 120	3	20

Preliminary Data

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

Lab Sample ID: LCSD 160-208119/4
Matrix: Water
Analysis Batch: 208119

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon disulfide	50.0	54.6		ug/L		109	79 - 120	4	20
Carbon tetrachloride	50.0	42.3		ug/L		85	74 - 128	3	20
Chlorobenzene	50.0	48.2		ug/L		96	80 - 120	1	20
Chloroethane	50.0	35.2		ug/L		70	55 - 140	7	20
Chloroform	50.0	44.7		ug/L		89	80 - 120	2	20
cis-1,2-Dichloroethene	50.0	49.3		ug/L		99	80 - 120	1	20
cis-1,3-Dichloropropene	50.0	47.7		ug/L		95	80 - 120	2	20
Dibromochloromethane	50.0	49.1		ug/L		98	80 - 120	3	20
1,2-Dibromo-3-Chloropropane	50.0	49.6		ug/L		99	69 - 135	2	20
1,2-Dibromoethane (EDB)	50.0	50.4		ug/L		101	80 - 120	3	20
1,2-Dichlorobenzene	50.0	49.7		ug/L		99	76 - 122	2	20
1,4-Dichlorobenzene	50.0	48.6		ug/L		97	80 - 120	1	20
Methyl bromide	50.0	39.1		ug/L		78	48 - 140	2	20
1,1-Dichloroethane	50.0	46.8		ug/L		94	80 - 120	3	20
Methyl chloride	50.0	44.0		ug/L		88	72 - 123	8	20
1,2-Dichloroethane	50.0	39.8		ug/L		80	80 - 120	2	20
Methylene bromide	50.0	44.8		ug/L		90	80 - 120	3	20
1,1-Dichloroethene	50.0	56.3		ug/L		113	77 - 121	4	20
Methyl ethyl ketone (MEK)	50.0	43.3		ug/L		87	68 - 128	2	20
1,2-Dichloropropane	50.0	46.4		ug/L		93	80 - 120	0	20
Ethylbenzene	50.0	43.5		ug/L		87	80 - 120	1	20
2-Hexanone	50.0	47.0		ug/L		94	64 - 136	1	20
Methyl iodide	50.0	52.7		ug/L		105	72 - 130	2	20
Methacrylonitrile	500	399		ug/L		80	78 - 123	1	20
Methylene Chloride	50.0	53.2		ug/L		106	79 - 115	1	20
4-Methyl-2-pentanone (MIBK)	50.0	47.7		ug/L		95	74 - 129	3	20
Styrene	50.0	51.1		ug/L		102	80 - 120	1	20
1,1,1,2-Tetrachloroethane	50.0	48.0		ug/L		96	80 - 120	0	20
1,1,2,2-Tetrachloroethane	50.0	51.8		ug/L		104	80 - 120	1	20
Tetrachloroethene	50.0	49.6		ug/L		99	80 - 120	0	20
Toluene	50.0	50.7		ug/L		101	80 - 120	1	20
trans-1,4-Dichloro-2-butene	50.0	43.2		ug/L		86	80 - 123	4	20
trans-1,2-Dichloroethene	50.0	52.3		ug/L		105	80 - 120	2	20
trans-1,3-Dichloropropene	50.0	50.2		ug/L		100	80 - 120	3	20
1,1,1-Trichloroethane	50.0	42.8		ug/L		86	75 - 127	2	20
1,1,2-Trichloroethane	50.0	50.8		ug/L		102	80 - 120	4	20
Trichloroethene	50.0	42.1		ug/L		84	80 - 120	0	20
Trichlorofluoromethane	50.0	46.2		ug/L		92	72 - 132	3	20
1,2,3-Trichloropropane	50.0	46.8		ug/L		94	80 - 120	0	20
Vinyl acetate	50.0	46.8		ug/L		94	43 - 140	2	20
Vinyl chloride	50.0	38.0		ug/L		76	68 - 120	9	20
Xylenes, Total	100	98.5		ug/L		99	80 - 120	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*75 - 123*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*86*		*78 - 127*
Toluene-d8 (Surr)	*105*		*80 - 120*

Preliminary Data

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

Lab Sample ID: MB 160-207677/1-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Acenaphthylene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Acetophenone	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Acetylaminofluorene	ND		100	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
alpha,alpha-Dimethyl phenethylamine	ND		50	22	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Aminobiphenyl	ND		50	1.1	ug/L		08/25/15 09:36	08/25/15 18:04	1
Anthracene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzo[a]anthracene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzo[a]pyrene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzo[b]fluoranthene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzo[g,h,i]perylene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzo[k]fluoranthene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Benzyl alcohol	ND		10	3.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Bis(2-chloroethoxy)methane	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Bis(2-chloroethyl)ether	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
bis(2 chloro-1-methylethyl) ether	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Bis(2-ethylhexyl) phthalate	ND		10	1.9	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Bromophenyl phenyl ether	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Butyl benzyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Chloroaniline	ND		10	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Chlorobenzilate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Chloro-3-methylphenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Chloronaphthalene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Chlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Chlorophenyl phenyl ether	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Chrysene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Diallate	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Dibenz(a,h)anthracene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Dibenzofuran	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
3,3'-Dichlorobenzidine	ND		50	1.3	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4-Dichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,6-Dichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Diethyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Dimethoate	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
7,12-Dimethylbenz(a)anthracene	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
3,3'-Dimethylbenzidine	ND		50	2.6	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4-Dimethylphenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Dimethyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Di-n-butyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,3-Dinitrobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,4-Dinitrobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
4,6-Dinitro-2-methylphenol	ND		10	1.3	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4-Dinitrophenol	ND		50	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4-Dinitrotoluene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,6-Dinitrotoluene	ND		10	2.2	ug/L		08/25/15 09:36	08/25/15 18:04	1
Di-n-octyl phthalate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Dinoseb	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Diphenylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1

Preliminary Data

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

Lab Sample ID: MB 160-207677/1-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Disulfoton	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Ethyl methanesulfonate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Famphur	ND		100	1.7	ug/L		08/25/15 09:36	08/25/15 18:04	1
Fluoranthene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Fluorene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Hexachlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Hexachlorobutadiene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Hexachloroethane	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Hexachloropropene	ND		100	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Indeno[1,2,3-cd]pyrene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Isodrin	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Isophorone	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Isosafrole	ND		20	5.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Methapyrilene	ND		50	1.3	ug/L		08/25/15 09:36	08/25/15 18:04	1
3-Methylcholanthrene	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Methyl methanesulfonate	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Methylnaphthalene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Methyl parathion	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Methylphenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
3 & 4 Methylphenol	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Naphthalene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,4-Naphthoquinone	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1-Naphthylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Naphthylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Nitroaniline	ND		10	1.1	ug/L		08/25/15 09:36	08/25/15 18:04	1
3-Nitroaniline	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Nitroaniline	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Nitrobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
5-Nitro-o-toluidine	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2-Nitrophenol	ND		10	1.5	ug/L		08/25/15 09:36	08/25/15 18:04	1
4-Nitrophenol	ND		10	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosodiethylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosodimethylamine	ND		10	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosodi-n-butylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosomethylethylamine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosomorpholine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosopiperidine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
N-Nitrosopyrrolidine	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
o,o',o''-Triethylphosphorothioate	ND		50	1.1	ug/L		08/25/15 09:36	08/25/15 18:04	1
o-Toluidine	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Parathion	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
p-Dimethylamino azobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pentachlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pentachloroethane	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pentachloronitrobenzene	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pentachlorophenol	ND		10	1.3	ug/L		08/25/15 09:36	08/25/15 18:04	1

Preliminary Data

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

Lab Sample ID: MB 160-207677/1-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenacetin	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Phenanthrene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Phenol	ND		10	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Phorate	ND		50	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
p-Phenylene diamine	ND		100	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pronamide	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pyrene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Pyridine	ND		20	2.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
Safrole	ND		20	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,3,4,6-Tetrachlorophenol	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,2,4-Trichlorobenzene	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4,5-Trichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
2,4,6-Trichlorophenol	ND		10	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1
1,3,5-Trinitrobenzene	ND		50	1.0	ug/L		08/25/15 09:36	08/25/15 18:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*43 - 108*	*08/25/15 09:36*	*08/25/15 18:04*	*1*
2-Fluorophenol (Surr)	*40*		*15 - 59*	*08/25/15 09:36*	*08/25/15 18:04*	*1*
Nitrobenzene-d5 (Surr)	*74*		*50 - 101*	*08/25/15 09:36*	*08/25/15 18:04*	*1*
Phenol-d5 (Surr)	*25*		*10 - 50*	*08/25/15 09:36*	*08/25/15 18:04*	*1*
Terphenyl-d14 (Surr)	*70*		*21 - 97*	*08/25/15 09:36*	*08/25/15 18:04*	*1*
2,4,6-Tribromophenol (Surr)	*91*		*37 - 120*	*08/25/15 09:36*	*08/25/15 18:04*	*1*

Lab Sample ID: MB 160-207677/1-A
Matrix: Water
Analysis Batch: 207950

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorophene	ND		250	10	ug/L		08/25/15 09:36	08/26/15 15:56	1
Kepone	ND		100	20	ug/L		08/25/15 09:36	08/26/15 15:56	1

Lab Sample ID: LCS 160-207677/2-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	200	162		ug/L		81	58 - 108
Acenaphthylene	200	163		ug/L		81	59 - 110
Anthracene	200	164		ug/L		82	59 - 106
Benzo[a]anthracene	200	175		ug/L		88	56 - 105
Benzo[a]pyrene	200	175		ug/L		88	54 - 109
Benzo[b]fluoranthene	200	185		ug/L		92	58 - 109
Benzo[g,h,i]perylene	200	182		ug/L		91	50 - 119
Benzo[k]fluoranthene	200	161		ug/L		80	54 - 109
Bis(2-chloroethoxy)methane	200	165		ug/L		82	59 - 110
Bis(2-chloroethyl)ether	200	159		ug/L		80	58 - 109
bis(2 chloro-1-methylethyl) ether	200	155		ug/L		77	49 - 97

Preliminary Data

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

Lab Sample ID: LCS 160-207677/2-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-ethylhexyl) phthalate	200	171		ug/L		86	58 - 111
4-Bromophenyl phenyl ether	200	172		ug/L		86	62 - 98
Butyl benzyl phthalate	200	176		ug/L		88	56 - 111
4-Chloroaniline	200	158		ug/L		79	43 - 97
4-Chloro-3-methylphenol	200	171		ug/L		86	51 - 102
2-Chloronaphthalene	200	162		ug/L		81	58 - 109
2-Chlorophenol	200	154		ug/L		77	47 - 97
4-Chlorophenyl phenyl ether	200	170		ug/L		85	59 - 110
Chrysene	200	162		ug/L		81	55 - 107
Dibenz(a,h)anthracene	200	190		ug/L		95	52 - 118
Dibenzofuran	200	161		ug/L		81	57 - 106
3,3'-Dichlorobenzidine	200	184		ug/L		92	50 - 105
2,4-Dichlorophenol	200	175		ug/L		88	55 - 104
Diethyl phthalate	200	171		ug/L		86	58 - 113
2,4-Dimethylphenol	200	162		ug/L		81	53 - 99
Dimethyl phthalate	200	176		ug/L		88	60 - 114
Di-n-butyl phthalate	200	170		ug/L		85	60 - 105
4,6-Dinitro-2-methylphenol	200	199		ug/L		99	56 - 118
2,4-Dinitrophenol	200	162		ug/L		81	53 - 119
2,4-Dinitrotoluene	200	191		ug/L		95	57 - 117
2,6-Dinitrotoluene	200	180		ug/L		90	59 - 117
Di-n-octyl phthalate	200	182		ug/L		91	59 - 113
Diphenylamine	200	166		ug/L		83	58 - 102
Fluoranthene	200	174		ug/L		87	56 - 113
Fluorene	200	167		ug/L		84	61 - 113
Hexachlorobenzene	200	177		ug/L		88	57 - 113
Hexachlorobutadiene	200	169		ug/L		84	52 - 102
Hexachlorocyclopentadiene	200	168		ug/L		84	40 - 120
Hexachloroethane	200	152		ug/L		76	52 - 102
Indeno[1,2,3-cd]pyrene	200	197		ug/L		98	49 - 120
Isophorone	200	163		ug/L		82	56 - 101
2-Methylnaphthalene	200	165		ug/L		82	54 - 101
2-Methylphenol	200	133		ug/L		67	40 - 96
3 & 4 Methylphenol	200	133		ug/L		67	40 - 87
Naphthalene	200	159		ug/L		79	54 - 98
2-Nitroaniline	200	170		ug/L		85	57 - 120
3-Nitroaniline	200	174		ug/L		87	47 - 113
4-Nitroaniline	200	180		ug/L		90	51 - 119
Nitrobenzene	200	165		ug/L		83	59 - 110
2-Nitrophenol	200	185		ug/L		92	58 - 111
4-Nitrophenol	200	56.4		ug/L		28	20 - 47
N-Nitrosodi-n-propylamine	200	170		ug/L		85	59 - 115
Pentachlorophenol	200	170		ug/L		85	49 - 115
Phenanthrene	200	160		ug/L		80	59 - 110
Phenol	200	57.3		ug/L		29	20 - 69
Pyrene	200	169		ug/L		84	55 - 105
1,2,4-Trichlorobenzene	200	164		ug/L		82	56 - 100
2,4,5-Trichlorophenol	200	180		ug/L		90	56 - 113

Preliminary Data

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

Lab Sample ID: LCS 160-207677/2-A
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,6-Trichlorophenol	200	179		ug/L		89	47 - 116

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*78*		*43 - 108*
2-Fluorophenol (Surr)	*44*		*15 - 59*
Nitrobenzene-d5 (Surr)	*84*		*50 - 101*
Phenol-d5 (Surr)	*29*		*10 - 50*
Terphenyl-d14 (Surr)	*83*		*21 - 97*
2,4,6-Tribromophenol (Surr)	*105*		*37 - 120*

Lab Sample ID: 160-13499-B-1-A MS
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		193	138		ug/L		71	63 - 103
Acenaphthylene	ND		193	139		ug/L		72	64 - 105
Anthracene	ND		193	140		ug/L		72	64 - 101
Benzo[a]anthracene	ND		193	147		ug/L		76	55 - 116
Benzo[a]pyrene	ND		193	147		ug/L		76	55 - 109
Benzo[b]fluoranthene	ND		193	153		ug/L		79	56 - 119
Benzo[g,h,i]perylene	ND		193	151		ug/L		78	40 - 127
Benzo[k]fluoranthene	ND		193	137		ug/L		71	54 - 110
Bis(2-chloroethoxy)methane	ND		193	137		ug/L		71	64 - 105
Bis(2-chloroethyl)ether	ND		193	132		ug/L		68	63 - 104
bis(2 chloro-1-methylethyl) ether	ND		193	130		ug/L		67	54 - 102
Bis(2-ethylhexyl) phthalate	ND		193	145		ug/L		75	53 - 125
4-Bromophenyl phenyl ether	ND		193	148		ug/L		77	64 - 108
Butyl benzyl phthalate	ND		193	148		ug/L		77	56 - 128
4-Chloroaniline	ND		193	132		ug/L		68	48 - 92
4-Chloro-3-methylphenol	ND		193	140		ug/L		72	51 - 105
2-Chloronaphthalene	ND		193	140		ug/L		73	63 - 104
2-Chlorophenol	ND		193	126		ug/L		65	52 - 92
4-Chlorophenyl phenyl ether	ND		193	146		ug/L		76	64 - 105
Chrysene	ND		193	135		ug/L		70	56 - 115
Dibenz(a,h)anthracene	ND		193	157		ug/L		82	44 - 128
Dibenzofuran	ND		193	139		ug/L		72	62 - 101
3,3'-Dichlorobenzidine	ND		193	152		ug/L		79	43 - 117
2,4-Dichlorophenol	ND		193	144		ug/L		75	60 - 99
Diethyl phthalate	ND		193	144		ug/L		75	63 - 108
2,4-Dimethylphenol	ND		193	132		ug/L		68	54 - 97
Dimethyl phthalate	ND		193	148		ug/L		77	65 - 109
Di-n-butyl phthalate	ND		193	145		ug/L		75	62 - 109
4,6-Dinitro-2-methylphenol	ND		193	146		ug/L		76	61 - 113
2,4-Dinitrophenol	ND		193	116		ug/L		60	20 - 131
2,4-Dinitrotoluene	ND		193	157		ug/L		82	62 - 112
2,6-Dinitrotoluene	ND		193	150		ug/L		78	64 - 112
Di-n-octyl phthalate	ND		193	151		ug/L		78	54 - 128

Preliminary Data

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

Lab Sample ID: 160-13499-B-1-A MS
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diphenylamine	ND		193	141		ug/L		73	63 - 97
Fluoranthene	ND		193	147		ug/L		76	61 - 108
Fluorene	ND		193	143		ug/L		74	66 - 108
Hexachlorobenzene	ND		193	148		ug/L		77	62 - 108
Hexachlorobutadiene	ND		193	144		ug/L		75	57 - 97
Hexachlorocyclopentadiene	ND		193	144		ug/L		75	16 - 115
Hexachloroethane	ND		193	133		ug/L		69	57 - 97
Indeno[1,2,3-cd]pyrene	ND		193	163		ug/L		85	42 - 131
Isophorone	ND		193	134		ug/L		70	48 - 106
2-Methylnaphthalene	ND		193	142		ug/L		74	64 - 99
2-Methylphenol	ND		193	104		ug/L		54	39 - 83
3 & 4 Methylphenol	ND		193	103		ug/L		53	39 - 82
Naphthalene	ND		193	137		ug/L		71	63 - 98
2-Nitroaniline	ND		193	139		ug/L		72	62 - 115
3-Nitroaniline	ND		193	145		ug/L		75	52 - 108
4-Nitroaniline	ND		193	148		ug/L		77	56 - 114
Nitrobenzene	ND		193	135		ug/L		70	64 - 105
2-Nitrophenol	ND		193	152		ug/L		79	64 - 106
4-Nitrophenol	ND		193	40.1		ug/L		21	15 - 42
N-Nitrosodi-n-propylamine	ND		193	142		ug/L		74	64 - 110
Pentachlorophenol	ND		193	119		ug/L		62	54 - 110
Phenanthrene	ND		193	138		ug/L		71	64 - 105
Phenol	ND		193	42.0		ug/L		22	15 - 70
Pyrene	ND		193	142		ug/L		74	57 - 118
1,2,4-Trichlorobenzene	ND		193	143		ug/L		74	61 - 95
2,4,5-Trichlorophenol	ND		193	150		ug/L		78	61 - 108
2,4,6-Trichlorophenol	ND		193	148		ug/L		77	61 - 108

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*71*		*43 - 108*
2-Fluorophenol (Surr)	*33*		*15 - 59*
Nitrobenzene-d5 (Surr)	*72*		*50 - 101*
Phenol-d5 (Surr)	*21*		*10 - 50*
Terphenyl-d14 (Surr)	*71*		*21 - 97*
2,4,6-Tribromophenol (Surr)	*89*		*37 - 120*

Lab Sample ID: 160-13499-C-1-A MSD
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		192	164		ug/L		85	63 - 103	17	20
Acenaphthylene	ND		192	165		ug/L		86	64 - 105	17	20
Anthracene	ND		192	164		ug/L		85	64 - 101	16	20
Benzo[a]anthracene	ND		192	174		ug/L		91	55 - 116	17	20
Benzo[a]pyrene	ND		192	176		ug/L		92	55 - 109	18	20
Benzo[b]fluoranthene	ND		192	183		ug/L		95	56 - 119	18	20
Benzo[g,h,i]perylene	ND		192	180		ug/L		94	40 - 127	18	20

Preliminary Data

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

Lab Sample ID: 160-13499-C-1-A MSD
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[k]fluoranthene	ND		192	165		ug/L		86	54 - 110	18	20
Bis(2-chloroethoxy)methane	ND		192	161		ug/L		84	64 - 105	16	20
Bis(2-chloroethyl)ether	ND		192	157		ug/L		82	63 - 104	18	20
bis(2 chloro-1-methylethyl) ether	ND		192	157		ug/L		82	54 - 102	19	20
Bis(2-ethylhexyl) phthalate	ND		192	173		ug/L		90	53 - 125	18	20
4-Bromophenyl phenyl ether	ND		192	173		ug/L		90	64 - 108	16	20
Butyl benzyl phthalate	ND		192	175		ug/L		91	56 - 128	17	20
4-Chloroaniline	ND		192	155		ug/L		81	48 - 92	16	20
4-Chloro-3-methylphenol	ND		192	164		ug/L		86	51 - 105	16	20
2-Chloronaphthalene	ND		192	165		ug/L		86	63 - 104	16	20
2-Chlorophenol	ND		192	151		ug/L		79	52 - 92	18	20
4-Chlorophenyl phenyl ether	ND		192	174		ug/L		91	64 - 105	17	20
Chrysene	ND		192	162		ug/L		84	56 - 115	18	20
Dibenz(a,h)anthracene	ND		192	189		ug/L		99	44 - 128	19	20
Dibenzofuran	ND		192	163		ug/L		85	62 - 101	16	20
3,3'-Dichlorobenzidine	ND		192	183		ug/L		95	43 - 117	18	20
2,4-Dichlorophenol	ND		192	169		ug/L		88	60 - 99	16	20
Diethyl phthalate	ND		192	169		ug/L		88	63 - 108	16	20
2,4-Dimethylphenol	ND		192	154		ug/L		80	54 - 97	16	20
Dimethyl phthalate	ND		192	174		ug/L		91	65 - 109	16	20
Di-n-butyl phthalate	ND		192	169		ug/L		88	62 - 109	15	20
4,6-Dinitro-2-methylphenol	ND		192	174		ug/L		91	61 - 113	17	20
2,4-Dinitrophenol	ND		192	142		ug/L		74	20 - 131	20	20
2,4-Dinitrotoluene	ND		192	186		ug/L		97	62 - 112	17	20
2,6-Dinitrotoluene	ND		192	179		ug/L		93	64 - 112	18	20
Di-n-octyl phthalate	ND		192	179		ug/L		94	54 - 128	17	20
Diphenylamine	ND		192	167		ug/L		87	63 - 97	17	20
Fluoranthene	ND		192	172		ug/L		90	61 - 108	16	20
Fluorene	ND		192	169		ug/L		88	66 - 108	16	20
Hexachlorobenzene	ND		192	174		ug/L		91	62 - 108	16	20
Hexachlorobutadiene	ND		192	171		ug/L		89	57 - 97	17	20
Hexachlorocyclopentadiene	ND		192	172		ug/L		90	16 - 115	18	20
Hexachloroethane	ND		192	159		ug/L		83	57 - 97	18	20
Indeno[1,2,3-cd]pyrene	ND		192	191		ug/L		100	42 - 131	16	20
Isophorone	ND		192	159		ug/L		83	48 - 106	17	20
2-Methylnaphthalene	ND		192	167		ug/L		87	64 - 99	16	20
2-Methylphenol	ND		192	125		ug/L		65	39 - 83	18	20
3 & 4 Methylphenol	ND		192	122		ug/L		64	39 - 82	17	20
Naphthalene	ND		192	162		ug/L		84	63 - 98	17	20
2-Nitroaniline	ND		192	168		ug/L		88	62 - 115	19	20
3-Nitroaniline	ND		192	169		ug/L		88	52 - 108	15	20
4-Nitroaniline	ND		192	173		ug/L		90	56 - 114	16	20
Nitrobenzene	ND		192	160		ug/L		83	64 - 105	17	20
2-Nitrophenol	ND		192	179		ug/L		93	64 - 106	16	20
4-Nitrophenol	ND		192	47.8		ug/L		25	15 - 42	17	20
N-Nitrosodi-n-propylamine	ND		192	169		ug/L		88	64 - 110	17	20
Pentachlorophenol	ND		192	139		ug/L		72	54 - 110	16	20
Phenanthrene	ND		192	163		ug/L		85	64 - 105	17	20

Preliminary Data

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

Lab Sample ID: 160-13499-C-1-A MSD
Matrix: Water
Analysis Batch: 207735

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 207677

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol	ND		192	49.8		ug/L		26	15 - 70	17	20
Pyrene	ND		192	169		ug/L		88	57 - 118	17	20
1,2,4-Trichlorobenzene	ND		192	166		ug/L		87	61 - 95	15	20
2,4,5-Trichlorophenol	ND		192	176		ug/L		92	61 - 108	16	20
2,4,6-Trichlorophenol	ND		192	178		ug/L		93	61 - 108	18	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*85*		*43 - 108*
2-Fluorophenol (Surr)	*40*		*15 - 59*
Nitrobenzene-d5 (Surr)	*86*		*50 - 101*
Phenol-d5 (Surr)	*26*		*10 - 50*
Terphenyl-d14 (Surr)	*85*		*21 - 97*
2,4,6-Tribromophenol (Surr)	*106*		*37 - 120*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 160-207387/1-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207387

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
alpha-BHC	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
beta-BHC	ND		0.050	0.013	ug/L		08/24/15 14:06	08/25/15 14:10	1
delta-BHC	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
gamma-BHC (Lindane)	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
alpha-Chlordane	ND		0.050	0.015	ug/L		08/24/15 14:06	08/25/15 14:10	1
gamma-Chlordane	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
4,4'-DDD	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
4,4'-DDE	ND		0.050	0.014	ug/L		08/24/15 14:06	08/25/15 14:10	1
4,4'-DDT	ND		0.050	0.023	ug/L		08/24/15 14:06	08/25/15 14:10	1
Dieldrin	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endosulfan I	ND		0.050	0.019	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endosulfan II	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endosulfan sulfate	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endrin	ND		0.050	0.018	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endrin aldehyde	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Endrin ketone	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Heptachlor	ND		0.050	0.010	ug/L		08/24/15 14:06	08/25/15 14:10	1
Heptachlor epoxide	ND		0.050	0.017	ug/L		08/24/15 14:06	08/25/15 14:10	1
Methoxychlor	ND		0.50	0.013	ug/L		08/24/15 14:06	08/25/15 14:10	1
Toxaphene	ND		2.0	0.27	ug/L		08/24/15 14:06	08/25/15 14:10	1
Technical Chlordane	ND		0.50	0.10	ug/L		08/24/15 14:06	08/25/15 14:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*83*		*44 - 112*	*08/24/15 14:06*	*08/25/15 14:10*	*1*
Tetrachloro-m-xylene	*89*		*49 - 104*	*08/24/15 14:06*	*08/25/15 14:10*	*1*

Preliminary Data

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 160-207387/2-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207387

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	0.500	0.398		ug/L		80	42 - 103
alpha-BHC	0.500	0.470		ug/L		94	65 - 109
beta-BHC	0.500	0.444		ug/L		89	62 - 105
delta-BHC	0.500	0.514		ug/L		103	66 - 111
gamma-BHC (Lindane)	0.501	0.466		ug/L		93	63 - 110
alpha-Chlordane	0.500	0.446		ug/L		89	58 - 106
gamma-Chlordane	0.500	0.443		ug/L		89	55 - 107
4,4'-DDD	0.500	0.513		ug/L		103	63 - 115
4,4'-DDE	0.501	0.462		ug/L		92	58 - 107
4,4'-DDT	0.500	0.479		ug/L		96	63 - 115
Dieldrin	0.501	0.450		ug/L		90	63 - 106
Endosulfan I	0.500	0.375		ug/L		75	40 - 106
Endosulfan II	0.500	0.385		ug/L		77	48 - 104
Endosulfan sulfate	0.500	0.469		ug/L		94	61 - 111
Endrin	0.501	0.456		ug/L		91	64 - 111
Endrin aldehyde	0.500	0.476		ug/L		95	40 - 139
Endrin ketone	0.501	0.475		ug/L		95	60 - 112
Heptachlor	0.500	0.371		ug/L		74	42 - 119
Heptachlor epoxide	0.500	0.455		ug/L		91	63 - 106
Methoxychlor	0.500	0.468	J	ug/L		94	62 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*84*		*44 - 112*
Tetrachloro-m-xylene	*85*		*49 - 104*

Lab Sample ID: LCSD 160-207387/3-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 207387

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldrin	0.500	0.393		ug/L		79	42 - 103	1	20
alpha-BHC	0.500	0.471		ug/L		94	65 - 109	0	20
beta-BHC	0.500	0.435		ug/L		87	62 - 105	2	20
delta-BHC	0.500	0.500		ug/L		100	66 - 111	3	20
gamma-BHC (Lindane)	0.501	0.458		ug/L		92	63 - 110	2	20
alpha-Chlordane	0.500	0.427		ug/L		85	58 - 106	4	20
gamma-Chlordane	0.500	0.427		ug/L		85	55 - 107	4	20
4,4'-DDD	0.500	0.470		ug/L		94	63 - 115	9	20
4,4'-DDE	0.501	0.445		ug/L		89	58 - 107	4	20
4,4'-DDT	0.500	0.434		ug/L		87	63 - 115	10	20
Dieldrin	0.501	0.434		ug/L		87	63 - 106	4	20
Endosulfan I	0.500	0.362		ug/L		72	40 - 106	4	20
Endosulfan II	0.500	0.369		ug/L		74	48 - 104	4	20
Endosulfan sulfate	0.500	0.438		ug/L		88	61 - 111	7	20
Endrin	0.501	0.434		ug/L		87	64 - 111	5	20
Endrin aldehyde	0.500	0.440		ug/L		88	40 - 139	8	20
Endrin ketone	0.501	0.436		ug/L		87	60 - 112	9	20
Heptachlor	0.500	0.361		ug/L		72	42 - 119	3	20

Preliminary Data

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 160-207387/3-A
Matrix: Water
Analysis Batch: 207683

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 207387

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Heptachlor epoxide	0.500	0.440		ug/L		88	63 - 106	3	20
Methoxychlor	0.500	0.429	J	ug/L		86	62 - 119	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*77*		*44 - 112*
Tetrachloro-m-xylene	*86*		*49 - 104*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 160-207737/1-A
Matrix: Water
Analysis Batch: 207944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1221	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1232	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1242	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1248	ND		1.0	0.35	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1254	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 09:26	1
PCB-1260	ND		1.0	0.17	ug/L		08/25/15 13:16	08/27/15 09:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*104*		*52 - 150*	*08/25/15 13:16*	*08/27/15 09:26*	*1*

Lab Sample ID: LCS 160-207737/2-A
Matrix: Water
Analysis Batch: 207944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	5.00	4.44		ug/L		89	51 - 126
PCB-1260	5.00	4.41		ug/L		88	66 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*90*		*52 - 150*

Lab Sample ID: LCSD 160-207737/3-A
Matrix: Water
Analysis Batch: 207944

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 207737

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	5.00	4.09		ug/L		82	51 - 126	8	20
PCB-1260	5.00	4.08		ug/L		82	66 - 125	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*81*		*52 - 150*

Preliminary Data

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 160-207377/1-A
Matrix: Water
Analysis Batch: 207961

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207377

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.27	ug/L		08/24/15 12:55	08/26/15 18:50	1
2,4-D	ND		8.0	4.2	ug/L		08/24/15 12:55	08/26/15 18:50	1
Silvex (2,4,5-TP)	ND		1.0	0.19	ug/L		08/24/15 12:55	08/26/15 18:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*108*		*60 - 128*	*08/24/15 12:55*	*08/26/15 18:50*	*1*

Lab Sample ID: LCS 160-207377/2-A
Matrix: Water
Analysis Batch: 207961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207377

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	5.92		ug/L		118	40 - 140
2,4-D	20.0	27.4		ug/L		137	40 - 140
Silvex (2,4,5-TP)	5.00	5.64		ug/L		113	37 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*103*		*60 - 128*

Lab Sample ID: LCSD 160-207377/3-A
Matrix: Water
Analysis Batch: 207961

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 207377

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	6.59		ug/L		132	40 - 140	11	20
2,4-D	20.0	26.4		ug/L		132	40 - 140	4	20
Silvex (2,4,5-TP)	5.00	6.14		ug/L		123	37 - 140	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*104*		*60 - 128*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-207770/9
Matrix: Water
Analysis Batch: 207770

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.50	0.050	mg/L			08/25/15 18:49	1

Lab Sample ID: LCS 160-207770/10
Matrix: Water
Analysis Batch: 207770

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	8.00	7.64		mg/L		95	90 - 110

Preliminary Data

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 160-13505-G-2 MS
Matrix: Water
Analysis Batch: 207770

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate - DL	91		200	276		mg/L		93	90 - 110

Lab Sample ID: 160-13505-G-2 DU
Matrix: Water
Analysis Batch: 207770

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate - DL	91		89.9		mg/L		0.9	20

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Lab Sample ID: MB 320-84116/1-A
Matrix: Water
Analysis Batch: 84518

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 84116

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.29	pg/L		08/26/15 08:47	08/27/15 18:44	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*65*		*31 - 137*	*08/26/15 08:47*	*08/27/15 18:44*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*101*		*42 - 164*	*08/26/15 08:47*	*08/27/15 18:44*	*1*

Lab Sample ID: LCS 320-84116/2-A
Matrix: Water
Analysis Batch: 84518

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 84116

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	235		pg/L		118	73 - 146

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*67*		*25 - 141*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*101*		*42 - 164*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-207421/1-A
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207421

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	4.00	J ^	10	3.7	ug/L		08/24/15 16:46	08/26/15 21:26	1
Arsenic	ND		10	1.8	ug/L		08/24/15 16:46	08/26/15 21:26	1
Barium	ND		50	2.1	ug/L		08/24/15 16:46	08/26/15 21:26	1

Preliminary Data

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

Lab Sample ID: MB 160-207421/1-A
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207421

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		5.0	0.28	ug/L		08/24/15 16:46	08/26/15 21:26	1
Boron	ND	^	50	7.2	ug/L		08/24/15 16:46	08/26/15 21:26	1
Cadmium	ND		5.0	0.34	ug/L		08/24/15 16:46	08/26/15 21:26	1
Calcium	ND		1000	54	ug/L		08/24/15 16:46	08/26/15 21:26	1
Chromium	ND		10	3.4	ug/L		08/24/15 16:46	08/26/15 21:26	1
Cobalt	ND		50	2.7	ug/L		08/24/15 16:46	08/26/15 21:26	1
Copper	ND		25	2.1	ug/L		08/24/15 16:46	08/26/15 21:26	1
Hardness (as CaCO3)	ND		5000	1700	ug/L		08/24/15 16:46	08/26/15 21:26	1
Lead	ND		10	0.60	ug/L		08/24/15 16:46	08/26/15 21:26	1
Magnesium	ND		1.0	0.051	mg/L		08/24/15 16:46	08/26/15 21:26	1
Manganese	ND		15	1.0	ug/L		08/24/15 16:46	08/26/15 21:26	1
Nickel	ND		0.040	0.0026	mg/L		08/24/15 16:46	08/26/15 21:26	1
Phosphorus	72.8	J	250	14	ug/L		08/24/15 16:46	08/26/15 21:26	1
Selenium	ND		15	2.1	ug/L		08/24/15 16:46	08/26/15 21:26	1
Silver	ND		10	0.99	ug/L		08/24/15 16:46	08/26/15 21:26	1
Sodium	ND		1000	110	ug/L		08/24/15 16:46	08/26/15 21:26	1
Thallium	ND		20	2.4	ug/L		08/24/15 16:46	08/26/15 21:26	1
Vanadium	ND		50	4.4	ug/L		08/24/15 16:46	08/26/15 21:26	1
Zinc	ND		20	8.3	ug/L		08/24/15 16:46	08/26/15 21:26	1
Tin	ND		100	5.0	ug/L		08/24/15 16:46	08/26/15 21:26	1

Lab Sample ID: LCS 160-207421/2-A
Matrix: Water
Analysis Batch: 208156

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207421

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	510	^	ug/L		102	80 - 120
Arsenic	1000	930		ug/L		93	80 - 120
Barium	1000	1010		ug/L		101	80 - 120
Beryllium	1000	979		ug/L		98	80 - 120
Boron	2000	1970	^	ug/L		99	80 - 120
Cadmium	1000	998		ug/L		100	80 - 120
Calcium	10000	10500		ug/L		105	80 - 120
Chromium	1000	1060		ug/L		106	80 - 120
Cobalt	1000	1060		ug/L		106	80 - 120
Copper	1000	998		ug/L		100	80 - 120
Lead	1000	996		ug/L		100	80 - 120
Magnesium	10.0	9.76		mg/L		98	80 - 120
Manganese	1000	1030		ug/L		103	80 - 120
Nickel	1.00	1.06		mg/L		106	80 - 120
Phosphorus	1000	1080		ug/L		108	80 - 120
Selenium	500	474		ug/L		95	80 - 120
Silver	200	208		ug/L		104	80 - 120
Sodium	10000	9970		ug/L		100	80 - 120
Thallium	200	210		ug/L		105	80 - 120
Vanadium	1000	974		ug/L		97	80 - 120
Zinc	1000	996		ug/L		100	80 - 120
Tin	1000	990		ug/L		99	80 - 120

Preliminary Data

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

Lab Sample ID: 160-13506-4 MS
Matrix: Water
Analysis Batch: 208156

Client Sample ID: PZ-106-SS
Prep Type: Total/NA
Prep Batch: 207421

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	51	J B ^	500	519	^	ug/L		94	75 - 125
Arsenic	27	J	1000	995		ug/L		97	75 - 125
Barium	150	J	1000	1150		ug/L		100	75 - 125
Beryllium	ND		1000	998		ug/L		100	75 - 125
Boron	94	J ^	2000	2020	^	ug/L		96	75 - 125
Cadmium	ND		1000	1040		ug/L		104	75 - 125
Calcium	110000		10000	122000	4	ug/L		92	75 - 125
Chromium	ND		1000	1110		ug/L		111	75 - 125
Cobalt	ND		1000	1090		ug/L		109	75 - 125
Copper	ND		1000	1060		ug/L		106	75 - 125
Lead	ND		1000	1050		ug/L		105	75 - 125
Magnesium	50		10.0	59.8	4	mg/L		97	75 - 125
Manganese	13	J	1000	1060		ug/L		104	75 - 125
Nickel	ND		1.00	1.10		mg/L		110	75 - 125
Phosphorus	ND		1000	1140	J	ug/L		114	75 - 125
Selenium	24	J	500	493		ug/L		94	75 - 125
Silver	ND		200	208		ug/L		104	75 - 125
Sodium	14000		10000	23500		ug/L		95	75 - 125
Thallium	ND		200	227		ug/L		113	75 - 125
Vanadium	ND		1000	923		ug/L		92	75 - 125
Zinc	ND		1000	1070		ug/L		107	75 - 125
Tin	ND		1000	1030		ug/L		103	75 - 125

Lab Sample ID: 160-13506-4 MSD
Matrix: Water
Analysis Batch: 208156

Client Sample ID: PZ-106-SS
Prep Type: Total/NA
Prep Batch: 207421

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	51	J B ^	500	564	^	ug/L		103	75 - 125	8	20
Arsenic	27	J	1000	990		ug/L		96	75 - 125	1	20
Barium	150	J	1000	1150		ug/L		100	75 - 125	0	20
Beryllium	ND		1000	1000		ug/L		100	75 - 125	0	20
Boron	94	J ^	2000	2060	^	ug/L		98	75 - 125	2	20
Cadmium	ND		1000	1040		ug/L		104	75 - 125	0	20
Calcium	110000		10000	122000	4	ug/L		96	75 - 125	0	20
Chromium	ND		1000	1120		ug/L		112	75 - 125	1	20
Cobalt	ND		1000	1100		ug/L		110	75 - 125	1	20
Copper	ND		1000	1090		ug/L		109	75 - 125	3	20
Lead	ND		1000	1040		ug/L		104	75 - 125	0	20
Magnesium	50		10.0	59.9	4	mg/L		97	75 - 125	0	20
Manganese	13	J	1000	1070		ug/L		106	75 - 125	1	20
Nickel	ND		1.00	1.11		mg/L		111	75 - 125	0	20
Phosphorus	ND		1000	1140	J	ug/L		114	75 - 125	0	20
Selenium	24	J	500	540		ug/L		103	75 - 125	9	20
Silver	ND		200	211		ug/L		106	75 - 125	1	20
Sodium	14000		10000	23500		ug/L		95	75 - 125	0	20
Thallium	ND		200	234		ug/L		117	75 - 125	3	20
Vanadium	ND		1000	936		ug/L		94	75 - 125	1	20

Preliminary Data

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

Lab Sample ID: 160-13506-4 MSD
Matrix: Water
Analysis Batch: 208156

Client Sample ID: PZ-106-SS
Prep Type: Total/NA
Prep Batch: 207421

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc	ND		1000	1070		ug/L		107	75 - 125	0	20
Tin	ND		1000	1030		ug/L		103	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-207717/1-A
Matrix: Water
Analysis Batch: 207921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		08/25/15 12:47	08/25/15 21:56	1

Lab Sample ID: LCS 160-207717/2-A
Matrix: Water
Analysis Batch: 207921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.85		ug/L		97	80 - 120

Lab Sample ID: 160-13505-D-1-C MS
Matrix: Water
Analysis Batch: 207921

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 207717

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.20		5.00	5.16		ug/L		99	80 - 120

Lab Sample ID: 160-13505-D-1-D MSD
Matrix: Water
Analysis Batch: 207921

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 207717

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.20		5.00	5.11		ug/L		98	80 - 120	1	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 160-207699/1-A
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207699

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	2.9	ug/L		08/25/15 15:15	08/26/15 19:07	1

Lab Sample ID: HLCS 160-207699/3-A
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	400	362		ug/L		90	90 - 110

Preliminary Data

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: LCS 160-207699/2-A
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	200	180		ug/L		90	90 - 110

Lab Sample ID: 160-13457-J-1-C MS
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	3.6	J	200	172		ug/L		84	66 - 120

Lab Sample ID: 160-13457-J-1-B DU
Matrix: Water
Analysis Batch: 208193

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 207699

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	3.6	J	3.76	J	ug/L		4	20

Method: 376.1 - Sulfide

Lab Sample ID: MB 160-208227/1
Matrix: Water
Analysis Batch: 208227

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.45	mg/L			08/27/15 15:58	1

Lab Sample ID: LCS 160-208227/2
Matrix: Water
Analysis Batch: 208227

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	10.0	9.67		mg/L		97	90 - 110

Lab Sample ID: LCSD 160-208227/3
Matrix: Water
Analysis Batch: 208227

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	10.0	9.67		mg/L		97	90 - 110	0	

Method: 415.1 - TOC

Lab Sample ID: MB 160-208916/4
Matrix: Water
Analysis Batch: 208916

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.35	mg/L			09/01/15 11:38	1

Preliminary Data

Method: 415.1 - TOC (Continued)

Lab Sample ID: LCS 160-208916/5
Matrix: Water
Analysis Batch: 208916

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.64		mg/L		96	90 - 110

Lab Sample ID: 160-13457-I-1 MS
Matrix: Water
Analysis Batch: 208916

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	ND		5.00	5.48		mg/L		110	76 - 120

Lab Sample ID: 160-13457-I-1 DU
Matrix: Water
Analysis Batch: 208916

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	ND		ND		mg/L		NC	20

Preliminary Data

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

GC/MS VOA

Analysis Batch: 207022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	8260C	
160-13506-2	PZ-104-SS	Total/NA	Water	8260C	
160-13506-3	PZ-104-SD	Total/NA	Water	8260C	
160-13506-4	PZ-106-SS	Total/NA	Water	8260C	
160-13506-4 MS	PZ-106-SS	Total/NA	Water	8260C	
160-13506-4 MSD	PZ-106-SS	Total/NA	Water	8260C	
160-13506-5	PZ-106-SD	Total/NA	Water	8260C	
160-13506-6	PZ-116-SS	Total/NA	Water	8260C	
160-13506-7	PZ-105-SS	Total/NA	Water	8260C	
160-13506-8	PZ-202-SS	Total/NA	Water	8260C	
160-13506-9	PZ-107-SS	Total/NA	Water	8260C	
LCS 160-207022/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-207022/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-207022/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 207165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-2 - DL	PZ-104-SS	Total/NA	Water	8260C	
160-13506-3 - DL	PZ-104-SD	Total/NA	Water	8260C	
160-13506-10	MW-1204	Total/NA	Water	8260C	
160-13506-11	082115	Total/NA	Water	8260C	
160-13506-11 - DL	082115	Total/NA	Water	8260C	
160-13506-11 MS	082115	Total/NA	Water	8260C	
160-13506-11 MSD	082115	Total/NA	Water	8260C	
160-13506-12	PZ-203-SS	Total/NA	Water	8260C	
160-13506-13	PZ-103-SS	Total/NA	Water	8260C	
160-13506-14	PZ-204-SS	Total/NA	Water	8260C	
160-13506-15	TRIP BLANK	Total/NA	Water	8260C	
LCS 160-207165/4	Lab Control Sample	Total/NA	Water	8260C	
MB 160-207165/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 208119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-10 - DL	MW-1204	Total/NA	Water	8260C	
160-13506-13 - DL	PZ-103-SS	Total/NA	Water	8260C	
LCS 160-208119/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-208119/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-208119/6	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 207677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13499-B-1-A MS	Matrix Spike	Total/NA	Water	3510C	
160-13499-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	
160-13506-1	PZ-211-SD	Total/NA	Water	3510C	
160-13506-2	PZ-104-SS	Total/NA	Water	3510C	
160-13506-3	PZ-104-SD	Total/NA	Water	3510C	
LCS 160-207677/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 160-207677/1-A	Method Blank	Total/NA	Water	3510C	

Preliminary Data

GC/MS Semi VOA (Continued)

Analysis Batch: 207735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13499-B-1-A MS	Matrix Spike	Total/NA	Water	8270D	207677
160-13499-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	8270D	207677
160-13506-1	PZ-211-SD	Total/NA	Water	8270D	207677
160-13506-2	PZ-104-SS	Total/NA	Water	8270D	207677
160-13506-3	PZ-104-SD	Total/NA	Water	8270D	207677
LCS 160-207677/2-A	Lab Control Sample	Total/NA	Water	8270D	207677
MB 160-207677/1-A	Method Blank	Total/NA	Water	8270D	207677

Analysis Batch: 207950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	8270D	207677
160-13506-2	PZ-104-SS	Total/NA	Water	8270D	207677
160-13506-3	PZ-104-SD	Total/NA	Water	8270D	207677
MB 160-207677/1-A	Method Blank	Total/NA	Water	8270D	207677

GC Semi VOA

Prep Batch: 207377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	8151A	
160-13506-2	PZ-104-SS	Total/NA	Water	8151A	
160-13506-3	PZ-104-SD	Total/NA	Water	8151A	
LCS 160-207377/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 160-207377/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
MB 160-207377/1-A	Method Blank	Total/NA	Water	8151A	

Prep Batch: 207387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	3510C	
160-13506-2	PZ-104-SS	Total/NA	Water	3510C	
160-13506-3	PZ-104-SD	Total/NA	Water	3510C	
LCS 160-207387/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 160-207387/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-207387/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 207683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	8081B	207387
160-13506-2	PZ-104-SS	Total/NA	Water	8081B	207387
160-13506-3	PZ-104-SD	Total/NA	Water	8081B	207387
LCS 160-207387/2-A	Lab Control Sample	Total/NA	Water	8081B	207387
LCSD 160-207387/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	207387
MB 160-207387/1-A	Method Blank	Total/NA	Water	8081B	207387

Prep Batch: 207737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	3510C	
160-13506-2	PZ-104-SS	Total/NA	Water	3510C	
160-13506-3	PZ-104-SD	Total/NA	Water	3510C	
LCS 160-207737/2-A	Lab Control Sample	Total/NA	Water	3510C	

Preliminary Data

GC Semi VOA (Continued)

Prep Batch: 207737 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 160-207737/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-207737/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 207944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	8082A	207737
160-13506-2	PZ-104-SS	Total/NA	Water	8082A	207737
160-13506-3	PZ-104-SD	Total/NA	Water	8082A	207737
LCS 160-207737/2-A	Lab Control Sample	Total/NA	Water	8082A	207737
LCSD 160-207737/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	207737
MB 160-207737/1-A	Method Blank	Total/NA	Water	8082A	207737

Analysis Batch: 207961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	8151A	207377
160-13506-2	PZ-104-SS	Total/NA	Water	8151A	207377
160-13506-3	PZ-104-SD	Total/NA	Water	8151A	207377
LCS 160-207377/2-A	Lab Control Sample	Total/NA	Water	8151A	207377
LCSD 160-207377/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	207377
MB 160-207377/1-A	Method Blank	Total/NA	Water	8151A	207377

HPLC/IC

Analysis Batch: 207770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-G-2 DU - DL	Duplicate	Total/NA	Water	300.0	
160-13505-G-2 MS - DL	Matrix Spike	Total/NA	Water	300.0	
160-13506-1 - DL	PZ-211-SD	Total/NA	Water	300.0	
160-13506-2 - DL	PZ-104-SS	Total/NA	Water	300.0	
160-13506-3 - DL	PZ-104-SD	Total/NA	Water	300.0	
LCS 160-207770/10	Lab Control Sample	Total/NA	Water	300.0	
MB 160-207770/9	Method Blank	Total/NA	Water	300.0	

Specialty Organics

Prep Batch: 84116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	1613B	
160-13506-2	PZ-104-SS	Total/NA	Water	1613B	
160-13506-3	PZ-104-SD	Total/NA	Water	1613B	
LCS 320-84116/2-A	Lab Control Sample	Total/NA	Water	1613B	
MB 320-84116/1-A	Method Blank	Total/NA	Water	1613B	

Analysis Batch: 84514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	1613B	84116
160-13506-2	PZ-104-SS	Total/NA	Water	1613B	84116
160-13506-3	PZ-104-SD	Total/NA	Water	1613B	84116

Preliminary Data

Specialty Organics (Continued)

Analysis Batch: 84518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-84116/2-A	Lab Control Sample	Total/NA	Water	1613B	84116
MB 320-84116/1-A	Method Blank	Total/NA	Water	1613B	84116

Metals

Prep Batch: 207421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	3010A	
160-13506-2	PZ-104-SS	Total/NA	Water	3010A	
160-13506-3	PZ-104-SD	Total/NA	Water	3010A	
160-13506-4	PZ-106-SS	Total/NA	Water	3010A	
160-13506-4 MS	PZ-106-SS	Total/NA	Water	3010A	
160-13506-4 MSD	PZ-106-SS	Total/NA	Water	3010A	
160-13506-5	PZ-106-SD	Total/NA	Water	3010A	
160-13506-6	PZ-116-SS	Total/NA	Water	3010A	
160-13506-7	PZ-105-SS	Total/NA	Water	3010A	
160-13506-8	PZ-202-SS	Total/NA	Water	3010A	
160-13506-9	PZ-107-SS	Total/NA	Water	3010A	
160-13506-10	MW-1204	Total/NA	Water	3010A	
160-13506-11	082115	Total/NA	Water	3010A	
160-13506-12	PZ-203-SS	Total/NA	Water	3010A	
160-13506-13	PZ-103-SS	Total/NA	Water	3010A	
160-13506-14	PZ-204-SS	Total/NA	Water	3010A	
LCS 160-207421/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-207421/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 207717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-D-1-C MS	Matrix Spike	Total/NA	Water	7470A	
160-13505-D-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
160-13506-1	PZ-211-SD	Total/NA	Water	7470A	
160-13506-2	PZ-104-SS	Total/NA	Water	7470A	
160-13506-3	PZ-104-SD	Total/NA	Water	7470A	
LCS 160-207717/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 160-207717/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 207921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13505-D-1-C MS	Matrix Spike	Total/NA	Water	7470A	207717
160-13505-D-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	207717
160-13506-1	PZ-211-SD	Total/NA	Water	7470A	207717
160-13506-2	PZ-104-SS	Total/NA	Water	7470A	207717
160-13506-3	PZ-104-SD	Total/NA	Water	7470A	207717
LCS 160-207717/2-A	Lab Control Sample	Total/NA	Water	7470A	207717
MB 160-207717/1-A	Method Blank	Total/NA	Water	7470A	207717

Analysis Batch: 208156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	6010C	207421
160-13506-2	PZ-104-SS	Total/NA	Water	6010C	207421

Preliminary Data

Metals (Continued)

Analysis Batch: 208156 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-3	PZ-104-SD	Total/NA	Water	6010C	207421
160-13506-4	PZ-106-SS	Total/NA	Water	6010C	207421
160-13506-4 MS	PZ-106-SS	Total/NA	Water	6010C	207421
160-13506-4 MSD	PZ-106-SS	Total/NA	Water	6010C	207421
160-13506-5	PZ-106-SD	Total/NA	Water	6010C	207421
160-13506-6	PZ-116-SS	Total/NA	Water	6010C	207421
160-13506-7	PZ-105-SS	Total/NA	Water	6010C	207421
160-13506-8	PZ-202-SS	Total/NA	Water	6010C	207421
160-13506-9	PZ-107-SS	Total/NA	Water	6010C	207421
160-13506-10	MW-1204	Total/NA	Water	6010C	207421
160-13506-11	082115	Total/NA	Water	6010C	207421
160-13506-12	PZ-203-SS	Total/NA	Water	6010C	207421
160-13506-13	PZ-103-SS	Total/NA	Water	6010C	207421
160-13506-14	PZ-204-SS	Total/NA	Water	6010C	207421
LCS 160-207421/2-A	Lab Control Sample	Total/NA	Water	6010C	207421
MB 160-207421/1-A	Method Blank	Total/NA	Water	6010C	207421

General Chemistry

Prep Batch: 207699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-J-1-B DU	Duplicate	Total/NA	Water	Distill/CN	
160-13457-J-1-C MS	Matrix Spike	Total/NA	Water	Distill/CN	
160-13506-1	PZ-211-SD	Total/NA	Water	Distill/CN	
160-13506-2	PZ-104-SS	Total/NA	Water	Distill/CN	
160-13506-3	PZ-104-SD	Total/NA	Water	Distill/CN	
HLCS 160-207699/3-A	Lab Control Sample	Total/NA	Water	Distill/CN	
LCS 160-207699/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 160-207699/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 208193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-J-1-B DU	Duplicate	Total/NA	Water	335.4	207699
160-13457-J-1-C MS	Matrix Spike	Total/NA	Water	335.4	207699
160-13506-1	PZ-211-SD	Total/NA	Water	335.4	207699
160-13506-2	PZ-104-SS	Total/NA	Water	335.4	207699
160-13506-3	PZ-104-SD	Total/NA	Water	335.4	207699
HLCS 160-207699/3-A	Lab Control Sample	Total/NA	Water	335.4	207699
LCS 160-207699/2-A	Lab Control Sample	Total/NA	Water	335.4	207699
MB 160-207699/1-A	Method Blank	Total/NA	Water	335.4	207699

Analysis Batch: 208227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13506-1	PZ-211-SD	Total/NA	Water	376.1	
160-13506-2	PZ-104-SS	Total/NA	Water	376.1	
160-13506-3	PZ-104-SD	Total/NA	Water	376.1	
LCS 160-208227/2	Lab Control Sample	Total/NA	Water	376.1	
LCSD 160-208227/3	Lab Control Sample Dup	Total/NA	Water	376.1	
MB 160-208227/1	Method Blank	Total/NA	Water	376.1	

Preliminary Data

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

General Chemistry (Continued)

Analysis Batch: 208916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13457-I-1 DU	Duplicate	Total/NA	Water	415.1	
160-13457-I-1 MS	Matrix Spike	Total/NA	Water	415.1	
160-13506-1	PZ-211-SD	Total/NA	Water	415.1	
160-13506-2	PZ-104-SS	Total/NA	Water	415.1	
160-13506-3 - DL	PZ-104-SD	Total/NA	Water	415.1	
LCS 160-208916/5	Lab Control Sample	Total/NA	Water	415.1	
MB 160-208916/4	Method Blank	Total/NA	Water	415.1	

Preliminary Data

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	12DCE	TOL
Lab Sample ID	Client Sample ID	(75-123)	(80-120)	(78-127)	(80-120)
160-13506-1	PZ-211-SD	115	105	106	109
160-13506-2	PZ-104-SS	129 X	89	95	104
160-13506-2 - DL	PZ-104-SS	93	91	90	97
160-13506-3	PZ-104-SD	137 X	95	91	111
160-13506-3 - DL	PZ-104-SD	95	100	99	100
160-13506-4	PZ-106-SS	123	107	112	112
160-13506-4 MS	PZ-106-SS	111	101	107	106
160-13506-4 MSD	PZ-106-SS	118	97	100	108
160-13506-5	PZ-106-SD	114	106	102	106
160-13506-6	PZ-116-SS	138 X	108	110	116
160-13506-7	PZ-105-SS	126 X	103	103	109
160-13506-8	PZ-202-SS	125 X	93	89	107
160-13506-9	PZ-107-SS	123	103	98	109
160-13506-10	MW-1204	99	101	91	107
160-13506-10 - DL	MW-1204	98	99	88	102
160-13506-11	082115	95	101	98	102
160-13506-11 - DL	082115	98	103	94	106
160-13506-11 MS	082115	102	103	95	104
160-13506-11 MSD	082115	105	102	90	108
160-13506-12	PZ-203-SS	99	99	88	103
160-13506-13	PZ-103-SS	98	99	90	101
160-13506-13 - DL	PZ-103-SS	97	98	90	103
160-13506-14	PZ-204-SS	99	102	92	108
160-13506-15	TRIP BLANK	95	97	90	101
LCS 160-207022/4	Lab Control Sample	113	95	100	105
LCS 160-207165/4	Lab Control Sample	99	99	92	105
LCS 160-208119/3	Lab Control Sample	104	98	85	107
LCSD 160-207022/5	Lab Control Sample Dup	119	95	100	107
LCSD 160-208119/4	Lab Control Sample Dup	105	99	86	105
MB 160-207022/7	Method Blank	129 X	104	101	113
MB 160-207165/6	Method Blank	97	96	88	104
MB 160-208119/6	Method Blank	99	97	88	101

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(43-108)	(15-59)	(50-101)	(10-50)	(21-97)	(37-120)
160-13499-B-1-A MS	Matrix Spike	71	33	72	21	71	89
160-13499-C-1-A MSD	Matrix Spike Duplicate	85	40	86	26	85	106
160-13506-1	PZ-211-SD	73	34	73	22	60	89
160-13506-2	PZ-104-SS	78	36	78	23	62	98

Preliminary Data

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(43-108)	(15-59)	(50-101)	(10-50)	(21-97)	(37-120)
160-13506-3	PZ-104-SD	82	40	84	27	65	105
LCS 160-207677/2-A	Lab Control Sample	78	44	84	29	83	105
MB 160-207677/1-A	Method Blank	73	40	74	25	70	91

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB2	TCX2
Lab Sample ID	Client Sample ID	(44-112)	(49-104)
160-13506-1	PZ-211-SD	51	80
160-13506-2	PZ-104-SS	48	77
160-13506-3	PZ-104-SD	18 X	36 X
LCS 160-207387/2-A	Lab Control Sample	84	85
LCSD 160-207387/3-A	Lab Control Sample Dup	77	86
MB 160-207387/1-A	Method Blank	83	89

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)
TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		DCB1
Lab Sample ID	Client Sample ID	(52-150)
160-13506-1	PZ-211-SD	110
160-13506-2	PZ-104-SS	107
160-13506-3	PZ-104-SD	87
LCS 160-207737/2-A	Lab Control Sample	90
LCSD 160-207737/3-A	Lab Control Sample Dup	81
MB 160-207737/1-A	Method Blank	104

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

Preliminary Data

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCPA1 (60-128)
160-13506-1	PZ-211-SD	78
160-13506-2	PZ-104-SS	84
160-13506-3	PZ-104-SD	109
LCS 160-207377/2-A	Lab Control Sample	103
LCSD 160-207377/3-A	Lab Control Sample Dup	104
MB 160-207377/1-A	Method Blank	108

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	37TCDD (42-164)
160-13506-1	PZ-211-SD	104
160-13506-2	PZ-104-SS	100
160-13506-3	PZ-104-SD	101
LCS 320-84116/2-A	Lab Control Sample	101
MB 320-84116/1-A	Method Blank	101

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Preliminary Data

Isotope Dilution Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-13506-1

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**TCDD (31-137)**
160-13506-1	PZ-211-SD	75
160-13506-2	PZ-104-SS	74
160-13506-3	PZ-104-SD	65
MB 320-84116/1-A	Method Blank	65

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**TCDD (25-141)**
LCS 320-84116/2-A	Lab Control Sample	67

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

Preliminary Data

State of MO v. Republic Services, Inc. et al
Price - 0000525

Appendix F

Groundwater Analytical Results
Teklab, Inc.

August 26, 2015

Brenna McDonald
Missouri Geological Survey
111 Fairgrounds Road
Rolla, MO 65401
TEL: (573) 368-2163
FAX:

RE: J024889.02 BLF **WorkOrder:** 15081277

Dear Brenna McDonald:

TEKLAB, INC received 2 samples on 8/21/2015 5:00:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

State of MO v. Republic Services, Inc. et al
Price - 0000527

Report Contents

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081277
Report Date: 26-Aug-15

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	4
Laboratory Results	5
Sample Summary	15
Dates Report	16
Quality Control Results	18
Receiving Check List	36
Chain of Custody	Appended

State of MO v. Republic Services, Inc. et al
Price - 0000528

Client: Missouri Geological Survey
Work Order: 15081277

Client Project: J024889.02 BLF
Report Date: 26-Aug-15

Abbr Definition

CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
DNI	Did not ignite
DUP	Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Qualifiers

# - Unknown hydrocarbon	B - Analyte detected in associated Method Blank
E - Value above quantitation range	H - Holding times exceeded
I - Associated internal standard was outside method criteria	J - Analyte detected below quantitation limits
M - Manual Integration used to determine area response	ND - Not Detected at the Reporting Limit
R - RPD outside accepted recovery limits	S - Spike Recovery outside recovery limits
T - TIC(Tentatively identified compound)	X - Value exceeds Maximum Contaminant Level

State of MO v. Republic Services, Inc. et al
Price - 0000529

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081277
Report Date: 26-Aug-15

Cooler Receipt Temp: 4.02 °C

Locations and Accreditations

	Collinsville	Springfield	Kansas City	Collinsville Air
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425	3920 Pintail Dr Springfield, IL 62711-9415	8421 Nieman Road Lenexa, KS 66214	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004	(217) 698-1004	(913) 541-1998	(618) 344-1004
Fax	(618) 344-1005	(217) 698-1005	(913) 541-1998	(618) 344-1005
Email	jhriley@teklabinc.com	KKlostermann@teklabinc.com	dthompson@teklabinc.com	EHurley@teklabinc.com

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2016	Collinsville
Kansas	KDHE	E-10374	NELAP	9/30/2015	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2016	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2016	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2016	Collinsville
Arkansas	ADEQ	88-0966		3/14/2016	Collinsville
Illinois	IDPH	17584		5/31/2017	Collinsville
Kentucky	KDEP	98006		12/31/2015	Collinsville
Kentucky	UST	0073		1/31/2016	Collinsville
Missouri	MDNR	00930		5/31/2015	Collinsville
Oklahoma	ODEQ	9978		8/31/2015	Collinsville

State of MO v. Republic Services, Inc. et al
Price - 0000530

Client: Missouri Geological Survey | **Work Order:** 15081277

Client Project: J024889.02 BLF | **Report Date:** 26-Aug-15

Lab ID: 15081277-001 | **Client Sample ID:** MO-1-SS

Matrix: AQUEOUS | **Collection Date:** 08/21/2015 11:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 4500-S D (TOTAL)								
Sulfide, Total - Colorimetric	NELAP	3.0	S	< 3.0	mg/L	60	08/24/2015 15:52	R208427
MS and/or MSD did not recover within control limits due to matrix interference and sample composition.								
Elevated reporting limit due to sample composition.								
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.007		< 0.007	mg/L	1	08/24/2015 14:35	111747
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		503	mg/L	20	08/24/2015 22:38	R208477
SW-846 9060								
Total Organic Carbon (TOC)	NELAP	10.0		45.4	mg/L	10	08/24/2015 14:50	R208421
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 14:54	111715
Arsenic	NELAP	0.0250		0.0563	mg/L	1	08/24/2015 14:54	111715
Barium	NELAP	0.0025		0.742	mg/L	1	08/24/2015 14:54	111715
Beryllium	NELAP	0.0005		0.0102	mg/L	1	08/24/2015 14:54	111715
Cadmium	NELAP	0.0020	J	0.0011	mg/L	1	08/24/2015 14:54	111715
Chromium	NELAP	0.0050		0.196	mg/L	1	08/24/2015 14:54	111715
Cobalt	NELAP	0.0050		0.0381	mg/L	1	08/24/2015 14:54	111715
Copper	NELAP	0.0050		0.0757	mg/L	1	08/24/2015 14:54	111715
Lead	NELAP	0.0150		0.147	mg/L	1	08/24/2015 14:54	111715
Magnesium	NELAP	0.0500		39.1	mg/L	1	08/24/2015 14:54	111715
Manganese	NELAP	0.0030		1.47	mg/L	1	08/24/2015 14:54	111715
Nickel	NELAP	0.0050		0.198	mg/L	1	08/24/2015 14:54	111715
Selenium	NELAP	0.0400		< 0.0400	mg/L	1	08/24/2015 14:54	111715
Silver	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 14:54	111715
Thallium	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 14:54	111715
Tin	NELAP	0.0200		0.0200	mg/L	1	08/24/2015 14:54	111715
Vanadium	NELAP	0.0100		0.0983	mg/L	1	08/24/2015 14:54	111715
Zinc	NELAP	0.0100		0.346	mg/L	1	08/24/2015 14:54	111715
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		0.00027	mg/L	1	08/24/2015 12:24	111717
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4`-DDD	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
4,4`-DDE	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
4,4`-DDT	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
Aldrin	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
alpha-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
beta-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
Chlordane	NELAP	0.50		ND	µg/L	1	08/24/2015 15:44	111703
delta-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
Dieldrin	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
Endosulfan I	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
Endosulfan II	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
Endosulfan sulfate	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
Endrin	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
Endrin aldehyde	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
gamma-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
Heptachlor	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703

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Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
Heptachlor epoxide	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
Methoxychlor	NELAP	0.05		ND	µg/L	1	08/24/2015 15:44	111703
Toxaphene	NELAP	0.50		ND	µg/L	1	08/24/2015 15:44	111703
Surr: Decachlorobiphenyl		5.54-150		8.0	%REC	1	08/24/2015 15:44	111703
Surr: Tetrachloro-m-xylene		13-129		27.2	%REC	1	08/24/2015 15:44	111703
RPD for LCS/LCSD was outside of QC limit.								
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	08/24/2015 17:26	111703
Aroclor 1221	NELAP	1.00		ND	µg/L	1	08/24/2015 17:26	111703
Aroclor 1232	NELAP	1.00		ND	µg/L	1	08/24/2015 17:26	111703
Aroclor 1242	NELAP	1.00		ND	µg/L	1	08/24/2015 17:26	111703
Aroclor 1248	NELAP	1.00		ND	µg/L	1	08/24/2015 17:26	111703
Aroclor 1254	NELAP	1.00		ND	µg/L	1	08/24/2015 17:26	111703
Aroclor 1260	NELAP	1.00		ND	µg/L	1	08/24/2015 17:26	111703
Surr: Decachlorobiphenyl		5-174		7.2	%REC	1	08/24/2015 17:26	111703
Surr: Tetrachloro-meta-xylene		22.2-139		28.9	%REC	1	08/24/2015 17:26	111703
SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD								
2,4,5-T	NELAP	1.00		ND	µg/L	1	08/26/2015 12:25	111790
2,4,5-TP (Silvex)	NELAP	1.00		ND	µg/L	1	08/26/2015 12:25	111790
2,4-D	NELAP	1.00		ND	µg/L	1	08/26/2015 12:25	111790
Dinoseb	NELAP	1.00		ND	µg/L	1	08/26/2015 12:25	111790
Surr: 2,4-Dichlorophenylacetic acid		9.03-112		61.1	%REC	1	08/26/2015 12:25	111790
Elevated reporting limit due to limited sample for re-extract.								
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,4-Trichlorobenzene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
2,4,5-Trichlorophenol	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
2,4,6-Trichlorophenol	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
2,4-Dichlorophenol	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
2,4-Dimethylphenol	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
2,4-Dinitrophenol	NELAP	0.100		ND	mg/L	1	08/24/2015 14:11	111713
2,4-Dinitrotoluene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
2,6-Dinitrotoluene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
2-Chloronaphthalene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
2-Chlorophenol	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
2-Methylnaphthalene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
2-Nitroaniline	NELAP	0.200		ND	mg/L	1	08/24/2015 14:11	111713
2-Nitrophenol	NELAP	0.100		ND	mg/L	1	08/24/2015 14:11	111713
3,3'-Dichlorobenzidine	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
3-Nitroaniline	NELAP	0.200		ND	mg/L	1	08/24/2015 14:11	111713
4,6-Dinitro-2-methylphenol	NELAP	0.100		ND	mg/L	1	08/24/2015 14:11	111713
4-Bromophenyl phenyl ether	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
4-Chloro-3-methylphenol	NELAP	0.100		ND	mg/L	1	08/24/2015 14:11	111713
4-Chloroaniline	NELAP	0.100		ND	mg/L	1	08/24/2015 14:11	111713
4-Chlorophenyl phenyl ether	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
4-Nitroaniline	NELAP	0.100		ND	mg/L	1	08/24/2015 14:11	111713
4-Nitrophenol	NELAP	0.100		ND	mg/L	1	08/24/2015 14:11	111713
Acenaphthene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713

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Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthylene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Anthracene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Benzo(a)anthracene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Benzo(a)pyrene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Benzo(b)fluoranthene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Benzo(g,h,i)perylene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Benzo(k)fluoranthene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Benzyl alcohol	NELAP	0.100		ND	mg/L	1	08/24/2015 14:11	111713
Bis(2-chloroethoxy)methane	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Bis(2-chloroethyl)ether	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Bis(2-chloroisopropyl)ether	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Bis(2-ethylhexyl)phthalate	NELAP	0.030		ND	mg/L	1	08/24/2015 14:11	111713
Butyl benzyl phthalate	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Chrysene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Dibenzo(a,h)anthracene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Dibenzofuran	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Diethyl phthalate	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Dimethyl phthalate	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Di-n-butyl phthalate	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Di-n-octyl phthalate	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Fluoranthene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Fluorene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Hexachlorobenzene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Hexachlorocyclopentadiene	NELAP	0.100		ND	mg/L	1	08/24/2015 14:11	111713
Indeno(1,2,3-cd)pyrene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Isophorone	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
m,p-Cresol	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Naphthalene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Nitrobenzene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
N-Nitrosodimethylamine	NELAP	0.100		ND	mg/L	1	08/24/2015 14:11	111713
N-Nitroso-di-n-propylamine	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
N-Nitrosodiphenylamine	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
o-Cresol	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Pentachlorophenol	NELAP	0.100		ND	mg/L	1	08/24/2015 14:11	111713
Phenanthrene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
Phenol	NELAP	0.025		ND	mg/L	1	08/24/2015 14:11	111713
Pyrene	NELAP	0.050		ND	mg/L	1	08/24/2015 14:11	111713
1,2-Diphenylhydrazine		0.050		ND	mg/L	1	08/24/2015 14:11	111713
Surr: 2,4,6-Tribromophenol		36.9-125		61.6	%REC	1	08/24/2015 14:11	111713
Surr: 2-Fluorobiphenyl		36.7-114		55.8	%REC	1	08/24/2015 14:11	111713
Surr: 2-Fluorophenol		23.9-78.3		40.4	%REC	1	08/24/2015 14:11	111713
Surr: Nitrobenzene-d5		49.9-124		57.0	%REC	1	08/24/2015 14:11	111713
Surr: Phenol-d5		14.1-51.6		31.8	%REC	1	08/24/2015 14:11	111713
Surr: p-Terphenyl-d14		41.6-133		61.4	%REC	1	08/24/2015 14:11	111713
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,1,1-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731

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Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,2,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,1,2-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,1-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,1-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,1-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,2,3-Trichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,2-Dibromo-3-chloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,2-Dibromoethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,2-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,2-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,3-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,3-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
1,4-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
2,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
2-Butanone	NELAP	25.0		ND	µg/L	1	08/24/2015 11:44	111731
2-Hexanone	NELAP	25.0		ND	µg/L	1	08/24/2015 11:44	111731
4-Methyl-2-pentanone	NELAP	25.0		ND	µg/L	1	08/24/2015 11:44	111731
Acetone	NELAP	25.0	J	10	µg/L	1	08/24/2015 11:44	111731
Acetonitrile	NELAP	50.0		ND	µg/L	1	08/24/2015 11:44	111731
Acrolein	NELAP	100		ND	µg/L	1	08/24/2015 11:44	111731
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Benzene	NELAP	2.0		ND	µg/L	1	08/24/2015 11:44	111731
Bromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Bromodichloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Bromoform	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Bromomethane	NELAP	10.0		ND	µg/L	1	08/24/2015 11:44	111731
Carbon disulfide	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Carbon tetrachloride	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Chlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Chloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 11:44	111731
Chloroform	NELAP	5.0	J	3.0	µg/L	1	08/24/2015 11:44	111731
Chloromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 11:44	111731
cis-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
cis-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Dibromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Dibromomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Dichlorodifluoromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 11:44	111731
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Ethylbenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Hexachloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 11:44	111731
Iodomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
m,p-Xylenes	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731
Methacrylonitrile	NELAP	10.0		ND	µg/L	1	08/24/2015 11:44	111731
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 11:44	111731

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Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Methylene chloride	NELAP	5.0		**ND**	µg/L	1	08/24/2015 11:44	111731
Naphthalene	NELAP	10.0		**ND**	µg/L	1	08/24/2015 11:44	111731
o-Xylene	NELAP	5.0		**ND**	µg/L	1	08/24/2015 11:44	111731
Propionitrile	NELAP	50.0		**ND**	µg/L	1	08/24/2015 11:44	111731
Styrene	NELAP	5.0		**ND**	µg/L	1	08/24/2015 11:44	111731
Tetrachloroethene	NELAP	5.0		**ND**	µg/L	1	08/24/2015 11:44	111731
Toluene	NELAP	5.0		**ND**	µg/L	1	08/24/2015 11:44	111731
trans-1,2-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	08/24/2015 11:44	111731
trans-1,3-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	08/24/2015 11:44	111731
trans-1,4-Dichloro-2-butene	NELAP	10.0		**ND**	µg/L	1	08/24/2015 11:44	111731
Trichloroethene	NELAP	5.0		**ND**	µg/L	1	08/24/2015 11:44	111731
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	08/24/2015 11:44	111731
Vinyl acetate	NELAP	10.0		**ND**	µg/L	1	08/24/2015 11:44	111731
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	08/24/2015 11:44	111731
Xylenes, Total	NELAP	5.0		**ND**	µg/L	1	08/24/2015 11:44	111731
Surr: 1,2-Dichloroethane-d4		74.7-129		**102.1**	%REC	1	08/24/2015 11:44	111731
Surr: 4-Bromofluorobenzene		86-119		**100.1**	%REC	1	08/24/2015 11:44	111731
Surr: Dibromofluoromethane		81.7-123		**100.7**	%REC	1	08/24/2015 11:44	111731
Surr: Toluene-d8		84.3-114		**99.2**	%REC	1	08/24/2015 11:44	111731

Client: Missouri Geological Survey
Work Order: 15081277

Client Project: J024889.02 BLF
Report Date: 26-Aug-15

Lab ID: 15081277-002
Client Sample ID: MO-1-SDR

Matrix: AQUEOUS
Collection Date: 08/21/2015 14:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 4500-S D (TOTAL)								
Sulfide, Total - Colorimetric	NELAP	0.05	S	< 0.05	mg/L	1	08/24/2015 15:08	R208427
MS and/or MSD did not recover within control limits due to matrix interference.								
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.007		< 0.007	mg/L	1	08/24/2015 14:40	111747
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		97	mg/L	5	08/24/2015 23:16	R208477
SW-846 9060								
Total Organic Carbon (TOC)	NELAP	1.0		5.5	mg/L	1	08/24/2015 12:42	R208421
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 12:24	111715
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	08/24/2015 12:24	111715
Barium	NELAP	0.0025		0.106	mg/L	1	08/24/2015 12:24	111715
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	08/24/2015 12:24	111715
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	08/24/2015 12:24	111715
Chromium	NELAP	0.0050	J	0.0027	mg/L	1	08/24/2015 12:24	111715
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 12:24	111715
Copper	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 12:24	111715
Lead	NELAP	0.0150		< 0.0150	mg/L	1	08/24/2015 12:24	111715
Magnesium	NELAP	0.0500		38.9	mg/L	1	08/24/2015 12:24	111715
Manganese	NELAP	0.0030		0.0195	mg/L	1	08/24/2015 12:24	111715
Nickel	NELAP	0.0050		0.0058	mg/L	1	08/24/2015 12:24	111715
Selenium	NELAP	0.0400		< 0.0400	mg/L	1	08/24/2015 12:24	111715
Silver	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 12:24	111715
Thallium	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 12:24	111715
Tin	NELAP	0.0200		< 0.0200	mg/L	1	08/24/2015 12:24	111715
Vanadium	NELAP	0.0100	J	0.0055	mg/L	1	08/24/2015 12:24	111715
Zinc	NELAP	0.0100	J	0.0026	mg/L	1	08/24/2015 12:24	111715
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	08/24/2015 12:15	111717
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4´-DDD	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
4,4´-DDE	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
4,4´-DDT	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
Aldrin	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
alpha-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
beta-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
Chlordane	NELAP	0.50		ND	µg/L	1	08/24/2015 16:08	111703
delta-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
Dieldrin	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
Endosulfan I	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
Endosulfan II	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
Endosulfan sulfate	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
Endrin	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
Endrin aldehyde	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
gamma-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
Heptachlor	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
Heptachlor epoxide	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703

Client: Missouri Geological Survey
Work Order: 15081277
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Client Sample ID: MO-1-SDR
Matrix: AQUEOUS
Collection Date: 08/21/2015 14:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
Methoxychlor	NELAP	0.05		ND	µg/L	1	08/24/2015 16:08	111703
Toxaphene	NELAP	0.50		ND	µg/L	1	08/24/2015 16:08	111703
Surr: Decachlorobiphenyl		5.54-150		48.0	%REC	1	08/24/2015 16:08	111703
Surr: Tetrachloro-m-xylene		13-129		73.0	%REC	1	08/24/2015 16:08	111703
RPD for LCS/LCSD was outside of QC limit.								
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	08/24/2015 17:44	111703
Aroclor 1221	NELAP	1.00		ND	µg/L	1	08/24/2015 17:44	111703
Aroclor 1232	NELAP	1.00		ND	µg/L	1	08/24/2015 17:44	111703
Aroclor 1242	NELAP	1.00		ND	µg/L	1	08/24/2015 17:44	111703
Aroclor 1248	NELAP	1.00		ND	µg/L	1	08/24/2015 17:44	111703
Aroclor 1254	NELAP	1.00		ND	µg/L	1	08/24/2015 17:44	111703
Aroclor 1260	NELAP	1.00		ND	µg/L	1	08/24/2015 17:44	111703
Surr: Decachlorobiphenyl		5-174		53.2	%REC	1	08/24/2015 17:44	111703
Surr: Tetrachloro-meta-xylene		22.2-139		73.3	%REC	1	08/24/2015 17:44	111703
SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD								
2,4,5-T	NELAP	0.200		ND	µg/L	1	08/26/2015 12:56	111790
2,4,5-TP (Silvex)	NELAP	0.200		ND	µg/L	1	08/26/2015 12:56	111790
2,4-D	NELAP	0.200		ND	µg/L	1	08/26/2015 12:56	111790
Dinoseb	NELAP	0.200		ND	µg/L	1	08/26/2015 12:56	111790
Surr: 2,4-Dichlorophenylacetic acid		9.03-112		62.5	%REC	1	08/26/2015 12:56	111790
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,4-Trichlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
2,4,5-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
2,4,6-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
2,4-Dichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
2,4-Dimethylphenol	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
2,4-Dinitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 14:43	111713
2,4-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
2,6-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
2-Chloronaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
2-Chlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
2-Methylnaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
2-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 14:43	111713
2-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 14:43	111713
3,3'-Dichlorobenzidine	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
3-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 14:43	111713
4,6-Dinitro-2-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 14:43	111713
4-Bromophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
4-Chloro-3-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 14:43	111713
4-Chloroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 14:43	111713
4-Chlorophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
4-Nitroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 14:43	111713
4-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 14:43	111713
Acenaphthene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Acenaphthylene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713

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Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Benzo(a)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Benzo(a)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Benzo(b)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Benzo(g,h,i)perylene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Benzo(k)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Benzyl alcohol	NELAP	0.020		ND	mg/L	1	08/24/2015 14:43	111713
Bis(2-chloroethoxy)methane	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Bis(2-chloroethyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Bis(2-chloroisopropyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Bis(2-ethylhexyl)phthalate	NELAP	0.006		ND	mg/L	1	08/24/2015 14:43	111713
Butyl benzyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Chrysene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Dibenzo(a,h)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Dibenzofuran	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Diethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Dimethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Di-n-butyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Di-n-octyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Fluorene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Hexachlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Hexachlorocyclopentadiene	NELAP	0.020		ND	mg/L	1	08/24/2015 14:43	111713
Indeno(1,2,3-cd)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Isophorone	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
m,p-Cresol	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Naphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Nitrobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
N-Nitrosodimethylamine	NELAP	0.020		ND	mg/L	1	08/24/2015 14:43	111713
N-Nitroso-di-n-propylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
N-Nitrosodiphenylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
o-Cresol	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Pentachlorophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 14:43	111713
Phenanthrene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
Phenol	NELAP	0.005		ND	mg/L	1	08/24/2015 14:43	111713
Pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 14:43	111713
1,2-Diphenylhydrazine		0.010		ND	mg/L	1	08/24/2015 14:43	111713
Surr: 2,4,6-Tribromophenol		36.9-125		86.6	%REC	1	08/24/2015 14:43	111713
Surr: 2-Fluorobiphenyl		36.7-114		75.3	%REC	1	08/24/2015 14:43	111713
Surr: 2-Fluorophenol		23.9-78.3		53.1	%REC	1	08/24/2015 14:43	111713
Surr: Nitrobenzene-d5		49.9-124		67.7	%REC	1	08/24/2015 14:43	111713
Surr: Phenol-d5		14.1-51.6		37.4	%REC	1	08/24/2015 14:43	111713
Surr: p-Terphenyl-d14		41.6-133		77.9	%REC	1	08/24/2015 14:43	111713
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,1,1-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,1,2,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,1,2-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731

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Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,1-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,1-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,2,3-Trichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,2-Dibromo-3-chloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,2-Dibromoethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,2-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,2-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,3-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,3-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
1,4-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
2,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
2-Butanone	NELAP	25.0		ND	µg/L	1	08/24/2015 12:10	111731
2-Hexanone	NELAP	25.0		ND	µg/L	1	08/24/2015 12:10	111731
4-Methyl-2-pentanone	NELAP	25.0		ND	µg/L	1	08/24/2015 12:10	111731
Acetone	NELAP	25.0		ND	µg/L	1	08/24/2015 12:10	111731
Acetonitrile	NELAP	50.0		ND	µg/L	1	08/24/2015 12:10	111731
Acrolein	NELAP	100		ND	µg/L	1	08/24/2015 12:10	111731
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Benzene	NELAP	2.0		ND	µg/L	1	08/24/2015 12:10	111731
Bromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Bromodichloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Bromoform	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Bromomethane	NELAP	10.0		ND	µg/L	1	08/24/2015 12:10	111731
Carbon disulfide	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Carbon tetrachloride	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Chlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Chloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 12:10	111731
Chloroform	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Chloromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 12:10	111731
cis-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
cis-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Dibromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Dibromomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Dichlorodifluoromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 12:10	111731
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Ethylbenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Hexachloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 12:10	111731
Iodomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
m,p-Xylenes	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Methacrylonitrile	NELAP	10.0		ND	µg/L	1	08/24/2015 12:10	111731
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Methylene chloride	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Naphthalene	NELAP	10.0		ND	µg/L	1	08/24/2015 12:10	111731

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Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
o-Xylene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Propionitrile	NELAP	50.0		ND	µg/L	1	08/24/2015 12:10	111731
Styrene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Tetrachloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Toluene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
trans-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
trans-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
trans-1,4-Dichloro-2-butene	NELAP	10.0		ND	µg/L	1	08/24/2015 12:10	111731
Trichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Vinyl acetate	NELAP	10.0		ND	µg/L	1	08/24/2015 12:10	111731
Vinyl chloride	NELAP	2.0		ND	µg/L	1	08/24/2015 12:10	111731
Xylenes, Total	NELAP	5.0		ND	µg/L	1	08/24/2015 12:10	111731
Surr: 1,2-Dichloroethane-d4		74.7-129		105.2	%REC	1	08/24/2015 12:10	111731
Surr: 4-Bromofluorobenzene		86-119		102.1	%REC	1	08/24/2015 12:10	111731
Surr: Dibromofluoromethane		81.7-123		102.1	%REC	1	08/24/2015 12:10	111731
Surr: Toluene-d8		84.3-114		101.7	%REC	1	08/24/2015 12:10	111731

Sample Summary

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081277
Report Date: 26-Aug-15

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
15081277-001	MO-1-SS	Aqueous	7	08/21/2015 11:30
15081277-002	MO-1-SDR	Aqueous	7	08/21/2015 14:00

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Price - 0000541

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
15081277-001A	MO-1-SS	08/21/2015 11:30	08/21/2015 17:00		
	SW-846 3510C, 8081B, Chlorinated Pesticides by GC/ECD			08/21/2015 20:07	08/24/2015 15:44
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			08/21/2015 20:07	08/24/2015 17:26
	SW-846 3510C, 8151A, Chlorinated Herbicides by GC/ECD			08/25/2015 14:44	08/26/2015 12:25
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			08/24/2015 9:30	08/24/2015 14:11
15081277-001B	MO-1-SS	08/21/2015 11:30	08/21/2015 17:00		
	SW-846 9036 (Total)				08/24/2015 22:38
15081277-001C	MO-1-SS	08/21/2015 11:30	08/21/2015 17:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			08/24/2015 7:58	08/24/2015 14:54
	SW-846 7470A (Total)			08/24/2015 8:18	08/24/2015 12:24
15081277-001D	MO-1-SS	08/21/2015 11:30	08/21/2015 17:00		
	SW-846 9012A (Total)			08/21/2015 20:00	08/24/2015 14:35
15081277-001E	MO-1-SS	08/21/2015 11:30	08/21/2015 17:00		
	Standard Methods 4500-S D (Total)				08/24/2015 15:52
15081277-001F	MO-1-SS	08/21/2015 11:30	08/21/2015 17:00		
	SW-846 9060				08/24/2015 14:50
15081277-001G	MO-1-SS	08/21/2015 11:30	08/21/2015 17:00		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/24/2015 11:44
15081277-002A	MO-1-SDR	08/21/2015 14:00	08/21/2015 17:00		
	SW-846 3510C, 8081B, Chlorinated Pesticides by GC/ECD			08/21/2015 20:07	08/24/2015 16:08
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			08/21/2015 20:07	08/24/2015 17:44
	SW-846 3510C, 8151A, Chlorinated Herbicides by GC/ECD			08/25/2015 14:44	08/26/2015 12:56
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			08/24/2015 8:10	08/24/2015 14:43
15081277-002B	MO-1-SDR	08/21/2015 14:00	08/21/2015 17:00		
	SW-846 9036 (Total)				08/24/2015 23:16
15081277-002C	MO-1-SDR	08/21/2015 14:00	08/21/2015 17:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			08/24/2015 7:58	08/24/2015 12:24
	SW-846 7470A (Total)			08/24/2015 8:18	08/24/2015 12:15
15081277-002D	MO-1-SDR	08/21/2015 14:00	08/21/2015 17:00		
	SW-846 9012A (Total)			08/21/2015 20:00	08/24/2015 14:40
15081277-002E	MO-1-SDR	08/21/2015 14:00	08/21/2015 17:00		
	Standard Methods 4500-S D (Total)				08/24/2015 15:08
15081277-002F	MO-1-SDR	08/21/2015 14:00	08/21/2015 17:00		
	SW-846 9060				08/24/2015 12:42
15081277-002G	MO-1-SDR	08/21/2015 14:00	08/21/2015 17:00		

Client: Missouri Geological Survey
Work Order: 15081277

Client Project: J024889.02 BLF
Report Date: 26-Aug-15

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/24/2015 12:10

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

STANDARD METHODS 4500-S D (TOTAL)

Batch R208427 **SampType:** mblk Units **mg/L**
SampID: MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.05		**< 0.05**						08/24/2015

Batch R208427 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.05		**0.06**	0.06700	0	91.0	90	110	08/24/2015

Batch R208427 **SampType:** ms Units **mg/L**
SampID: 15081277-001EMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	3.0	JS	**1**	4.020	0	34.3	85	115	08/24/2015

Batch R208427 **SampType:** MS Units **mg/L**
SampID: 15081277-002EMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.05	S	**0.08**	0.06700	0	117.9	85	115	08/24/2015

Batch R208427 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 15081277-002EMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfide, Total - Colorimetric	0.05	S	**0.09**	0.06700	0	129.9	0.07900	9.64	08/24/2015

SW-846 9012A (TOTAL)

Batch 111747 **SampType:** MBLK Units **mg/L**
SampID: MBLK 150821 TCN3

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide	0.007		**< 0.007**						08/24/2015

Batch 111747 **SampType:** LCS Units **mg/L**
SampID: LCS 150821 TCN3

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide	0.007		**0.026**	0.02500	0	103.9	85	115	08/24/2015

Batch 111747 **SampType:** MS Units **mg/L**
SampID: 15081277-002DMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide	0.007		**0.025**	0.02500	0	99.9	75	125	08/24/2015

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081277
Report Date: 26-Aug-15

SW-846 9012A (TOTAL)

Batch 111747 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 15081277-002DMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Cyanide	0.007		**0.024**	0.02500	0	94.1	0.02498	5.94	08/24/2015

SW-846 9036 (TOTAL)

Batch R208477 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**< 10**						08/24/2015

Batch R208477 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**20**	20.00	0	98.5	90	110	08/24/2015

Batch R208477 **SampType:** MS Units **mg/L**
SampID: 15081277-001BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	200		**697**	200.0	503.4	96.8	85	115	08/24/2015

Batch R208477 **SampType:** MSD Units **mg/L** RPD Limit **10**
SampID: 15081277-001BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate	200		**728**	200.0	503.4	112.2	697.0	4.32	08/24/2015

SW-846 9060

Batch R208421 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	1.0		**< 1.0**						08/24/2015

Batch R208421 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	10.0		**78.5**	77.60	0	101.1	90	110	08/24/2015

Batch R208421 **SampType:** MS Units **mg/L**
SampID: 15081277-001FMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	10.0		**91.5**	50.00	45.38	92.2	85	115	08/24/2015

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081277
Report Date: 26-Aug-15

SW-846 9060

Batch R208421 **SampType:** MSD Units mg/L RPD Limit 10

SampID: 15081277-001FMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Organic Carbon (TOC)	10.0		**93.2**	50.00	45.38	95.7	91.50	1.89	08/24/2015

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 111715 **SampType:** MBLK Units mg/L

SampID: MBLK-111715

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		< **0.0500**	0.05000	0	0	-100	100	08/24/2015
Arsenic	0.0250		< **0.0250**	0.02500	0	0	-100	100	08/24/2015
Barium	0.0025		< **0.0025**	0.00250(	0	0	-100	100	08/24/2015
Beryllium	0.0005		< **0.0005**	.000500	0	0	-100	100	08/24/2015
Cadmium	0.0020		< **0.0020**	0.00200(	0	0	-100	100	08/24/2015
Chromium	0.0050		< **0.0050**	0.00500(	0	0	-100	100	08/24/2015
Cobalt	0.0050		< **0.0050**	0.00500(	0	0	-100	100	08/24/2015
Copper	0.0050		< **0.0050**	0.00500(	0	0	-100	100	08/24/2015
Lead	0.0150		< **0.0150**	0.01500	0	0	-100	100	08/24/2015
Magnesium	0.0500		< **0.0500**	0.05000	0	0	-100	100	08/24/2015
Manganese	0.0030		< **0.0030**	0.00300(	0	0	-100	100	08/24/2015
Nickel	0.0050		< **0.0050**	0.00500(	0	0	-100	100	08/24/2015
Selenium	0.0400		< **0.0400**	0.04000	0	0	-100	100	08/24/2015
Silver	0.0050		< **0.0050**	0.00500(	0	0	-100	100	08/24/2015
Thallium	0.0500		< **0.0500**	0.05000	0	0	-100	100	08/24/2015
Tin	0.0200		< **0.0200**	0.02000	0	0	-100	100	08/24/2015
Vanadium	0.0100		< **0.0100**	0.01000	0	0	-100	100	08/24/2015
Zinc	0.0100		< **0.0100**	0.01000	0	0	-100	100	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 111715 **SampType:** LCS Units mg/L
SampID: LCS-111715

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**0.486**	0.5000	0	97.3	85	115	08/24/2015
Arsenic	0.0250		**2.02**	2.000	0	101.0	85	115	08/24/2015
Barium	0.0025		**2.06**	2.000	0	103.2	85	115	08/24/2015
Beryllium	0.0005		**0.0497**	0.05000	0	99.4	85	115	08/24/2015
Cadmium	0.0020		**0.0496**	0.05000	0	99.2	85	115	08/24/2015
Chromium	0.0050		**0.206**	0.2000	0	102.9	85	115	08/24/2015
Cobalt	0.0050		**0.496**	0.5000	0	99.1	85	115	08/24/2015
Copper	0.0050		**0.249**	0.2500	0	99.7	85	115	08/24/2015
Lead	0.0150		**0.506**	0.5000	0	101.1	85	115	08/24/2015
Magnesium	0.0500		**2.49**	2.500	0	99.4	85	115	08/24/2015
Manganese	0.0030		**0.512**	0.5000	0	102.5	85	115	08/24/2015
Nickel	0.0050		**0.516**	0.5000	0	103.3	85	115	08/24/2015
Selenium	0.0400		**1.98**	2.000	0	98.8	85	115	08/24/2015
Silver	0.0050		**0.0484**	0.05000	0	96.8	85	115	08/24/2015
Thallium	0.0500		**2.02**	2.000	0	101.0	85	115	08/24/2015
Tin	0.0200		**0.504**	0.5000	0	100.8	85	115	08/24/2015
Vanadium	0.0100		**0.507**	0.5000	0	101.4	85	115	08/24/2015
Zinc	0.0100		**0.480**	0.5000	0	96.0	85	115	08/24/2015

Batch 111715 **SampType:** MS Units mg/L
SampID: 15081277-002CMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**0.498**	0.5000	0	99.6	75	125	08/24/2015
Arsenic	0.0250		**2.08**	2.000	0	103.8	75	125	08/24/2015
Barium	0.0025		**2.23**	2.000	0.1064	106.1	75	125	08/24/2015
Beryllium	0.0005		**0.0509**	0.05000	0	101.8	75	125	08/24/2015
Cadmium	0.0020		**0.0499**	0.05000	0	99.8	75	125	08/24/2015
Chromium	0.0050		**0.212**	0.2000	0.002700	104.8	75	125	08/24/2015
Cobalt	0.0050		**0.502**	0.5000	0	100.4	75	125	08/24/2015
Copper	0.0050		**0.259**	0.2500	0	103.8	75	125	08/24/2015
Lead	0.0150		**0.509**	0.5000	0	101.8	75	125	08/24/2015
Magnesium	0.0500		**41.5**	2.500	38.91	104.0	75	125	08/24/2015
Manganese	0.0030		**0.542**	0.5000	0.01950	104.5	75	125	08/24/2015
Nickel	0.0050		**0.526**	0.5000	0.005800	104.1	75	125	08/24/2015
Selenium	0.0400		**2.00**	2.000	0	100.1	75	125	08/24/2015
Silver	0.0050		**0.0499**	0.05000	0	99.8	75	125	08/24/2015
Thallium	0.0500		**2.03**	2.000	0	101.5	75	125	08/24/2015
Tin	0.0200		**0.514**	0.5000	0	102.8	75	125	08/24/2015
Vanadium	0.0100		**0.524**	0.5000	0.005500	103.7	75	125	08/24/2015
Zinc	0.0100		**0.483**	0.5000	0.002600	96.2	75	125	08/24/2015

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081277
Report Date: 26-Aug-15

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 111715 **SampType:** MSD Units mg/L RPD Limit 20

SampID: 15081277-002CMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony	0.0500		**0.500**	0.5000	0	99.9	0.4981	0.30	08/24/2015
Arsenic	0.0250		**2.07**	2.000	0	103.3	2.076	0.48	08/24/2015
Barium	0.0025		**2.21**	2.000	0.1064	105.3	2.229	0.72	08/24/2015
Beryllium	0.0005		**0.0507**	0.05000	0	101.4	0.05090	0.39	08/24/2015
Cadmium	0.0020		**0.0496**	0.05000	0	99.2	0.04990	0.60	08/24/2015
Chromium	0.0050		**0.211**	0.2000	0.002700	104.1	0.2122	0.61	08/24/2015
Cobalt	0.0050		**0.499**	0.5000	0	99.8	0.5020	0.64	08/24/2015
Copper	0.0050		**0.258**	0.2500	0	103.1	0.2594	0.62	08/24/2015
Lead	0.0150		**0.506**	0.5000	0	101.3	0.5090	0.51	08/24/2015
Magnesium	0.0500		**41.3**	2.500	38.91	96.8	41.51	0.43	08/24/2015
Manganese	0.0030		**0.538**	0.5000	0.01950	103.8	0.5418	0.65	08/24/2015
Nickel	0.0050		**0.524**	0.5000	0.005800	103.7	0.5262	0.40	08/24/2015
Selenium	0.0400		**2.01**	2.000	0	100.4	2.002	0.25	08/24/2015
Silver	0.0050		**0.0498**	0.05000	0	99.6	0.04990	0.20	08/24/2015
Thallium	0.0500		**2.02**	2.000	0	101.0	2.030	0.49	08/24/2015
Tin	0.0200		**0.511**	0.5000	0	102.2	0.5140	0.57	08/24/2015
Vanadium	0.0100		**0.521**	0.5000	0.005500	103.1	0.5238	0.54	08/24/2015
Zinc	0.0100		**0.480**	0.5000	0.002600	95.6	0.4834	0.62	08/24/2015

SW-846 7470A (TOTAL)

Batch 111717 **SampType:** MBLK Units mg/L

SampID: MBLK-111717

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**< 0.00020**	.000200	0	0	-100	100	08/24/2015

Batch 111717 **SampType:** LCS Units mg/L

SampID: LCS-111717

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**0.00480**	).00500(	0	96.0	85	115	08/24/2015

Batch 111717 **SampType:** MS Units mg/L

SampID: 15081277-001CMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**0.00557**	).00500(	0.0002714	106.0	75	125	08/24/2015

Batch 111717 **SampType:** MSD Units mg/L RPD Limit 15

SampID: 15081277-001CMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury	0.00020		**0.00570**	).00500(	0.0002714	108.5	0.005571	2.23	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD

Batch 111703 **SampType:** MBLK Units µg/L
SampID: MBLK-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
4,4'-DDD	0.05		ND						08/24/2015
4,4'-DDE	0.05		ND						08/24/2015
4,4'-DDT	0.05		ND						08/24/2015
Aldrin	0.05		ND						08/24/2015
alpha-BHC	0.05		ND						08/24/2015
beta-BHC	0.05		ND						08/24/2015
delta-BHC	0.05		ND						08/24/2015
Dieldrin	0.05		ND						08/24/2015
Endosulfan I	0.05		ND						08/24/2015
Endosulfan II	0.05		ND						08/24/2015
Endosulfan sulfate	0.05		ND						08/24/2015
Endrin	0.05		ND						08/24/2015
Endrin aldehyde	0.05		ND						08/24/2015
gamma-BHC	0.05		ND						08/24/2015
Heptachlor	0.05		ND						08/24/2015
Heptachlor epoxide	0.05		ND						08/24/2015
Methoxychlor	0.05		ND						08/24/2015
Toxaphene	0.50		ND						08/24/2015
Chlordane	0.50		ND						08/24/2015
Surr: Decachlorobiphenyl			0.15	0.2500		60.7	11.3	138	08/24/2015
Surr: Tetrachloro-m-xylene			0.21	0.2500		82.4	13	114	08/24/2015

Batch 111703 **SampType:** LCS Units µg/L
SampID: LCSPST-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
4,4'-DDD	0.05		0.16	0.2500	0	64.9	49	118	08/24/2015
4,4'-DDE	0.05		0.15	0.2500	0	59.3	34.3	106	08/24/2015
4,4'-DDT	0.05		0.16	0.2500	0	63.7	39	118	08/24/2015
Aldrin	0.05		0.14	0.2500	0	54.7	33.1	98.8	08/24/2015
alpha-BHC	0.05		0.17	0.2500	0	68.0	33.5	110	08/24/2015
beta-BHC	0.05		0.21	0.2500	0	83.0	64.2	119	08/24/2015
delta-BHC	0.05		0.21	0.2500	0	83.5	25.6	126	08/24/2015
Dieldrin	0.05		0.18	0.2500	0	70.0	55	117	08/24/2015
Endosulfan I	0.05		0.17	0.2500	0	68.9	49.5	117	08/24/2015
Endosulfan II	0.05		0.19	0.2500	0	74.9	58.4	129	08/24/2015
Endosulfan sulfate	0.05		0.25	0.2500	0	100.2	54.9	136	08/24/2015
Endrin	0.05		0.18	0.2500	0	71.3	62.6	128	08/24/2015
Endrin aldehyde	0.05		0.21	0.2500	0	83.4	70.5	126	08/24/2015
gamma-BHC	0.05		0.19	0.2500	0	75.6	47.7	117	08/24/2015
Heptachlor	0.05		0.15	0.2500	0	61.5	42.4	110	08/24/2015
Heptachlor epoxide	0.05		0.17	0.2500	0	67.5	53.4	117	08/24/2015
Methoxychlor	0.05		0.17	0.2500	0	68.6	56.4	132	08/24/2015
Surr: Decachlorobiphenyl			0.13	0.2500		50.9	9.42	147	08/24/2015
Surr: Tetrachloro-m-xylene			0.16	0.2500		64.1	13	114	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD

Batch 111703 **SampType:** LCSD Units µg/L RPD Limit 30

SampID: LCSPSTD-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
4,4'-DDD	0.05	R	**0.24**	0.2500	0	96.6	0.1624	39.20	08/24/2015
4,4'-DDE	0.05		**0.18**	0.2500	0	70.4	0.1482	17.17	08/24/2015
4,4'-DDT	0.05		**0.19**	0.2500	0	75.3	0.1593	16.65	08/24/2015
Aldrin	0.05		**0.17**	0.2500	0	66.6	0.1367	19.75	08/24/2015
alpha-BHC	0.05		**0.19**	0.2500	0	77.7	0.1700	13.27	08/24/2015
beta-BHC	0.05		**0.21**	0.2500	0	84.7	0.2075	2.09	08/24/2015
delta-BHC	0.05		**0.22**	0.2500	0	86.3	0.2088	3.28	08/24/2015
Dieldrin	0.05		**0.21**	0.2500	0	83.3	0.1751	17.28	08/24/2015
Endosulfan I	0.05		**0.20**	0.2500	0	80.0	0.1723	14.89	08/24/2015
Endosulfan II	0.05		**0.22**	0.2500	0	88.8	0.1872	17.06	08/24/2015
Endosulfan sulfate	0.05		**0.31**	0.2500	0	122.2	0.2504	19.85	08/24/2015
Endrin	0.05		**0.22**	0.2500	0	86.4	0.1782	19.18	08/24/2015
Endrin aldehyde	0.05		**0.22**	0.2500	0	89.6	0.2086	7.13	08/24/2015
gamma-BHC	0.05		**0.21**	0.2500	0	83.1	0.1890	9.51	08/24/2015
Heptachlor	0.05		**0.19**	0.2500	0	76.1	0.1537	21.28	08/24/2015
Heptachlor epoxide	0.05		**0.20**	0.2500	0	81.3	0.1687	18.50	08/24/2015
Methoxychlor	0.05		**0.22**	0.2500	0	86.6	0.1715	23.23	08/24/2015
Surr: Decachlorobiphenyl			**0.13**	0.2500		53.1			08/24/2015
Surr: Tetrachloro-m-xylene			**0.19**	0.2500		77.6			08/24/2015

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 111703 **SampType:** MBLK Units µg/L

SampID: MBLK-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	1.00		**ND**						08/24/2015
Aroclor 1221	1.00		**ND**						08/24/2015
Aroclor 1232	1.00		**ND**						08/24/2015
Aroclor 1242	1.00		**ND**						08/24/2015
Aroclor 1248	1.00		**ND**						08/24/2015
Aroclor 1254	1.00		**ND**						08/24/2015
Aroclor 1260	1.00		**ND**						08/24/2015
Surr: Decachlorobiphenyl			**0.17**	0.2500		68.6	11.3	138	08/24/2015
Surr: Tetrachloro-meta-xylene			**0.21**	0.2500		83.8	26.8	110	08/24/2015

Batch 111703 **SampType:** LCS Units µg/L

SampID: LCSPCB-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	1.00		**3.71**	5.000	0	74.3	52	122	08/24/2015
Aroclor 1260	1.00		**2.26**	5.000	0	45.3	28.7	119	08/24/2015
Surr: Decachlorobiphenyl			**0.17**	0.2500		69.7	11.3	138	08/24/2015
Surr: Tetrachloro-meta-xylene			**0.19**	0.2500		76.4	26.8	110	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 111703 **SampType:** LCSD Units µg/L RPD Limit 21.1
SampID: LCSPCBD-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016	1.00		**4.05**	5.000	0	80.9	3.713	8.58	08/24/2015
Aroclor 1260	1.00		**2.72**	5.000	0	54.4	2.263	18.39	08/24/2015
Surr: Decachlorobiphenyl			**0.18**	0.2500		72.3			08/24/2015
Surr: Tetrachloro-meta-xylene			**0.18**	0.2500		73.4			08/24/2015

SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD

Batch 111790 **SampType:** MBLK Units µg/L
SampID: MBLK-111790

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
2,4,5-T	0.200		**ND**						08/26/2015
2,4,5-TP (Silvex)	0.200		**ND**						08/26/2015
2,4-D	0.200		**ND**						08/26/2015
Dinoseb	0.200		**ND**						08/26/2015
Surr: 2,4-Dichlorophenylacetic acid			**0.594**	0.8000		74.3	23.8	117	08/26/2015

Batch 111790 **SampType:** LCS Units µg/L
SampID: LCS-111790

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
2,4,5-T	0.200		**0.798**	0.8000	0	99.7	23.9	155	08/26/2015
2,4,5-TP (Silvex)	0.200		**0.783**	0.8000	0	97.9	32.1	115	08/26/2015
2,4-D	0.200		**0.746**	0.8000	0	93.2	5	239	08/26/2015
Dinoseb	0.200		**0.492**	0.8000	0	61.5	9.62	105	08/26/2015
Surr: 2,4-Dichlorophenylacetic acid			**0.608**	0.8000		76.0	23.8	117	08/26/2015

Batch 111790 **SampType:** LCSD Units µg/L RPD Limit 30
SampID: LCSD-111790

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
2,4,5-T	0.200		**0.717**	0.8000	0	89.6	0.7980	10.71	08/26/2015
2,4,5-TP (Silvex)	0.200		**0.659**	0.8000	0	82.4	0.7834	17.21	08/26/2015
2,4-D	0.200		**0.640**	0.8000	0	80.0	0.7458	15.30	08/26/2015
Dinoseb	0.200		**0.405**	0.8000	0	50.6	0.4924	19.54	08/26/2015
Surr: 2,4-Dichlorophenylacetic acid			**0.479**	0.8000		59.9			08/26/2015

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111713 **SampType:** MBLK Units mg/L
SampID: MBLK-111713

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		ND						08/24/2015
2,4,5-Trichlorophenol	0.010		ND						08/24/2015
2,4,6-Trichlorophenol	0.010		ND						08/24/2015
2,4-Dichlorophenol	0.010		ND						08/24/2015
2,4-Dimethylphenol	0.010		ND						08/24/2015
2,4-Dinitrophenol	0.020		ND						08/24/2015
2,4-Dinitrotoluene	0.010		ND						08/24/2015
2,6-Dinitrotoluene	0.010		ND						08/24/2015
2-Chloronaphthalene	0.010		ND						08/24/2015
2-Chlorophenol	0.010		ND						08/24/2015
2-Methylnaphthalene	0.010		ND						08/24/2015
2-Nitroaniline	0.040		ND						08/24/2015
2-Nitrophenol	0.020		ND						08/24/2015
3,3'-Dichlorobenzidine	0.010		ND						08/24/2015
3-Nitroaniline	0.040		ND						08/24/2015
4,6-Dinitro-2-methylphenol	0.020		ND						08/24/2015
4-Bromophenyl phenyl ether	0.010		ND						08/24/2015
4-Chloro-3-methylphenol	0.020		ND						08/24/2015
4-Chloroaniline	0.020		ND						08/24/2015
4-Chlorophenyl phenyl ether	0.010		ND						08/24/2015
4-Nitroaniline	0.020		ND						08/24/2015
4-Nitrophenol	0.020		ND						08/24/2015
Acenaphthene	0.010		ND						08/24/2015
Acenaphthylene	0.010		ND						08/24/2015
Anthracene	0.010		ND						08/24/2015
Benzo(a)anthracene	0.010		ND						08/24/2015
Benzo(a)pyrene	0.010		ND						08/24/2015
Benzo(b)fluoranthene	0.010		ND						08/24/2015
Benzo(g,h,i)perylene	0.010		ND						08/24/2015
Benzo(k)fluoranthene	0.010		ND						08/24/2015
Benzyl alcohol	0.020		ND						08/24/2015
Bis(2-chloroethoxy)methane	0.010		ND						08/24/2015
Bis(2-chloroethyl)ether	0.010		ND						08/24/2015
Bis(2-chloroisopropyl)ether	0.010		ND						08/24/2015
Bis(2-ethylhexyl)phthalate	0.006		ND						08/24/2015
Butyl benzyl phthalate	0.010		ND						08/24/2015
Chrysene	0.010		ND						08/24/2015
Dibenzo(a,h)anthracene	0.010		ND						08/24/2015
Dibenzofuran	0.010		ND						08/24/2015
Diethyl phthalate	0.010		ND						08/24/2015
Dimethyl phthalate	0.010		ND						08/24/2015
Di-n-butyl phthalate	0.010		ND						08/24/2015
Di-n-octyl phthalate	0.010		ND						08/24/2015
Fluoranthene	0.010		ND						08/24/2015
Fluorene	0.010		ND						08/24/2015
Hexachlorobenzene	0.010		ND						08/24/2015
Hexachlorocyclopentadiene	0.020		ND						08/24/2015

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111713 **SampType:** MBLK Units mg/L
SampID: MBLK-111713

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Indeno(1,2,3-cd)pyrene	0.010		**ND**						08/24/2015
Isophorone	0.010		**ND**						08/24/2015
m,p-Cresol	0.010		**ND**						08/24/2015
Naphthalene	0.010		**ND**						08/24/2015
Nitrobenzene	0.010		**ND**						08/24/2015
N-Nitrosodimethylamine	0.020		**ND**						08/24/2015
N-Nitroso-di-n-propylamine	0.010		**ND**						08/24/2015
N-Nitrosodiphenylamine	0.010		**ND**						08/24/2015
o-Cresol	0.010		**ND**						08/24/2015
Pentachlorophenol	0.020		**ND**						08/24/2015
Phenanthrene	0.010		**ND**						08/24/2015
Phenol	0.005		**ND**						08/24/2015
Pyrene	0.010		**ND**						08/24/2015
1,2-Diphenylhydrazine	0.010		**ND**						08/24/2015
Surr: 2,4,6-Tribromophenol			**0.045**	0.05000		89.4	48.9	120	08/24/2015
Surr: 2-Fluorobiphenyl			**0.020**	0.02500		78.7	51.1	102	08/24/2015
Surr: 2-Fluorophenol			**0.030**	0.05000		60.0	32	75.8	08/24/2015
Surr: Nitrobenzene-d5			**0.018**	0.02500		71.6	19.5	133	08/24/2015
Surr: Phenol-d5			**0.022**	0.05000		44.5	24.1	54.7	08/24/2015
Surr: p-Terphenyl-d14			**0.023**	0.02500		90.4	51.6	124	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111713 **SampType:** LCS Units mg/L
SampID: LCS-111713

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.034**	0.05000	0	67.4	42.3	104	08/24/2015
2,4,5-Trichlorophenol	0.010		**0.079**	0.1000	0	78.6	55	116	08/24/2015
2,4,6-Trichlorophenol	0.010		**0.072**	0.1000	0	72.2	52.3	109	08/24/2015
2,4-Dimethylphenol	0.010		**0.070**	0.1000	0	69.8	50	107	08/24/2015
2,4-Dinitrophenol	0.020		**0.062**	0.1000	0	61.9	5.78	112	08/24/2015
2,4-Dinitrotoluene	0.010		**0.042**	0.05000	0	83.5	58.7	119	08/24/2015
2-Chlorophenol	0.010		**0.065**	0.1000	0	65.0	44.4	94.7	08/24/2015
4-Chloro-3-methylphenol	0.020		**0.078**	0.1000	0	78.2	52.1	109	08/24/2015
4-Nitrophenol	0.020		**0.040**	0.1000	0	39.7	24.2	55.7	08/24/2015
Acenaphthene	0.010		**0.037**	0.05000	0	74.0	51.2	109	08/24/2015
Acenaphthylene	0.010		**0.039**	0.05000	0	78.1	54.8	117	08/24/2015
Anthracene	0.010		**0.039**	0.05000	0	77.4	56.1	116	08/24/2015
Benzo(a)anthracene	0.010		**0.038**	0.05000	0	75.1	55	113	08/24/2015
Benzo(a)pyrene	0.010		**0.040**	0.05000	0	80.5	60.4	126	08/24/2015
Benzo(b)fluoranthene	0.010		**0.038**	0.05000	0	76.4	57.6	119	08/24/2015
Benzo(g,h,i)perylene	0.010		**0.041**	0.05000	0	81.2	51.2	130	08/24/2015
Benzo(k)fluoranthene	0.010		**0.041**	0.05000	0	81.9	57.9	126	08/24/2015
Bis(2-ethylhexyl)phthalate	0.006		**0.038**	0.05000	0	76.6	52.8	122	08/24/2015
Chrysene	0.010		**0.040**	0.05000	0	79.0	57.9	120	08/24/2015
Dibenzo(a,h)anthracene	0.010		**0.042**	0.05000	0	84.4	54.7	130	08/24/2015
Diethyl phthalate	0.010		**0.078**	0.1000	0	77.8	54.3	116	08/24/2015
Dimethyl phthalate	0.010		**0.074**	0.1000	0	73.8	53.5	111	08/24/2015
Di-n-butyl phthalate	0.010		**0.036**	0.05000	0	73.0	50.8	116	08/24/2015
Fluoranthene	0.010		**0.040**	0.05000	0	79.2	56.9	117	08/24/2015
Fluorene	0.010		**0.038**	0.05000	0	76.4	55.1	112	08/24/2015
Hexachlorobenzene	0.010		**0.077**	0.1000	0	76.6	54.3	119	08/24/2015
Indeno(1,2,3-cd)pyrene	0.010		**0.043**	0.05000	0	85.9	56.2	135	08/24/2015
m,p-Cresol	0.010		**0.032**	0.05000	0	63.2	39.5	94	08/24/2015
Naphthalene	0.010		**0.031**	0.05000	0	61.7	40.3	98.1	08/24/2015
Nitrobenzene	0.010		**0.066**	0.1000	0	66.4	44.9	95.5	08/24/2015
N-Nitroso-di-n-propylamine	0.010		**0.037**	0.05000	0	74.1	49.2	107	08/24/2015
o-Cresol	0.010		**0.033**	0.05000	0	65.3	42.5	95	08/24/2015
Pentachlorophenol	0.020		**0.053**	0.1000	0	53.5	35.2	104	08/24/2015
Phenanthrene	0.010		**0.038**	0.05000	0	76.8	55.2	115	08/24/2015
Phenol	0.005		**0.041**	0.1000	0	41.2	22.7	51.8	08/24/2015
Pyrene	0.010		**0.040**	0.05000	0	80.4	56	116	08/24/2015
Surr: 2,4,6-Tribromophenol			**0.041**	0.05000		81.4	48.9	120	08/24/2015
Surr: 2-Fluorobiphenyl			**0.018**	0.02500		73.1	51.1	102	08/24/2015
Surr: 2-Fluorophenol			**0.026**	0.05000		52.3	32	75.8	08/24/2015
Surr: Nitrobenzene-d5			**0.021**	0.02500		84.7	19.5	133	08/24/2015
Surr: Phenol-d5			**0.020**	0.05000		40.4	24.1	54.7	08/24/2015
Surr: p-Terphenyl-d14			**0.020**	0.02500		79.7	51.6	124	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111713 **SampType:** LCSD Units mg/L RPD Limit 40

SampID: LCSD-111713

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.036**	0.05000	0	72.8	0.03372	7.60	08/24/2015
2,4,5-Trichlorophenol	0.010		**0.083**	0.1000	0	83.1	0.07863	5.56	08/24/2015
2,4,6-Trichlorophenol	0.010		**0.078**	0.1000	0	78.3	0.07222	8.11	08/24/2015
2,4-Dimethylphenol	0.010		**0.071**	0.1000	0	70.8	0.06976	1.55	08/24/2015
2,4-Dinitrophenol	0.020		**0.069**	0.1000	0	68.8	0.06188	10.53	08/24/2015
2,4-Dinitrotoluene	0.010		**0.044**	0.05000	0	88.6	0.04177	5.94	08/24/2015
2-Chlorophenol	0.010		**0.068**	0.1000	0	67.8	0.06504	4.18	08/24/2015
4-Chloro-3-methylphenol	0.020		**0.082**	0.1000	0	81.5	0.07822	4.16	08/24/2015
4-Nitrophenol	0.020		**0.040**	0.1000	0	40.1	0.03965	1.23	08/24/2015
Acenaphthene	0.010		**0.040**	0.05000	0	80.8	0.03702	8.78	08/24/2015
Acenaphthylene	0.010		**0.041**	0.05000	0	82.8	0.03907	5.83	08/24/2015
Anthracene	0.010		**0.041**	0.05000	0	82.4	0.03872	6.26	08/24/2015
Benzo(a)anthracene	0.010		**0.040**	0.05000	0	80.3	0.03753	6.73	08/24/2015
Benzo(a)pyrene	0.010		**0.043**	0.05000	0	86.1	0.04025	6.69	08/24/2015
Benzo(b)fluoranthene	0.010		**0.039**	0.05000	0	79.0	0.03819	3.32	08/24/2015
Benzo(g,h,i)perylene	0.010		**0.043**	0.05000	0	86.8	0.04058	6.73	08/24/2015
Benzo(k)fluoranthene	0.010		**0.045**	0.05000	0	90.3	0.04093	9.84	08/24/2015
Bis(2-ethylhexyl)phthalate	0.006		**0.041**	0.05000	0	82.7	0.03831	7.66	08/24/2015
Chrysene	0.010		**0.042**	0.05000	0	83.9	0.03951	6.00	08/24/2015
Dibenzo(a,h)anthracene	0.010		**0.045**	0.05000	0	90.2	0.04218	6.68	08/24/2015
Diethyl phthalate	0.010		**0.083**	0.1000	0	83.3	0.07779	6.86	08/24/2015
Dimethyl phthalate	0.010		**0.080**	0.1000	0	79.8	0.07384	7.79	08/24/2015
Di-n-butyl phthalate	0.010		**0.040**	0.05000	0	79.0	0.03650	7.97	08/24/2015
Fluoranthene	0.010		**0.042**	0.05000	0	84.1	0.03959	6.01	08/24/2015
Fluorene	0.010		**0.041**	0.05000	0	81.7	0.03822	6.59	08/24/2015
Hexachlorobenzene	0.010		**0.084**	0.1000	0	83.5	0.07662	8.61	08/24/2015
Indeno(1,2,3-cd)pyrene	0.010		**0.046**	0.05000	0	91.5	0.04296	6.35	08/24/2015
m,p-Cresol	0.010		**0.033**	0.05000	0	65.5	0.03160	3.58	08/24/2015
Naphthalene	0.010		**0.033**	0.05000	0	66.0	0.03084	6.78	08/24/2015
Nitrobenzene	0.010		**0.072**	0.1000	0	72.5	0.06637	8.78	08/24/2015
N-Nitroso-di-n-propylamine	0.010		**0.040**	0.05000	0	79.2	0.03703	6.75	08/24/2015
o-Cresol	0.010		**0.034**	0.05000	0	68.2	0.03264	4.36	08/24/2015
Pentachlorophenol	0.020		**0.059**	0.1000	0	58.6	0.05347	9.22	08/24/2015
Phenanthrene	0.010		**0.042**	0.05000	0	83.1	0.03838	7.98	08/24/2015
Phenol	0.005		**0.040**	0.1000	0	40.2	0.04118	2.38	08/24/2015
Pyrene	0.010		**0.043**	0.05000	0	85.0	0.04019	5.63	08/24/2015
Surr: 2,4,6-Tribromophenol			**0.044**	0.05000		87.0			08/24/2015
Surr: 2-Fluorobiphenyl			**0.019**	0.02500		77.4			08/24/2015
Surr: 2-Fluorophenol			**0.026**	0.05000		51.5			08/24/2015
Surr: Nitrobenzene-d5			**0.022**	0.02500		87.8			08/24/2015
Surr: Phenol-d5			**0.020**	0.05000		39.3			08/24/2015
Surr: p-Terphenyl-d14			**0.022**	0.02500		86.8			08/24/2015

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** MBLK Units µg/L
SampID: MBLK-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		ND						08/24/2015
1,1,1-Trichloroethane	5.0		ND						08/24/2015
1,1,2,2-Tetrachloroethane	5.0		ND						08/24/2015
1,1,2-Trichloroethane	5.0		ND						08/24/2015
1,1-Dichloroethane	5.0		ND						08/24/2015
1,1-Dichloroethene	5.0		ND						08/24/2015
1,1-Dichloropropene	5.0		ND						08/24/2015
1,2,3-Trichloropropane	5.0		ND						08/24/2015
1,2-Dibromo-3-chloropropane	5.0		ND						08/24/2015
1,2-Dibromoethane	5.0		ND						08/24/2015
1,2-Dichlorobenzene	5.0		ND						08/24/2015
1,2-Dichloroethane	5.0		ND						08/24/2015
1,2-Dichloropropane	5.0		ND						08/24/2015
1,3-Dichlorobenzene	5.0		ND						08/24/2015
1,3-Dichloropropane	5.0		ND						08/24/2015
1,4-Dichlorobenzene	5.0		ND						08/24/2015
2,2-Dichloropropane	5.0		ND						08/24/2015
2-Butanone	25.0		ND						08/24/2015
2-Hexanone	25.0		ND						08/24/2015
4-Methyl-2-pentanone	25.0		ND						08/24/2015
Acetone	25.0		ND						08/24/2015
Acetonitrile	50.0		ND						08/24/2015
Acrolein	100		ND						08/24/2015
Acrylonitrile	5.0		ND						08/24/2015
Allyl chloride	5.0		ND						08/24/2015
Benzene	2.0		ND						08/24/2015
Bromochloromethane	5.0		ND						08/24/2015
Bromodichloromethane	5.0		ND						08/24/2015
Bromoform	5.0		ND						08/24/2015
Bromomethane	10.0		ND						08/24/2015
Carbon disulfide	5.0		ND						08/24/2015
Carbon tetrachloride	5.0		ND						08/24/2015
Chlorobenzene	5.0		ND						08/24/2015
Chloroethane	10.0		ND						08/24/2015
Chloroform	5.0		ND						08/24/2015
Chloromethane	10.0		ND						08/24/2015
cis-1,2-Dichloroethene	5.0		ND						08/24/2015
cis-1,3-Dichloropropene	5.0		ND						08/24/2015
Dibromochloromethane	5.0		ND						08/24/2015
Dibromomethane	5.0		ND						08/24/2015
Dichlorodifluoromethane	10.0		ND						08/24/2015
Ethyl methacrylate	5.0		ND						08/24/2015
Ethylbenzene	5.0		ND						08/24/2015
Hexachlorobutadiene	5.0		ND						08/24/2015
Hexachloroethane	10.0		ND						08/24/2015
Iodomethane	5.0		ND						08/24/2015
m,p-Xylenes	5.0		ND						08/24/2015

Client: Missouri Geological Survey
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SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** MBLK Units µg/L
SampID: MBLK-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methacrylonitrile	10.0		ND						08/24/2015
Methyl Methacrylate	5.0		ND						08/24/2015
Methylene chloride	5.0		ND						08/24/2015
Naphthalene	10.0		ND						08/24/2015
o-Xylene	5.0		ND						08/24/2015
Propionitrile	50.0		ND						08/24/2015
Styrene	5.0		ND						08/24/2015
Tetrachloroethene	5.0		ND						08/24/2015
Toluene	5.0		ND						08/24/2015
trans-1,2-Dichloroethene	5.0		ND						08/24/2015
trans-1,3-Dichloropropene	5.0		ND						08/24/2015
trans-1,4-Dichloro-2-butene	10.0		ND						08/24/2015
Trichloroethene	5.0		ND						08/24/2015
Trichlorofluoromethane	5.0		ND						08/24/2015
Vinyl acetate	10.0		ND						08/24/2015
Vinyl chloride	2.0		ND						08/24/2015
Xylenes, Total	5.0		ND						08/24/2015
Surr: 1,2-Dichloroethane-d4			**50.6**	50.00		101.1	74.7	129	08/24/2015
Surr: 4-Bromofluorobenzene			**50.3**	50.00		100.6	86	119	08/24/2015
Surr: Dibromofluoromethane			**50.9**	50.00		101.8	81.7	123	08/24/2015
Surr: Toluene-d8			**49.2**	50.00		98.3	84.3	114	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081277
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** LCSD Units µg/L RPD Limit 40

SampID: LCSD-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**51.8**	50.00	0	103.5	50.14	3.20	08/24/2015
1,1,1-Trichloroethane	5.0		**48.3**	50.00	0	96.6	46.06	4.77	08/24/2015
1,1,2,2-Tetrachloroethane	5.0		**47.5**	50.00	0	95.1	48.29	1.59	08/24/2015
1,1,2-Trichloroethane	5.0		**46.2**	50.00	0	92.5	44.06	4.83	08/24/2015
1,1-Dichloroethane	5.0		**43.9**	50.00	0	87.8	43.45	1.08	08/24/2015
1,1-Dichloroethene	5.0		**45.3**	50.00	0	90.6	43.69	3.62	08/24/2015
1,1-Dichloropropene	5.0		**46.2**	50.00	0	92.5	44.02	4.90	08/24/2015
1,2,3-Trichloropropane	5.0		**47.0**	50.00	0	94.0	47.82	1.73	08/24/2015
1,2-Dibromo-3-chloropropane	5.0		**44.1**	50.00	0	88.2	43.75	0.77	08/24/2015
1,2-Dibromoethane	5.0		**49.9**	50.00	0	99.7	47.84	4.16	08/24/2015
1,2-Dichlorobenzene	5.0		**49.9**	50.00	0	99.8	49.72	0.38	08/24/2015
1,2-Dichloroethane	5.0		**46.7**	50.00	0	93.4	44.67	4.44	08/24/2015
1,2-Dichloropropane	5.0		**44.4**	50.00	0	88.9	43.85	1.36	08/24/2015
1,3-Dichlorobenzene	5.0		**50.7**	50.00	0	101.4	50.77	0.14	08/24/2015
1,3-Dichloropropane	5.0		**46.4**	50.00	0	92.8	44.03	5.20	08/24/2015
1,4-Dichlorobenzene	5.0		**52.2**	50.00	0	104.3	51.93	0.44	08/24/2015
2,2-Dichloropropane	5.0		**47.7**	50.00	0	95.5	46.82	1.92	08/24/2015
2-Butanone	25.0		**129**	125.0	0	102.9	130.5	1.48	08/24/2015
2-Hexanone	25.0		**120**	125.0	0	95.7	118.2	1.19	08/24/2015
4-Methyl-2-pentanone	25.0		**114**	125.0	0	91.2	111.2	2.44	08/24/2015
Acetone	25.0		**135**	125.0	0	108.4	153.6	12.55	08/24/2015
Acetonitrile	50.0		**535**	500.0	0	107.0	533.9	0.17	08/24/2015
Acrolein	100		**356**	500.0	0	71.1	337.6	5.20	08/24/2015
Acrylonitrile	5.0		**45.6**	50.00	0	91.2	45.65	0.07	08/24/2015
Allyl chloride	5.0		**44.0**	50.00	0	87.9	42.94	2.32	08/24/2015
Benzene	2.0		**47.7**	50.00	0	95.4	45.56	4.59	08/24/2015
Bromochloromethane	5.0		**44.7**	50.00	0	89.4	43.94	1.74	08/24/2015
Bromodichloromethane	5.0		**46.2**	50.00	0	92.5	45.55	1.50	08/24/2015
Bromoform	5.0		**53.0**	50.00	0	106.0	51.09	3.63	08/24/2015
Bromomethane	10.0		**50.0**	50.00	0	100.1	48.12	3.89	08/24/2015
Carbon disulfide	5.0		**41.5**	50.00	0	83.1	39.93	3.95	08/24/2015
Carbon tetrachloride	5.0		**51.8**	50.00	0	103.6	49.58	4.42	08/24/2015
Chlorobenzene	5.0		**50.9**	50.00	0	101.9	49.69	2.46	08/24/2015
Chloroethane	10.0		**46.0**	50.00	0	92.1	44.76	2.82	08/24/2015
Chloroform	5.0		**47.4**	50.00	0	94.9	46.15	2.76	08/24/2015
Chloromethane	10.0		**38.3**	50.00	0	76.5	38.04	0.58	08/24/2015
cis-1,2-Dichloroethene	5.0		**45.7**	50.00	0	91.4	43.99	3.81	08/24/2015
cis-1,3-Dichloropropene	5.0		**45.8**	50.00	0	91.6	44.99	1.83	08/24/2015
Dibromochloromethane	5.0		**52.6**	50.00	0	105.2	50.60	3.88	08/24/2015
Dibromomethane	5.0		**47.4**	50.00	0	94.7	46.45	1.94	08/24/2015
Dichlorodifluoromethane	10.0		**30.5**	50.00	0	61.0	30.23	0.89	08/24/2015
Ethyl methacrylate	5.0		**47.4**	50.00	0	94.8	46.15	2.63	08/24/2015
Ethylbenzene	5.0		**51.1**	50.00	0	102.3	49.99	2.27	08/24/2015
Hexachlorobutadiene	5.0		**52.4**	50.00	0	104.7	53.29	1.74	08/24/2015
Hexachloroethane	10.0		**46.0**	50.00	0	92.1	46.01	0.07	08/24/2015
Iodomethane	5.0		**50.8**	50.00	0	101.6	45.37	11.31	08/24/2015
m,p-Xylenes	5.0		**102**	100.0	0	101.9	98.16	3.78	08/24/2015

Client: Missouri Geological Survey
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Client Project: J024889.02 BLF
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SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** LCSD Units µg/L RPD Limit 40

SampID: LCSD-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methacrylonitrile	10.0		**43.5**	50.00	0	86.9	42.38	2.52	08/24/2015
Methyl Methacrylate	5.0		**45.3**	50.00	0	90.6	45.92	1.38	08/24/2015
Methylene chloride	5.0		**42.6**	50.00	0	85.1	42.08	1.11	08/24/2015
Naphthalene	10.0		**53.8**	50.00	0	107.5	50.09	7.07	08/24/2015
o-Xylene	5.0		**49.2**	50.00	0	98.4	47.89	2.70	08/24/2015
Propionitrile	50.0		**512**	500.0	0	102.3	500.2	2.26	08/24/2015
Styrene	5.0		**51.9**	50.00	0	103.8	50.06	3.65	08/24/2015
Tetrachloroethene	5.0		**47.8**	50.00	0	95.7	48.93	2.25	08/24/2015
Toluene	5.0		**49.3**	50.00	0	98.6	47.83	3.07	08/24/2015
trans-1,2-Dichloroethene	5.0		**44.9**	50.00	0	89.8	43.48	3.26	08/24/2015
trans-1,3-Dichloropropene	5.0		**48.1**	50.00	0	96.2	45.62	5.33	08/24/2015
trans-1,4-Dichloro-2-butene	10.0		**45.0**	50.00	0	90.1	42.65	5.43	08/24/2015
Trichloroethene	5.0		**46.7**	50.00	0	93.4	45.53	2.54	08/24/2015
Trichlorofluoromethane	5.0		**45.4**	50.00	0	90.8	43.83	3.52	08/24/2015
Vinyl acetate	10.0		**48.3**	50.00	0	96.5	46.36	4.02	08/24/2015
Vinyl chloride	2.0		**42.1**	50.00	0	84.3	41.28	2.06	08/24/2015
Xylenes, Total	5.0		**151**	150.0	0	100.8	146.0	3.43	08/24/2015
Surr: 1,2-Dichloroethane-d4			**47.8**	50.00		95.6			08/24/2015
Surr: 4-Bromofluorobenzene			**47.1**	50.00		94.3			08/24/2015
Surr: Dibromofluoromethane			**50.8**	50.00		101.5			08/24/2015
Surr: Toluene-d8			**49.2**	50.00		98.3			08/24/2015

Client: Missouri Geological Survey
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Client Project: J024889.02 BLF
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SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** LCS Units µg/L
SampID: LCS-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**50.1**	50.00	0	100.3	81.9	115	08/24/2015
1,1,1-Trichloroethane	5.0		**46.1**	50.00	0	92.1	79.4	124	08/24/2015
1,1,2,2-Tetrachloroethane	5.0		**48.3**	50.00	0	96.6	74.7	116	08/24/2015
1,1,2-Trichloroethane	5.0		**44.1**	50.00	0	88.1	80.8	111	08/24/2015
1,1-Dichloroethane	5.0		**43.4**	50.00	0	86.9	79.4	114	08/24/2015
1,1-Dichloroethene	5.0		**43.7**	50.00	0	87.4	74.1	117	08/24/2015
1,1-Dichloropropene	5.0		**44.0**	50.00	0	88.0	81.7	116	08/24/2015
1,2,3-Trichloropropane	5.0		**47.8**	50.00	0	95.6	77.3	112	08/24/2015
1,2-Dibromo-3-chloropropane	5.0		**43.8**	50.00	0	87.5	76	122	08/24/2015
1,2-Dibromoethane	5.0		**47.8**	50.00	0	95.7	80.8	114	08/24/2015
1,2-Dichlorobenzene	5.0		**49.7**	50.00	0	99.4	78.3	112	08/24/2015
1,2-Dichloroethane	5.0		**44.7**	50.00	0	89.3	70.6	118	08/24/2015
1,2-Dichloropropane	5.0		**43.8**	50.00	0	87.7	79.6	113	08/24/2015
1,3-Dichlorobenzene	5.0		**50.8**	50.00	0	101.5	78.6	117	08/24/2015
1,3-Dichloropropane	5.0		**44.0**	50.00	0	88.1	78.8	112	08/24/2015
1,4-Dichlorobenzene	5.0		**51.9**	50.00	0	103.9	77.8	114	08/24/2015
2,2-Dichloropropane	5.0		**46.8**	50.00	0	93.6	74.9	130	08/24/2015
2-Butanone	25.0		**131**	125.0	0	104.4	70.7	136	08/24/2015
2-Hexanone	25.0		**118**	125.0	0	94.6	73.3	125	08/24/2015
4-Methyl-2-pentanone	25.0		**111**	125.0	0	89.0	76.3	122	08/24/2015
Acetone	25.0		**154**	125.0	0	122.9	56.4	147	08/24/2015
Acetonitrile	50.0		**534**	500.0	0	106.8	59.3	129	08/24/2015
Acrolein	100		**338**	500.0	0	67.5	1	201	08/24/2015
Acrylonitrile	5.0		**45.6**	50.00	0	91.3	74.1	128	08/24/2015
Allyl chloride	5.0		**42.9**	50.00	0	85.9	71.5	123	08/24/2015
Benzene	2.0		**45.6**	50.00	0	91.1	80	114	08/24/2015
Bromochloromethane	5.0		**43.9**	50.00	0	87.9	73.3	121	08/24/2015
Bromodichloromethane	5.0		**45.6**	50.00	0	91.1	81.6	121	08/24/2015
Bromoform	5.0		**51.1**	50.00	0	102.2	83.1	127	08/24/2015
Bromomethane	10.0		**48.1**	50.00	0	96.2	44.4	154	08/24/2015
Carbon disulfide	5.0		**39.9**	50.00	0	79.9	73.2	118	08/24/2015
Carbon tetrachloride	5.0		**49.6**	50.00	0	99.2	79.4	130	08/24/2015
Chlorobenzene	5.0		**49.7**	50.00	0	99.4	81.4	110	08/24/2015
Chloroethane	10.0		**44.8**	50.00	0	89.5	52.1	137	08/24/2015
Chloroform	5.0		**46.2**	50.00	0	92.3	82.7	116	08/24/2015
Chloromethane	10.0		**38.0**	50.00	0	76.1	48.2	144	08/24/2015
cis-1,2-Dichloroethene	5.0		**44.0**	50.00	0	88.0	78.2	116	08/24/2015
cis-1,3-Dichloropropene	5.0		**45.0**	50.00	0	90.0	83	119	08/24/2015
Dibromochloromethane	5.0		**50.6**	50.00	0	101.2	81.2	121	08/24/2015
Dibromomethane	5.0		**46.4**	50.00	0	92.9	78.3	118	08/24/2015
Dichlorodifluoromethane	10.0		**30.2**	50.00	0	60.5	20.6	154	08/24/2015
Ethyl methacrylate	5.0		**46.2**	50.00	0	92.3	80.1	113	08/24/2015
Ethylbenzene	5.0		**50.0**	50.00	0	100.0	77.2	113	08/24/2015
Hexachlorobutadiene	5.0		**53.3**	50.00	0	106.6	77.3	123	08/24/2015
Hexachloroethane	10.0		**46.0**	50.00	0	92.0	74.6	117	08/24/2015
Iodomethane	5.0		**45.4**	50.00	0	90.7	61.3	140	08/24/2015
m,p-Xylenes	5.0		**98.2**	100.0	0	98.2	79.6	113	08/24/2015

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Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** LCS Units µg/L
SampID: LCS-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methacrylonitrile	10.0		**42.4**	50.00	0	84.8	77.2	125	08/24/2015
Methyl Methacrylate	5.0		**45.9**	50.00	0	91.8	74.2	121	08/24/2015
Methylene chloride	5.0		**42.1**	50.00	0	84.2	74.1	114	08/24/2015
Naphthalene	10.0		**50.1**	50.00	0	100.2	77.9	122	08/24/2015
o-Xylene	5.0		**47.9**	50.00	0	95.8	80.1	111	08/24/2015
Propionitrile	50.0		**500**	500.0	0	100.0	72.9	137	08/24/2015
Styrene	5.0		**50.1**	50.00	0	100.1	83.4	113	08/24/2015
Tetrachloroethene	5.0		**48.9**	50.00	0	97.9	72.5	125	08/24/2015
Toluene	5.0		**47.8**	50.00	0	95.7	77.5	113	08/24/2015
trans-1,2-Dichloroethene	5.0		**43.5**	50.00	0	87.0	79	114	08/24/2015
trans-1,3-Dichloropropene	5.0		**45.6**	50.00	0	91.2	78	115	08/24/2015
trans-1,4-Dichloro-2-butene	10.0		**42.6**	50.00	0	85.3	63.3	128	08/24/2015
Trichloroethene	5.0		**45.5**	50.00	0	91.1	84.4	114	08/24/2015
Trichlorofluoromethane	5.0		**43.8**	50.00	0	87.7	75.2	132	08/24/2015
Vinyl acetate	10.0		**46.4**	50.00	0	92.7	64.5	127	08/24/2015
Vinyl chloride	2.0		**41.3**	50.00	0	82.6	58	134	08/24/2015
Xylenes, Total	5.0		**146**	150.0	0	97.4	80.1	111	08/24/2015
Surr: 1,2-Dichloroethane-d4			**46.4**	50.00		92.8	74.7	129	08/24/2015
Surr: 4-Bromofluorobenzene			**49.0**	50.00		98.0	86	119	08/24/2015
Surr: Dibromofluoromethane			**50.4**	50.00		100.8	81.7	123	08/24/2015
Surr: Toluene-d8			**49.2**	50.00		98.4	84.1	114	08/24/2015

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081277
Report Date: 26-Aug-15

Carrier: Anthony Kimutis

Received By: EEP

Completed by: Emily E. Pohlman
On: 21-Aug-15

Reviewed by: Elizabeth A. Hurley
On: 21-Aug-15

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 4.02
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
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 ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

State of MO v. Republic Services, Inc. et al
Price - 0000562

CHAIN OF CUSTODY

pg. 1 of 1 Work Order # 1508177

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

State of MO v. Republic Services, Inc. et al.
Price - 0000563

Client: MO Geology Survey

Address:

City / State / Zip:

Contact: Peter Price Phone:

E-Mail: peter.price@modnr.gov Fax:

Samples on: ☒ Ice ☐ Blue Ice ☐ No Ice 4.02 °C AR

Preserved in: ☐ Lab ☒ Field AR 8/21/15

FOR LAB USE ONLY

Lab Notes: zero headspace AR 8/21/15

Courier

Comments:

ONE DAY TAT

- Are these samples known to be involved in litigation? If yes, a surcharge will apply. ☐ Yes ☐ No
- Are these samples known to be hazardous? ☐ Yes ☐ No
- Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in comment section. ☐ Yes ☐ No

Project Name / Number	Sample Collector's Name
J024889.02 BLF	Vince Epps

Results Requested: ☐ Standard ☒ 1-2 Day (100% Surcharge) ☐ Other _____ ☐ 3 Day (50% Surcharge)

Billing Instructions: MO AGO

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO_3	NaOH	H_2SO_4	HCL	MeOH	$NaHSO_4$	Other	MATRIX: Water	Drinking Water	Soil	Sludge	Sp. Waste	INDICATE ANALYSIS REQUESTED: Appendix 1	Appendix 2
1508177 001	MO-1-SS	8/21/15 1130									X					X	X
002	MO-1-SDR	8/21/15 1400									X					X	X

Relinquished By	Date / Time	Received By	Date / Time
	8/21/15 1515		8/21/15 1600
	8/21/15 1700		8/21/15 1700

The individual signing this agreement on behalf of client acknowledges that he/she has read and understands the terms and conditions of this agreement, on the reverse side, and that he/she has the authority to sign on behalf of client.

WHITE – LAB YELLOW – SAMPLER'S COPY

August 26, 2015

Brenna McDonald
Missouri Geological Survey
111 Fairgrounds Road
Rolla, MO 65401
TEL: (573) 368-2163
FAX:

RE: J024889.02 BLF **WorkOrder:** 15081254

Dear Brenna McDonald:

TEKLAB, INC received 4 samples on 8/21/2015 12:30:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

State of MO v. Republic Services, Inc. et al
Price - 0000564

Report Contents

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081254
Report Date: 26-Aug-15

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	4
Laboratory Results	5
Sample Summary	22
Dates Report	23
Quality Control Results	25
Receiving Check List	47
Chain of Custody	Appended

State of MO v. Republic Services, Inc. et al
Price - 0000565

Client: Missouri Geological Survey
Work Order: 15081254

Client Project: J024889.02 BLF
Report Date: 26-Aug-15

Abbr Definition

CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
DNI	Did not ignite
DUP	Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Qualifiers

# - Unknown hydrocarbon	B - Analyte detected in associated Method Blank
E - Value above quantitation range	H - Holding times exceeded
I - Associated internal standard was outside method criteria	J - Analyte detected below quantitation limits
M - Manual Integration used to determine area response	ND - Not Detected at the Reporting Limit
R - RPD outside accepted recovery limits	S - Spike Recovery outside recovery limits
T - TIC(Tentatively identified compound)	X - Value exceeds Maximum Contaminant Level

State of MO v. Republic Services, Inc. et al
Price - 0000566

Client: Missouri Geological Survey
Work Order: 15081254

Client Project: J024889.02 BLF
Report Date: 26-Aug-15

Cooler Receipt Temp: 5.42 °C

MO-3-SS: insufficient volume for MS/MSD on both pesticides and PCB's. The laboratory selected pesticides for MS/MSD. EAH 8/21/15

Locations and Accreditations

	Collinsville	Springfield	Kansas City	Collinsville Air
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425	3920 Pintail Dr Springfield, IL 62711-9415	8421 Nieman Road Lenexa, KS 66214	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004	(217) 698-1004	(913) 541-1998	(618) 344-1004
Fax	(618) 344-1005	(217) 698-1005	(913) 541-1998	(618) 344-1005
Email	jhriley@teklabinc.com	KKlostermann@teklabinc.com	dthompson@teklabinc.com	EHurley@teklabinc.com

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2016	Collinsville
Kansas	KDHE	E-10374	NELAP	9/30/2015	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2016	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2016	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2016	Collinsville
Arkansas	ADEQ	88-0966		3/14/2016	Collinsville
Illinois	IDPH	17584		5/31/2017	Collinsville
Kentucky	KDEP	98006		12/31/2015	Collinsville
Kentucky	UST	0073		1/31/2016	Collinsville
Missouri	MDNR	00930		5/31/2015	Collinsville
Oklahoma	ODEQ	9978		8/31/2015	Collinsville

State of MO v. Republic Services, Inc. et al
Price - 0000567

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-001
Client Sample ID: MO-3-SS
Matrix: AQUEOUS
Collection Date: 08/20/2015 10:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 4500-S D (TOTAL)								
Sulfide, Total - Colorimetric	NELAP	0.05	S	< 0.05	mg/L	1	08/24/2015 15:04	R208427
MS and/or MSD did not recover within control limits due to matrix interference.								
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.007		< 0.007	mg/L	1	08/24/2015 14:18	111747
SW-846 9036 (TOTAL)								
Sulfate	NELAP	20		58	mg/L	2	08/24/2015 22:24	R208477
SW-846 9060								
Total Organic Carbon (TOC)	NELAP	2.0		15.9	mg/L	2	08/24/2015 13:21	R208421
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 12:07	111715
Arsenic	NELAP	0.0250	J	0.011	mg/L	1	08/24/2015 12:07	111715
Barium	NELAP	0.0025		0.208	mg/L	1	08/24/2015 12:07	111715
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	08/24/2015 12:07	111715
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	08/24/2015 12:07	111715
Chromium	NELAP	0.0050		0.0055	mg/L	1	08/24/2015 12:07	111715
Cobalt	NELAP	0.0050	J	0.0028	mg/L	1	08/24/2015 12:07	111715
Copper	NELAP	0.0050	J	0.0025	mg/L	1	08/24/2015 12:07	111715
Lead	NELAP	0.0150		< 0.0150	mg/L	1	08/24/2015 12:07	111715
Magnesium	NELAP	0.0500		57.7	mg/L	1	08/24/2015 12:07	111715
Manganese	NELAP	0.0030		0.754	mg/L	1	08/24/2015 12:07	111715
Nickel	NELAP	0.0050		0.0131	mg/L	1	08/24/2015 12:07	111715
Selenium	NELAP	0.0400		< 0.0400	mg/L	1	08/24/2015 12:07	111715
Silver	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 12:07	111715
Thallium	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 12:07	111715
Tin	NELAP	0.0200		< 0.0200	mg/L	1	08/24/2015 12:07	111715
Vanadium	NELAP	0.0100	J	0.0066	mg/L	1	08/24/2015 12:07	111715
Zinc	NELAP	0.0100		0.0133	mg/L	1	08/24/2015 12:07	111715
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	08/24/2015 12:07	111717
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4´-DDD	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
4,4´-DDE	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
4,4´-DDT	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
Aldrin	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
alpha-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
beta-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
Chlordane	NELAP	0.50		ND	µg/L	1	08/24/2015 13:44	111703
delta-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
Dieldrin	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
Endosulfan I	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
Endosulfan II	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
Endosulfan sulfate	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
Endrin	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
Endrin aldehyde	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
gamma-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
Heptachlor	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
Heptachlor epoxide	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703

Client: Missouri Geological Survey | **Work Order:** 15081254

Client Project: J024889.02 BLF | **Report Date:** 26-Aug-15

Lab ID: 15081254-001 | **Client Sample ID:** MO-3-SS

Matrix: AQUEOUS | **Collection Date:** 08/20/2015 10:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
Methoxychlor	NELAP	0.05		ND	µg/L	1	08/24/2015 13:44	111703
Toxaphene	NELAP	0.50		ND	µg/L	1	08/24/2015 13:44	111703
Surr: Decachlorobiphenyl		5.54-150		60.9	%REC	1	08/24/2015 13:44	111703
Surr: Tetrachloro-m-xylene		13-129		77.1	%REC	1	08/24/2015 13:44	111703
RPD for LCS/LCSD was outside of QC limit.								
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	08/24/2015 16:35	111703
Aroclor 1221	NELAP	1.00		ND	µg/L	1	08/24/2015 16:35	111703
Aroclor 1232	NELAP	1.00		ND	µg/L	1	08/24/2015 16:35	111703
Aroclor 1242	NELAP	1.00		ND	µg/L	1	08/24/2015 16:35	111703
Aroclor 1248	NELAP	1.00		ND	µg/L	1	08/24/2015 16:35	111703
Aroclor 1254	NELAP	1.00		ND	µg/L	1	08/24/2015 16:35	111703
Aroclor 1260	NELAP	1.00		ND	µg/L	1	08/24/2015 16:35	111703
Surr: Decachlorobiphenyl		5-174		72.2	%REC	1	08/24/2015 16:35	111703
Surr: Tetrachloro-meta-xylene		22.2-139		79.4	%REC	1	08/24/2015 16:35	111703
SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD								
2,4,5-T	NELAP	0.200		ND	µg/L	1	08/26/2015 10:22	111790
2,4,5-TP (Silvex)	NELAP	0.200		ND	µg/L	1	08/26/2015 10:22	111790
2,4-D	NELAP	0.200		ND	µg/L	1	08/26/2015 10:22	111790
Dinoseb	NELAP	0.200		ND	µg/L	1	08/26/2015 10:22	111790
Surr: 2,4-Dichlorophenylacetic acid		9.03-112	S	0	%REC	1	08/26/2015 10:22	111790
Surrogate recovery could not be quantitiated due to matrix interference.								
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,4-Trichlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
2,4,5-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
2,4,6-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
2,4-Dichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
2,4-Dimethylphenol	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
2,4-Dinitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 9:53	111666
2,4-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
2,6-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
2-Chloronaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
2-Chlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
2-Methylnaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
2-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 9:53	111666
2-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 9:53	111666
3,3`-Dichlorobenzidine	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
3-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 9:53	111666
4,6-Dinitro-2-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 9:53	111666
4-Bromophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
4-Chloro-3-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 9:53	111666
4-Chloroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 9:53	111666
4-Chlorophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
4-Nitroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 9:53	111666
4-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 9:53	111666
Acenaphthene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Acenaphthylene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666

Client: Missouri Geological Survey | **Work Order:** 15081254

Client Project: J024889.02 BLF | **Report Date:** 26-Aug-15

Lab ID: 15081254-001 | **Client Sample ID:** MO-3-SS

Matrix: AQUEOUS | **Collection Date:** 08/20/2015 10:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Benzo(a)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Benzo(a)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Benzo(b)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Benzo(g,h,i)perylene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Benzo(k)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Benzyl alcohol	NELAP	0.020		ND	mg/L	1	08/24/2015 9:53	111666
Bis(2-chloroethoxy)methane	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Bis(2-chloroethyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Bis(2-chloroisopropyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Bis(2-ethylhexyl)phthalate	NELAP	0.006		ND	mg/L	1	08/24/2015 9:53	111666
Butyl benzyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Chrysene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Dibenzo(a,h)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Dibenzofuran	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Diethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Dimethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Di-n-butyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Di-n-octyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Fluorene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Hexachlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Hexachlorocyclopentadiene	NELAP	0.020		ND	mg/L	1	08/24/2015 9:53	111666
Indeno(1,2,3-cd)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Isophorone	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
m,p-Cresol	NELAP	0.010	J	0.002	mg/L	1	08/24/2015 9:53	111666
Naphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Nitrobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
N-Nitrosodimethylamine	NELAP	0.020		ND	mg/L	1	08/24/2015 9:53	111666
N-Nitroso-di-n-propylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
N-Nitrosodiphenylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
o-Cresol	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Pentachlorophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 9:53	111666
Phenanthrene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
Phenol	NELAP	0.005	J	0.004	mg/L	1	08/24/2015 9:53	111666
Pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 9:53	111666
1,2-Diphenylhydrazine		0.010		ND	mg/L	1	08/24/2015 9:53	111666
Surr: 2,4,6-Tribromophenol		36.9-125		94.9	%REC	1	08/24/2015 9:53	111666
Surr: 2-Fluorobiphenyl		36.7-114		81.3	%REC	1	08/24/2015 9:53	111666
Surr: 2-Fluorophenol		23.9-78.3		54.1	%REC	1	08/24/2015 9:53	111666
Surr: Nitrobenzene-d5		49.9-124		74.2	%REC	1	08/24/2015 9:53	111666
Surr: Phenol-d5		14.1-51.6		39.1	%REC	1	08/24/2015 9:53	111666
Surr: p-Terphenyl-d14		41.6-133		69.4	%REC	1	08/24/2015 9:53	111666
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,1,1-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,1,2,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-001
Client Sample ID: MO-3-SS
Matrix: AQUEOUS
Collection Date: 08/20/2015 10:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,2-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,1-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,1-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,1-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,2,3-Trichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,2-Dibromo-3-chloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,2-Dibromoethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,2-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,2-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,3-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,3-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
1,4-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
2,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
2-Butanone	NELAP	25.0	J	15	µg/L	1	08/24/2015 9:57	111731
2-Hexanone	NELAP	25.0		ND	µg/L	1	08/24/2015 9:57	111731
4-Methyl-2-pentanone	NELAP	25.0		ND	µg/L	1	08/24/2015 9:57	111731
Acetone	NELAP	25.0		27.4	µg/L	1	08/24/2015 9:57	111731
Acetonitrile	NELAP	50.0		ND	µg/L	1	08/24/2015 9:57	111731
Acrolein	NELAP	100		ND	µg/L	1	08/24/2015 9:57	111731
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Benzene	NELAP	2.0		28.1	µg/L	1	08/24/2015 9:57	111731
Bromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Bromodichloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Bromoform	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Bromomethane	NELAP	10.0		ND	µg/L	1	08/24/2015 9:57	111731
Carbon disulfide	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Carbon tetrachloride	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Chlorobenzene	NELAP	5.0	J	1.3	µg/L	1	08/24/2015 9:57	111731
Chloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 9:57	111731
Chloroform	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Chloromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 9:57	111731
cis-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
cis-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Dibromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Dibromomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Dichlorodifluoromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 9:57	111731
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Ethylbenzene	NELAP	5.0	J	1.5	µg/L	1	08/24/2015 9:57	111731
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Hexachloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 9:57	111731
Iodomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
m,p-Xylenes	NELAP	5.0	J	1.3	µg/L	1	08/24/2015 9:57	111731
Methacrylonitrile	NELAP	10.0		ND	µg/L	1	08/24/2015 9:57	111731
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Methylene chloride	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-001
Client Sample ID: MO-3-SS
Matrix: AQUEOUS
Collection Date: 08/20/2015 10:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Naphthalene	NELAP	10.0		ND	µg/L	1	08/24/2015 9:57	111731
o-Xylene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Propionitrile	NELAP	50.0		ND	µg/L	1	08/24/2015 9:57	111731
Styrene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Tetrachloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Toluene	NELAP	5.0		7.1	µg/L	1	08/24/2015 9:57	111731
trans-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
trans-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
trans-1,4-Dichloro-2-butene	NELAP	10.0		ND	µg/L	1	08/24/2015 9:57	111731
Trichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 9:57	111731
Vinyl acetate	NELAP	10.0		ND	µg/L	1	08/24/2015 9:57	111731
Vinyl chloride	NELAP	2.0		ND	µg/L	1	08/24/2015 9:57	111731
Xylenes, Total	NELAP	5.0	J	1.3	µg/L	1	08/24/2015 9:57	111731
Surr: 1,2-Dichloroethane-d4		74.7-129		100.8	%REC	1	08/24/2015 9:57	111731
Surr: 4-Bromofluorobenzene		86-119		101.4	%REC	1	08/24/2015 9:57	111731
Surr: Dibromofluoromethane		81.7-123		101.4	%REC	1	08/24/2015 9:57	111731
Surr: Toluene-d8		84.3-114		99.2	%REC	1	08/24/2015 9:57	111731

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-002
Client Sample ID: MO-2-SD
Matrix: AQUEOUS
Collection Date: 08/20/2015 16:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 4500-S D (TOTAL)								
Sulfide, Total - Colorimetric	NELAP	1.5	S	< 1.5	mg/L	30	08/24/2015 15:51	R208427
MS and/or MSD did not recover within control limits due to matrix interference and sample composition								
Elevated reporting limit due to sample composition.								
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.007		< 0.007	mg/L	1	08/24/2015 13:47	111747
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		80	mg/L	5	08/24/2015 22:30	R208477
SW-846 9060								
Total Organic Carbon (TOC)	NELAP	1.0		3.6	mg/L	1	08/24/2015 12:03	R208421
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 13:27	111715
Arsenic	NELAP	0.0250		0.0533	mg/L	1	08/24/2015 13:27	111715
Barium	NELAP	0.0025		0.490	mg/L	1	08/24/2015 13:27	111715
Beryllium	NELAP	0.0005		0.0079	mg/L	1	08/24/2015 13:27	111715
Cadmium	NELAP	0.0020	J	0.0014	mg/L	1	08/24/2015 13:27	111715
Chromium	NELAP	0.0050		0.0782	mg/L	1	08/24/2015 13:27	111715
Cobalt	NELAP	0.0050		0.0253	mg/L	1	08/24/2015 13:27	111715
Copper	NELAP	0.0050		0.0310	mg/L	1	08/24/2015 13:27	111715
Lead	NELAP	0.0150		0.119	mg/L	1	08/24/2015 13:27	111715
Magnesium	NELAP	0.0500		59.5	mg/L	1	08/24/2015 13:27	111715
Manganese	NELAP	0.0030		2.28	mg/L	1	08/24/2015 13:27	111715
Nickel	NELAP	0.0050		0.106	mg/L	1	08/24/2015 13:27	111715
Selenium	NELAP	0.0400		< 0.0400	mg/L	1	08/24/2015 13:27	111715
Silver	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 13:27	111715
Thallium	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 13:27	111715
Tin	NELAP	0.0200	J	0.019	mg/L	1	08/24/2015 13:27	111715
Vanadium	NELAP	0.0100		0.0584	mg/L	1	08/24/2015 13:27	111715
Zinc	NELAP	0.0100		0.257	mg/L	1	08/24/2015 13:27	111715
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020	J	0.00012	mg/L	1	08/24/2015 12:18	111717
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4´-DDD	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
4,4´-DDE	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
4,4´-DDT	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
Aldrin	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
alpha-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
beta-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
Chlordane	NELAP	0.50		ND	µg/L	1	08/24/2015 14:56	111703
delta-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
Dieldrin	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
Endosulfan I	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
Endosulfan II	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
Endosulfan sulfate	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
Endrin	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
Endrin aldehyde	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
gamma-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
Heptachlor	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-002
Client Sample ID: MO-2-SD
Matrix: AQUEOUS
Collection Date: 08/20/2015 16:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
Heptachlor epoxide	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
Methoxychlor	NELAP	0.05		ND	µg/L	1	08/24/2015 14:56	111703
Toxaphene	NELAP	0.50		ND	µg/L	1	08/24/2015 14:56	111703
Surr: Decachlorobiphenyl		5.54-150		16.1	%REC	1	08/24/2015 14:56	111703
Surr: Tetrachloro-m-xylene		13-129		63.1	%REC	1	08/24/2015 14:56	111703
RPD for LCS/LCSD was outside of QC limit								
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	08/24/2015 16:52	111703
Aroclor 1221	NELAP	1.00		ND	µg/L	1	08/24/2015 16:52	111703
Aroclor 1232	NELAP	1.00		ND	µg/L	1	08/24/2015 16:52	111703
Aroclor 1242	NELAP	1.00		ND	µg/L	1	08/24/2015 16:52	111703
Aroclor 1248	NELAP	1.00		ND	µg/L	1	08/24/2015 16:52	111703
Aroclor 1254	NELAP	1.00		ND	µg/L	1	08/24/2015 16:52	111703
Aroclor 1260	NELAP	1.00		ND	µg/L	1	08/24/2015 16:52	111703
Surr: Decachlorobiphenyl		5-174		17.2	%REC	1	08/24/2015 16:52	111703
Surr: Tetrachloro-meta-xylene		22.2-139		62.3	%REC	1	08/24/2015 16:52	111703
SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD								
2,4,5-T	NELAP	1.00		ND	µg/L	1	08/26/2015 10:53	111790
2,4,5-TP (Silvex)	NELAP	1.00		ND	µg/L	1	08/26/2015 10:53	111790
2,4-D	NELAP	1.00		ND	µg/L	1	08/26/2015 10:53	111790
Dinoseb	NELAP	1.00		ND	µg/L	1	08/26/2015 10:53	111790
Surr: 2,4-Dichlorophenylacetic acid		9.03-112		42.7	%REC	1	08/26/2015 10:53	111790
Elevated reporting limit due to limited sample for re-extract.								
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,4-Trichlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
2,4,5-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
2,4,6-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
2,4-Dichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
2,4-Dimethylphenol	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
2,4-Dinitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 11:30	111666
2,4-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
2,6-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
2-Chloronaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
2-Chlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
2-Methylnaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
2-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 11:30	111666
2-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 11:30	111666
3,3'-Dichlorobenzidine	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
3-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 11:30	111666
4,6-Dinitro-2-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 11:30	111666
4-Bromophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
4-Chloro-3-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 11:30	111666
4-Chloroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 11:30	111666
4-Chlorophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
4-Nitroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 11:30	111666
4-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 11:30	111666
Acenaphthene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-002
Client Sample ID: MO-2-SD
Matrix: AQUEOUS
Collection Date: 08/20/2015 16:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthylene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Benzo(a)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Benzo(a)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Benzo(b)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Benzo(g,h,i)perylene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Benzo(k)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Benzyl alcohol	NELAP	0.020		ND	mg/L	1	08/24/2015 11:30	111666
Bis(2-chloroethoxy)methane	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Bis(2-chloroethyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Bis(2-chloroisopropyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Bis(2-ethylhexyl)phthalate	NELAP	0.006		ND	mg/L	1	08/24/2015 11:30	111666
Butyl benzyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Chrysene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Dibenzo(a,h)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Dibenzofuran	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Diethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Dimethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Di-n-butyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Di-n-octyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Fluorene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Hexachlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Hexachlorocyclopentadiene	NELAP	0.020		ND	mg/L	1	08/24/2015 11:30	111666
Indeno(1,2,3-cd)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Isophorone	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
m,p-Cresol	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Naphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Nitrobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
N-Nitrosodimethylamine	NELAP	0.020		ND	mg/L	1	08/24/2015 11:30	111666
N-Nitroso-di-n-propylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
N-Nitrosodiphenylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
o-Cresol	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Pentachlorophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 11:30	111666
Phenanthrene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
Phenol	NELAP	0.005		ND	mg/L	1	08/24/2015 11:30	111666
Pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 11:30	111666
1,2-Diphenylhydrazine		0.010		ND	mg/L	1	08/24/2015 11:30	111666
Surr: 2,4,6-Tribromophenol		36.9-125		56.8	%REC	1	08/24/2015 11:30	111666
Surr: 2-Fluorobiphenyl		36.7-114		51.9	%REC	1	08/24/2015 11:30	111666
Surr: 2-Fluorophenol		23.9-78.3		40.1	%REC	1	08/24/2015 11:30	111666
Surr: Nitrobenzene-d5		49.9-124		60.7	%REC	1	08/24/2015 11:30	111666
Surr: Phenol-d5		14.1-51.6		29.9	%REC	1	08/24/2015 11:30	111666
Surr: p-Terphenyl-d14		41.6-133	S	28.1	%REC	1	08/24/2015 11:30	111666
Surrogate recovery is outside QC limits due to matrix interference.								
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731

Client: Missouri Geological Survey
Work Order: 15081254

Client Project: J024889.02 BLF
Report Date: 26-Aug-15

Lab ID: 15081254-002
Client Sample ID: MO-2-SD

Matrix: AQUEOUS
Collection Date: 08/20/2015 16:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,1,2,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,1,2-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,1-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,1-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,1-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,2,3-Trichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,2-Dibromo-3-chloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,2-Dibromoethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,2-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,2-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,3-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,3-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
1,4-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
2,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
2-Butanone	NELAP	25.0		ND	µg/L	1	08/24/2015 10:23	111731
2-Hexanone	NELAP	25.0		ND	µg/L	1	08/24/2015 10:23	111731
4-Methyl-2-pentanone	NELAP	25.0		ND	µg/L	1	08/24/2015 10:23	111731
Acetone	NELAP	25.0	J	12	µg/L	1	08/24/2015 10:23	111731
Acetonitrile	NELAP	50.0		ND	µg/L	1	08/24/2015 10:23	111731
Acrolein	NELAP	100		ND	µg/L	1	08/24/2015 10:23	111731
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Benzene	NELAP	2.0		ND	µg/L	1	08/24/2015 10:23	111731
Bromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Bromodichloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Bromoform	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Bromomethane	NELAP	10.0		ND	µg/L	1	08/24/2015 10:23	111731
Carbon disulfide	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Carbon tetrachloride	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Chlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Chloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 10:23	111731
Chloroform	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Chloromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 10:23	111731
cis-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
cis-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Dibromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Dibromomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Dichlorodifluoromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 10:23	111731
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Ethylbenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Hexachloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 10:23	111731
Iodomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
m,p-Xylenes	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Methacrylonitrile	NELAP	10.0		ND	µg/L	1	08/24/2015 10:23	111731

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-002
Client Sample ID: MO-2-SD
Matrix: AQUEOUS
Collection Date: 08/20/2015 16:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Methylene chloride	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Naphthalene	NELAP	10.0		ND	µg/L	1	08/24/2015 10:23	111731
o-Xylene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Propionitrile	NELAP	50.0		ND	µg/L	1	08/24/2015 10:23	111731
Styrene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Tetrachloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Toluene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
trans-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
trans-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
trans-1,4-Dichloro-2-butene	NELAP	10.0		ND	µg/L	1	08/24/2015 10:23	111731
Trichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Vinyl acetate	NELAP	10.0		ND	µg/L	1	08/24/2015 10:23	111731
Vinyl chloride	NELAP	2.0		ND	µg/L	1	08/24/2015 10:23	111731
Xylenes, Total	NELAP	5.0		ND	µg/L	1	08/24/2015 10:23	111731
Surr: 1,2-Dichloroethane-d4		74.7-129		103.2	%REC	1	08/24/2015 10:23	111731
Surr: 4-Bromofluorobenzene		86-119		99.8	%REC	1	08/24/2015 10:23	111731
Surr: Dibromofluoromethane		81.7-123		101.9	%REC	1	08/24/2015 10:23	111731
Surr: Toluene-d8		84.3-114		100.2	%REC	1	08/24/2015 10:23	111731

Client: Missouri Geological Survey
Work Order: 15081254

Client Project: J024889.02 BLF
Report Date: 26-Aug-15

Lab ID: 15081254-003
Client Sample ID: MO-3-SDR

Matrix: AQUEOUS
Collection Date: 08/20/2015 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 4500-S D (TOTAL)								
Sulfide, Total - Colorimetric	NELAP	0.05		< 0.05	mg/L	1	08/24/2015 15:06	R208427
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.007		< 0.007	mg/L	1	08/24/2015 13:52	111747
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		312	mg/L	10	08/24/2015 15:31	R208477
SW-846 9060								
Total Organic Carbon (TOC)	NELAP	10.0		98.0	mg/L	10	08/24/2015 13:46	R208421
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 12:20	111715
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	08/24/2015 12:20	111715
Barium	NELAP	0.0025		0.290	mg/L	1	08/24/2015 12:20	111715
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	08/24/2015 12:20	111715
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	08/24/2015 12:20	111715
Chromium	NELAP	0.0050		0.0050	mg/L	1	08/24/2015 12:20	111715
Cobalt	NELAP	0.0050		0.0061	mg/L	1	08/24/2015 12:20	111715
Copper	NELAP	0.0050	J	0.0020	mg/L	1	08/24/2015 12:20	111715
Lead	NELAP	0.0150		< 0.0150	mg/L	1	08/24/2015 12:20	111715
Magnesium	NELAP	0.0500		46.7	mg/L	1	08/24/2015 12:20	111715
Manganese	NELAP	0.0030		0.638	mg/L	1	08/24/2015 12:20	111715
Nickel	NELAP	0.0050		0.0297	mg/L	1	08/24/2015 12:20	111715
Selenium	NELAP	0.0400		< 0.0400	mg/L	1	08/24/2015 12:20	111715
Silver	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 12:20	111715
Thallium	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 12:20	111715
Tin	NELAP	0.0200		< 0.0200	mg/L	1	08/24/2015 12:20	111715
Vanadium	NELAP	0.0100	J	0.0050	mg/L	1	08/24/2015 12:20	111715
Zinc	NELAP	0.0100	J	0.0057	mg/L	1	08/24/2015 12:20	111715
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	08/24/2015 12:22	111717
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4'-DDD	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
4,4'-DDE	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
4,4'-DDT	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
Aldrin	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
alpha-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
beta-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
Chlordane	NELAP	0.50		ND	µg/L	1	08/24/2015 15:20	111703
delta-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
Dieldrin	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
Endosulfan I	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
Endosulfan II	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
Endosulfan sulfate	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
Endrin	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
Endrin aldehyde	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
gamma-BHC	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
Heptachlor	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
Heptachlor epoxide	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703
Methoxychlor	NELAP	0.05		ND	µg/L	1	08/24/2015 15:20	111703

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-003
Client Sample ID: MO-3-SDR
Matrix: AQUEOUS
Collection Date: 08/20/2015 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
Toxaphene	NELAP	0.50		ND	µg/L	1	08/24/2015 15:20	111703
Surr: Decachlorobiphenyl		5.54-150		65.1	%REC	1	08/24/2015 15:20	111703
Surr: Tetrachloro-m-xylene		13-129		67.2	%REC	1	08/24/2015 15:20	111703
RPD for LCS/LCSD was outside of QC limit.								
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	08/24/2015 17:09	111703
Aroclor 1221	NELAP	1.00		ND	µg/L	1	08/24/2015 17:09	111703
Aroclor 1232	NELAP	1.00		ND	µg/L	1	08/24/2015 17:09	111703
Aroclor 1242	NELAP	1.00		ND	µg/L	1	08/24/2015 17:09	111703
Aroclor 1248	NELAP	1.00		ND	µg/L	1	08/24/2015 17:09	111703
Aroclor 1254	NELAP	1.00		ND	µg/L	1	08/24/2015 17:09	111703
Aroclor 1260	NELAP	1.00		ND	µg/L	1	08/24/2015 17:09	111703
Surr: Decachlorobiphenyl		5-174		74.8	%REC	1	08/24/2015 17:09	111703
Surr: Tetrachloro-meta-xylene		22.2-139		69.3	%REC	1	08/24/2015 17:09	111703
SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD								
2,4,5-T	NELAP	1.00		ND	µg/L	1	08/26/2015 11:24	111790
2,4,5-TP (Silvex)	NELAP	1.00		ND	µg/L	1	08/26/2015 11:24	111790
2,4-D	NELAP	1.00		ND	µg/L	1	08/26/2015 11:24	111790
Dinoseb	NELAP	1.00		ND	µg/L	1	08/26/2015 11:24	111790
Surr: 2,4-Dichlorophenylacetic acid		9.03-112	S	0	%REC	1	08/26/2015 11:24	111790
Surrogate recovery could not be quantitiated due to matrix interference.								
Elevated reporting limit due to limited sample for re-extract.								
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,4-Trichlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
2,4,5-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
2,4,6-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
2,4-Dichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
2,4-Dimethylphenol	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
2,4-Dinitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 12:02	111666
2,4-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
2,6-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
2-Chloronaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
2-Chlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
2-Methylnaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
2-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 12:02	111666
2-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 12:02	111666
3,3'-Dichlorobenzidine	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
3-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 12:02	111666
4,6-Dinitro-2-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 12:02	111666
4-Bromophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
4-Chloro-3-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 12:02	111666
4-Chloroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 12:02	111666
4-Chlorophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
4-Nitroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 12:02	111666
4-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 12:02	111666
Acenaphthene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Acenaphthylene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-003
Client Sample ID: MO-3-SDR
Matrix: AQUEOUS
Collection Date: 08/20/2015 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Benzo(a)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Benzo(a)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Benzo(b)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Benzo(g,h,i)perylene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Benzo(k)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Benzyl alcohol	NELAP	0.020		ND	mg/L	1	08/24/2015 12:02	111666
Bis(2-chloroethoxy)methane	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Bis(2-chloroethyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Bis(2-chloroisopropyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Bis(2-ethylhexyl)phthalate	NELAP	0.006		ND	mg/L	1	08/24/2015 12:02	111666
Butyl benzyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Chrysene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Dibenzo(a,h)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Dibenzofuran	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Diethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Dimethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Di-n-butyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Di-n-octyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Fluorene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Hexachlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Hexachlorocyclopentadiene	NELAP	0.020		ND	mg/L	1	08/24/2015 12:02	111666
Indeno(1,2,3-cd)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Isophorone	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
m,p-Cresol	NELAP	0.010	J	0.006	mg/L	1	08/24/2015 12:02	111666
Naphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Nitrobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
N-Nitrosodimethylamine	NELAP	0.020		ND	mg/L	1	08/24/2015 12:02	111666
N-Nitroso-di-n-propylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
N-Nitrosodiphenylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
o-Cresol	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Pentachlorophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 12:02	111666
Phenanthrene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
Phenol	NELAP	0.005		0.040	mg/L	1	08/24/2015 12:02	111666
Pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 12:02	111666
1,2-Diphenylhydrazine		0.010		ND	mg/L	1	08/24/2015 12:02	111666
Surr: 2,4,6-Tribromophenol		36.9-125		82.5	%REC	1	08/24/2015 12:02	111666
Surr: 2-Fluorobiphenyl		36.7-114		67.1	%REC	1	08/24/2015 12:02	111666
Surr: 2-Fluorophenol		23.9-78.3		43.3	%REC	1	08/24/2015 12:02	111666
Surr: Nitrobenzene-d5		49.9-124		63.1	%REC	1	08/24/2015 12:02	111666
Surr: Phenol-d5		14.1-51.6		30.9	%REC	1	08/24/2015 12:02	111666
Surr: p-Terphenyl-d14		41.6-133		59.1	%REC	1	08/24/2015 12:02	111666
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,1,1-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,1,2,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-003
Client Sample ID: MO-3-SDR
Matrix: AQUEOUS
Collection Date: 08/20/2015 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,2-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,1-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,1-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,1-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,2,3-Trichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,2-Dibromo-3-chloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,2-Dibromoethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,2-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,2-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,3-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,3-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
1,4-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
2,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
2-Butanone	NELAP	250		907	µg/L	10	08/24/2015 12:37	111731
2-Hexanone	NELAP	25.0	J	13	µg/L	1	08/24/2015 10:50	111731
4-Methyl-2-pentanone	NELAP	25.0	J	21	µg/L	1	08/24/2015 10:50	111731
Acetone	NELAP	250		1380	µg/L	10	08/24/2015 12:37	111731
Acetonitrile	NELAP	50.0		ND	µg/L	1	08/24/2015 10:50	111731
Acrolein	NELAP	100		ND	µg/L	1	08/24/2015 10:50	111731
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Benzene	NELAP	2.0		24.1	µg/L	1	08/24/2015 10:50	111731
Bromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Bromodichloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Bromoform	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Bromomethane	NELAP	10.0		ND	µg/L	1	08/24/2015 10:50	111731
Carbon disulfide	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Carbon tetrachloride	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Chlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Chloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 10:50	111731
Chloroform	NELAP	5.0	J	1.0	µg/L	1	08/24/2015 10:50	111731
Chloromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 10:50	111731
cis-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
cis-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Dibromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Dibromomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Dichlorodifluoromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 10:50	111731
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Ethylbenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Hexachloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 10:50	111731
Iodomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
m,p-Xylenes	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Methacrylonitrile	NELAP	10.0		ND	µg/L	1	08/24/2015 10:50	111731
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Methylene chloride	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-003
Client Sample ID: MO-3-SDR
Matrix: AQUEOUS
Collection Date: 08/20/2015 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Naphthalene	NELAP	10.0		ND	µg/L	1	08/24/2015 10:50	111731
o-Xylene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Propionitrile	NELAP	50.0		ND	µg/L	1	08/24/2015 10:50	111731
Styrene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Tetrachloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Toluene	NELAP	5.0	J	1.7	µg/L	1	08/24/2015 10:50	111731
trans-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
trans-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
trans-1,4-Dichloro-2-butene	NELAP	10.0		ND	µg/L	1	08/24/2015 10:50	111731
Trichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Vinyl acetate	NELAP	10.0		ND	µg/L	1	08/24/2015 10:50	111731
Vinyl chloride	NELAP	2.0		ND	µg/L	1	08/24/2015 10:50	111731
Xylenes, Total	NELAP	5.0		ND	µg/L	1	08/24/2015 10:50	111731
Surr: 1,2-Dichloroethane-d4		74.7-129		101.5	%REC	1	08/24/2015 10:50	111731
Surr: 4-Bromofluorobenzene		86-119		100.1	%REC	1	08/24/2015 10:50	111731
Surr: Dibromofluoromethane		81.7-123		102.4	%REC	1	08/24/2015 10:50	111731
Surr: Toluene-d8		84.3-114		99.1	%REC	1	08/24/2015 10:50	111731

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-004
Client Sample ID: Trip Blank
Matrix: TRIP BLANK
Collection Date: 08/21/2015 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,1,1-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,1,2,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,1,2-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,1-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,1-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,1-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,2,3-Trichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,2-Dibromo-3-chloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,2-Dibromoethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,2-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,2-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,3-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,3-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
1,4-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
2,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
2-Butanone	NELAP	25.0		ND	µg/L	1	08/24/2015 11:17	111731
2-Hexanone	NELAP	25.0		ND	µg/L	1	08/24/2015 11:17	111731
4-Methyl-2-pentanone	NELAP	25.0		ND	µg/L	1	08/24/2015 11:17	111731
Acetone	NELAP	25.0		ND	µg/L	1	08/24/2015 11:17	111731
Acetonitrile	NELAP	50.0		ND	µg/L	1	08/24/2015 11:17	111731
Acrolein	NELAP	100		ND	µg/L	1	08/24/2015 11:17	111731
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Benzene	NELAP	2.0		ND	µg/L	1	08/24/2015 11:17	111731
Bromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Bromodichloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Bromoform	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Bromomethane	NELAP	10.0		ND	µg/L	1	08/24/2015 11:17	111731
Carbon disulfide	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Carbon tetrachloride	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Chlorobenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Chloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 11:17	111731
Chloroform	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Chloromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 11:17	111731
cis-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
cis-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Dibromochloromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Dibromomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Dichlorodifluoromethane	NELAP	10.0		ND	µg/L	1	08/24/2015 11:17	111731
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Ethylbenzene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Hexachloroethane	NELAP	10.0		ND	µg/L	1	08/24/2015 11:17	111731
Iodomethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
m,p-Xylenes	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15
Lab ID: 15081254-004
Client Sample ID: Trip Blank
Matrix: TRIP BLANK
Collection Date: 08/21/2015 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Methacrylonitrile	NELAP	10.0		ND	µg/L	1	08/24/2015 11:17	111731
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Methylene chloride	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Naphthalene	NELAP	10.0		ND	µg/L	1	08/24/2015 11:17	111731
o-Xylene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Propionitrile	NELAP	50.0		ND	µg/L	1	08/24/2015 11:17	111731
Styrene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Tetrachloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Toluene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
trans-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
trans-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
trans-1,4-Dichloro-2-butene	NELAP	10.0		ND	µg/L	1	08/24/2015 11:17	111731
Trichloroethene	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Vinyl acetate	NELAP	10.0		ND	µg/L	1	08/24/2015 11:17	111731
Vinyl chloride	NELAP	2.0		ND	µg/L	1	08/24/2015 11:17	111731
Xylenes, Total	NELAP	5.0		ND	µg/L	1	08/24/2015 11:17	111731
Surr: 1,2-Dichloroethane-d4		74.7-129		104.5	%REC	1	08/24/2015 11:17	111731
Surr: 4-Bromofluorobenzene		86-119		102.9	%REC	1	08/24/2015 11:17	111731
Surr: Dibromofluoromethane		81.7-123		102.0	%REC	1	08/24/2015 11:17	111731
Surr: Toluene-d8		84.3-114		99.6	%REC	1	08/24/2015 11:17	111731

Sample Summary

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081254
Report Date: 26-Aug-15

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
15081254-001	MO-3-SS	Aqueous	10	08/20/2015 10:00
15081254-002	MO-2-SD	Aqueous	7	08/20/2015 16:00
15081254-003	MO-3-SDR	Aqueous	7	08/20/2015 12:45
15081254-004	Trip Blank	Trip Blank	1	08/21/2015 12:30

State of MO v. Republic Services, Inc. et al
Price - 0000585

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081254
Report Date: 26-Aug-15

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
15081254-001A	MO-3-SS	08/20/2015 10:00	08/21/2015 12:30		
	SW-846 3510C, 8081B, Chlorinated Pesticides by GC/ECD			08/21/2015 20:07	08/24/2015 13:44
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			08/21/2015 20:07	08/24/2015 16:35
	SW-846 3510C, 8151A, Chlorinated Herbicides by GC/ECD			08/25/2015 14:44	08/26/2015 10:22
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			08/21/2015 17:32	08/24/2015 9:53
15081254-001B	MO-3-SS	08/20/2015 10:00	08/21/2015 12:30		
	SW-846 9036 (Total)				08/24/2015 22:24
15081254-001C	MO-3-SS	08/20/2015 10:00	08/21/2015 12:30		
	SW-846 3005A, 6010B, Metals by ICP (Total)			08/24/2015 7:58	08/24/2015 12:07
	SW-846 7470A (Total)			08/24/2015 8:18	08/24/2015 12:07
15081254-001E	MO-3-SS	08/20/2015 10:00	08/21/2015 12:30		
	SW-846 9012A (Total)			08/21/2015 20:00	08/24/2015 14:18
15081254-001G	MO-3-SS	08/20/2015 10:00	08/21/2015 12:30		
	Standard Methods 4500-S D (Total)				08/24/2015 15:04
15081254-001H	MO-3-SS	08/20/2015 10:00	08/21/2015 12:30		
	SW-846 9060				08/24/2015 13:21
15081254-001I	MO-3-SS	08/20/2015 10:00	08/21/2015 12:30		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/24/2015 9:57
15081254-002A	MO-2-SD	08/20/2015 16:00	08/21/2015 12:30		
	SW-846 3510C, 8081B, Chlorinated Pesticides by GC/ECD			08/21/2015 20:07	08/24/2015 14:56
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			08/21/2015 20:07	08/24/2015 16:52
	SW-846 3510C, 8151A, Chlorinated Herbicides by GC/ECD			08/25/2015 14:44	08/26/2015 10:53
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			08/21/2015 17:32	08/24/2015 11:30
15081254-002B	MO-2-SD	08/20/2015 16:00	08/21/2015 12:30		
	SW-846 9036 (Total)				08/24/2015 22:30
15081254-002C	MO-2-SD	08/20/2015 16:00	08/21/2015 12:30		
	SW-846 3005A, 6010B, Metals by ICP (Total)			08/24/2015 7:58	08/24/2015 13:27
	SW-846 7470A (Total)			08/24/2015 8:18	08/24/2015 12:18
15081254-002D	MO-2-SD	08/20/2015 16:00	08/21/2015 12:30		
	SW-846 9012A (Total)			08/21/2015 20:00	08/24/2015 13:47
15081254-002E	MO-2-SD	08/20/2015 16:00	08/21/2015 12:30		
	Standard Methods 4500-S D (Total)				08/24/2015 15:51
15081254-002F	MO-2-SD	08/20/2015 16:00	08/21/2015 12:30		
	SW-846 9060				08/24/2015 12:03
15081254-002G	MO-2-SD	08/20/2015 16:00	08/21/2015 12:30		

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

Sample ID	Client Sample ID	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
	Test Name				
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/24/2015 10:23
15081254-003A	MO-3-SDR	08/20/2015 12:45	08/21/2015 12:30		
	SW-846 3510C, 8081B, Chlorinated Pesticides by GC/ECD			08/21/2015 20:07	08/24/2015 15:20
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			08/21/2015 20:07	08/24/2015 17:09
	SW-846 3510C, 8151A, Chlorinated Herbicides by GC/ECD			08/25/2015 14:44	08/26/2015 11:24
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			08/21/2015 17:32	08/24/2015 12:02
15081254-003B	MO-3-SDR	08/20/2015 12:45	08/21/2015 12:30		
	SW-846 9036 (Total)				08/24/2015 15:31
15081254-003C	MO-3-SDR	08/20/2015 12:45	08/21/2015 12:30		
	SW-846 3005A, 6010B, Metals by ICP (Total)			08/24/2015 7:58	08/24/2015 12:20
	SW-846 7470A (Total)			08/24/2015 8:18	08/24/2015 12:22
15081254-003D	MO-3-SDR	08/20/2015 12:45	08/21/2015 12:30		
	SW-846 9012A (Total)			08/21/2015 20:00	08/24/2015 13:52
15081254-003E	MO-3-SDR	08/20/2015 12:45	08/21/2015 12:30		
	Standard Methods 4500-S D (Total)				08/24/2015 15:06
15081254-003F	MO-3-SDR	08/20/2015 12:45	08/21/2015 12:30		
	SW-846 9060				08/24/2015 13:46
15081254-003G	MO-3-SDR	08/20/2015 12:45	08/21/2015 12:30		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/24/2015 10:50
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/24/2015 12:37
15081254-004A	Trip Blank	08/21/2015 12:30	08/21/2015 12:30		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/24/2015 11:17

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081254
Report Date: 26-Aug-15

STANDARD METHODS 4500-S D (TOTAL)

Batch R208427 **SampType:** mblk Units **mg/L**
SampID: MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.05		**< 0.05**						08/24/2015

Batch R208427 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.05		**0.06**	0.06700	0	91.0	90	110	08/24/2015

Batch R208427 **SampType:** MS Units **mg/L**
SampID: 15081254-001GMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.05	JS	**0.04**	0.06700	0	55.2	85	115	08/24/2015

Batch R208427 **SampType:** ms Units **mg/L**
SampID: 15081254-002EMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	1.5	JS	**0.6**	2.010	0	31.3	85	115	08/24/2015

Batch R208427 **SampType:** MS Units **mg/L**
SampID: 15081254-003EMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.05		**0.07**	0.06700	0	107.5	85	115	08/24/2015

Batch R208427 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 15081254-003EMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfide, Total - Colorimetric	0.05		**0.08**	0.06700	0	111.9	0.07200	4.08	08/24/2015

SW-846 9012A (TOTAL)

Batch 111747 **SampType:** MBLK Units **mg/L**
SampID: MBLK 150821 TCN3

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide	0.007		**< 0.007**						08/24/2015

Batch 111747 **SampType:** LCS Units **mg/L**
SampID: LCS 150821 TCN3

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide	0.007		**0.026**	0.02500	0	103.9	85	115	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 9012A (TOTAL)

Batch 111747 **SampType:** MS Units **mg/L**
SampID: 15081254-001EMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide	0.007		**0.026**	0.02500	0	102.3	75	125	08/24/2015

Batch 111747 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 15081254-001EMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Cyanide	0.007		**0.026**	0.02500	0	104.6	0.02558	2.26	08/24/2015

SW-846 9036 (TOTAL)

Batch R208477 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**< 10**						08/24/2015

Batch R208477 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**20**	20.00	0	98.5	90	110	08/24/2015

Batch R208477 **SampType:** MS Units **mg/L**
SampID: 15081254-002BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	50		**130**	50.00	79.65	101.4	85	115	08/24/2015

Batch R208477 **SampType:** MSD Units **mg/L** RPD Limit **10**
SampID: 15081254-002BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate	50		**136**	50.00	79.65	113.0	130.3	4.35	08/24/2015

SW-846 9060

Batch R208421 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	1.0		**< 1.0**						08/24/2015

Batch R208421 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	10.0		**78.5**	77.60	0	101.1	90	110	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081254

Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 9060

Batch R208421 **SampType:** MS Units mg/L

SampID: 15081254-001HMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	2.0		**25.2**	10.00	15.88	93.4	85	115	08/24/2015

Batch R208421 **SampType:** MSD Units mg/L RPD Limit 10

SampID: 15081254-001HMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Organic Carbon (TOC)	2.0		**25.4**	10.00	15.88	94.9	25.22	0.59	08/24/2015

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 111715 **SampType:** MBLK Units mg/L

SampID: MBLK-111715

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**< 0.0500**	0.05000	0	0	-100	100	08/24/2015
Arsenic	0.0250		**< 0.0250**	0.02500	0	0	-100	100	08/24/2015
Barium	0.0025		**< 0.0025**	0.00250	0	0	-100	100	08/24/2015
Beryllium	0.0005		**< 0.0005**	.000500	0	0	-100	100	08/24/2015
Cadmium	0.0020		**< 0.0020**	0.00200	0	0	-100	100	08/24/2015
Chromium	0.0050		**< 0.0050**	0.00500	0	0	-100	100	08/24/2015
Cobalt	0.0050		**< 0.0050**	0.00500	0	0	-100	100	08/24/2015
Copper	0.0050		**< 0.0050**	0.00500	0	0	-100	100	08/24/2015
Lead	0.0150		**< 0.0150**	0.01500	0	0	-100	100	08/24/2015
Magnesium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	08/24/2015
Manganese	0.0030		**< 0.0030**	0.00300	0	0	-100	100	08/24/2015
Nickel	0.0050		**< 0.0050**	0.00500	0	0	-100	100	08/24/2015
Selenium	0.0400		**< 0.0400**	0.04000	0	0	-100	100	08/24/2015
Silver	0.0050		**< 0.0050**	0.00500	0	0	-100	100	08/24/2015
Thallium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	08/24/2015
Tin	0.0200		**< 0.0200**	0.02000	0	0	-100	100	08/24/2015
Vanadium	0.0100		**< 0.0100**	0.01000	0	0	-100	100	08/24/2015
Zinc	0.0100		**< 0.0100**	0.01000	0	0	-100	100	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 111715 **SampType:** LCS Units mg/L
SampID: LCS-111715

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**0.486**	0.5000	0	97.3	85	115	08/24/2015
Arsenic	0.0250		**2.02**	2.000	0	101.0	85	115	08/24/2015
Barium	0.0025		**2.06**	2.000	0	103.2	85	115	08/24/2015
Beryllium	0.0005		**0.0497**	0.05000	0	99.4	85	115	08/24/2015
Cadmium	0.0020		**0.0496**	0.05000	0	99.2	85	115	08/24/2015
Chromium	0.0050		**0.206**	0.2000	0	102.9	85	115	08/24/2015
Cobalt	0.0050		**0.496**	0.5000	0	99.1	85	115	08/24/2015
Copper	0.0050		**0.249**	0.2500	0	99.7	85	115	08/24/2015
Lead	0.0150		**0.506**	0.5000	0	101.1	85	115	08/24/2015
Magnesium	0.0500		**2.49**	2.500	0	99.4	85	115	08/24/2015
Manganese	0.0030		**0.512**	0.5000	0	102.5	85	115	08/24/2015
Nickel	0.0050		**0.516**	0.5000	0	103.3	85	115	08/24/2015
Selenium	0.0400		**1.98**	2.000	0	98.8	85	115	08/24/2015
Silver	0.0050		**0.0484**	0.05000	0	96.8	85	115	08/24/2015
Thallium	0.0500		**2.02**	2.000	0	101.0	85	115	08/24/2015
Tin	0.0200		**0.504**	0.5000	0	100.8	85	115	08/24/2015
Vanadium	0.0100		**0.507**	0.5000	0	101.4	85	115	08/24/2015
Zinc	0.0100		**0.480**	0.5000	0	96.0	85	115	08/24/2015

Batch 111715 **SampType:** MS Units mg/L
SampID: 15081254-001CMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**0.488**	0.5000	0	97.7	75	125	08/24/2015
Arsenic	0.0250		**2.05**	2.000	0.01140	102.1	75	125	08/24/2015
Barium	0.0025		**2.30**	2.000	0.2079	104.6	75	125	08/24/2015
Beryllium	0.0005		**0.0501**	0.05000	0	100.2	75	125	08/24/2015
Cadmium	0.0020		**0.0492**	0.05000	0	98.4	75	125	08/24/2015
Chromium	0.0050		**0.212**	0.2000	0.005500	103.1	75	125	08/24/2015
Cobalt	0.0050		**0.497**	0.5000	0.002800	98.8	75	125	08/24/2015
Copper	0.0050		**0.258**	0.2500	0.002500	102.2	75	125	08/24/2015
Lead	0.0150		**0.503**	0.5000	0	100.7	75	125	08/24/2015
Magnesium	0.0500		**60.6**	2.500	57.71	115.2	75	125	08/24/2015
Manganese	0.0030		**1.28**	0.5000	0.7545	104.7	75	125	08/24/2015
Nickel	0.0050		**0.525**	0.5000	0.01310	102.3	75	125	08/24/2015
Selenium	0.0400		**1.98**	2.000	0	99.0	75	125	08/24/2015
Silver	0.0050		**0.0493**	0.05000	0	98.6	75	125	08/24/2015
Thallium	0.0500		**2.00**	2.000	0	99.8	75	125	08/24/2015
Tin	0.0200		**0.506**	0.5000	0	101.2	75	125	08/24/2015
Vanadium	0.0100		**0.518**	0.5000	0.006600	102.2	75	125	08/24/2015
Zinc	0.0100		**0.484**	0.5000	0.01330	94.2	75	125	08/24/2015

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081254
Report Date: 26-Aug-15

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 111715 **SampType:** MSD Units **mg/L** RPD Limit **20**
SampID: 15081254-001CMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony	0.0500		**0.488**	0.5000	0	97.6	0.4883	0.10	08/24/2015
Arsenic	0.0250		**2.05**	2.000	0.01140	101.9	2.053	0.20	08/24/2015
Barium	0.0025		**2.30**	2.000	0.2079	104.4	2.299	0.13	08/24/2015
Beryllium	0.0005		**0.0499**	0.05000	0	99.8	0.05010	0.40	08/24/2015
Cadmium	0.0020		**0.0492**	0.05000	0	98.4	0.04920	0.00	08/24/2015
Chromium	0.0050		**0.210**	0.2000	0.005500	102.5	0.2117	0.57	08/24/2015
Cobalt	0.0050		**0.494**	0.5000	0.002800	98.2	0.4968	0.61	08/24/2015
Copper	0.0050		**0.258**	0.2500	0.002500	102.2	0.2579	0.00	08/24/2015
Lead	0.0150		**0.502**	0.5000	0	100.4	0.5034	0.30	08/24/2015
Magnesium	0.0500		**60.6**	2.500	57.71	114.8	60.59	0.02	08/24/2015
Manganese	0.0030		**1.28**	0.5000	0.7545	104.5	1.278	0.08	08/24/2015
Nickel	0.0050		**0.523**	0.5000	0.01310	101.9	0.5247	0.36	08/24/2015
Selenium	0.0400		**1.99**	2.000	0	99.6	1.980	0.55	08/24/2015
Silver	0.0050		**0.0492**	0.05000	0	98.4	0.04930	0.20	08/24/2015
Thallium	0.0500		**2.00**	2.000	0	99.9	1.997	0.05	08/24/2015
Tin	0.0200		**0.503**	0.5000	0	100.6	0.5058	0.57	08/24/2015
Vanadium	0.0100		**0.516**	0.5000	0.006600	101.9	0.5177	0.27	08/24/2015
Zinc	0.0100		**0.482**	0.5000	0.01330	93.6	0.4843	0.58	08/24/2015

SW-846 7470A (TOTAL)

Batch 111717 **SampType:** MBLK Units **mg/L**
SampID: MBLK-111717

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**< 0.00020**	.000200	0	0	-100	100	08/24/2015

Batch 111717 **SampType:** LCS Units **mg/L**
SampID: LCS-111717

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**0.00480**	0.00500	0	96.0	85	115	08/24/2015

Batch 111717 **SampType:** MS Units **mg/L**
SampID: 15081254-001CMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**0.00456**	0.00500	0	91.3	75	125	08/24/2015

Batch 111717 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 15081254-001CMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury	0.00020		**0.00442**	0.00500	0	88.4	0.004563	3.20	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD

Batch 111703 **SampType:** MBLK Units µg/L
SampID: MBLK-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
4,4'-DDD	0.05		ND						08/24/2015
4,4'-DDE	0.05		ND						08/24/2015
4,4'-DDT	0.05		ND						08/24/2015
Aldrin	0.05		ND						08/24/2015
alpha-BHC	0.05		ND						08/24/2015
beta-BHC	0.05		ND						08/24/2015
delta-BHC	0.05		ND						08/24/2015
Dieldrin	0.05		ND						08/24/2015
Endosulfan I	0.05		ND						08/24/2015
Endosulfan II	0.05		ND						08/24/2015
Endosulfan sulfate	0.05		ND						08/24/2015
Endrin	0.05		ND						08/24/2015
Endrin aldehyde	0.05		ND						08/24/2015
gamma-BHC	0.05		ND						08/24/2015
Heptachlor	0.05		ND						08/24/2015
Heptachlor epoxide	0.05		ND						08/24/2015
Methoxychlor	0.05		ND						08/24/2015
Toxaphene	0.50		ND						08/24/2015
Chlordane	0.50		ND						08/24/2015
Surr: Decachlorobiphenyl			0.15	0.2500		60.7	11.3	138	08/24/2015
Surr: Tetrachloro-m-xylene			0.21	0.2500		82.4	13	114	08/24/2015

Batch 111703 **SampType:** LCS Units µg/L
SampID: LCSPST-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
4,4'-DDD	0.05		0.16	0.2500	0	64.9	49	118	08/24/2015
4,4'-DDE	0.05		0.15	0.2500	0	59.3	34.3	106	08/24/2015
4,4'-DDT	0.05		0.16	0.2500	0	63.7	39	118	08/24/2015
Aldrin	0.05		0.14	0.2500	0	54.7	33.1	98.8	08/24/2015
alpha-BHC	0.05		0.17	0.2500	0	68.0	33.5	110	08/24/2015
beta-BHC	0.05		0.21	0.2500	0	83.0	64.2	119	08/24/2015
delta-BHC	0.05		0.21	0.2500	0	83.5	25.6	126	08/24/2015
Dieldrin	0.05		0.18	0.2500	0	70.0	55	117	08/24/2015
Endosulfan I	0.05		0.17	0.2500	0	68.9	49.5	117	08/24/2015
Endosulfan II	0.05		0.19	0.2500	0	74.9	58.4	129	08/24/2015
Endosulfan sulfate	0.05		0.25	0.2500	0	100.2	54.9	136	08/24/2015
Endrin	0.05		0.18	0.2500	0	71.3	62.6	128	08/24/2015
Endrin aldehyde	0.05		0.21	0.2500	0	83.4	70.5	126	08/24/2015
gamma-BHC	0.05		0.19	0.2500	0	75.6	47.7	117	08/24/2015
Heptachlor	0.05		0.15	0.2500	0	61.5	42.4	110	08/24/2015
Heptachlor epoxide	0.05		0.17	0.2500	0	67.5	53.4	117	08/24/2015
Methoxychlor	0.05		0.17	0.2500	0	68.6	56.4	132	08/24/2015
Surr: Decachlorobiphenyl			0.13	0.2500		50.9	9.42	147	08/24/2015
Surr: Tetrachloro-m-xylene			0.16	0.2500		64.1	13	114	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD

Batch 111703 **SampType:** LCSD Units µg/L RPD Limit 30

SampID: LCSPSTD-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
4,4'-DDD	0.05	R	**0.24**	0.2500	0	96.6	0.1624	39.20	08/24/2015
4,4'-DDE	0.05		**0.18**	0.2500	0	70.4	0.1482	17.17	08/24/2015
4,4'-DDT	0.05		**0.19**	0.2500	0	75.3	0.1593	16.65	08/24/2015
Aldrin	0.05		**0.17**	0.2500	0	66.6	0.1367	19.75	08/24/2015
alpha-BHC	0.05		**0.19**	0.2500	0	77.7	0.1700	13.27	08/24/2015
beta-BHC	0.05		**0.21**	0.2500	0	84.7	0.2075	2.09	08/24/2015
delta-BHC	0.05		**0.22**	0.2500	0	86.3	0.2088	3.28	08/24/2015
Dieldrin	0.05		**0.21**	0.2500	0	83.3	0.1751	17.28	08/24/2015
Endosulfan I	0.05		**0.20**	0.2500	0	80.0	0.1723	14.89	08/24/2015
Endosulfan II	0.05		**0.22**	0.2500	0	88.8	0.1872	17.06	08/24/2015
Endosulfan sulfate	0.05		**0.31**	0.2500	0	122.2	0.2504	19.85	08/24/2015
Endrin	0.05		**0.22**	0.2500	0	86.4	0.1782	19.18	08/24/2015
Endrin aldehyde	0.05		**0.22**	0.2500	0	89.6	0.2086	7.13	08/24/2015
gamma-BHC	0.05		**0.21**	0.2500	0	83.1	0.1890	9.51	08/24/2015
Heptachlor	0.05		**0.19**	0.2500	0	76.1	0.1537	21.28	08/24/2015
Heptachlor epoxide	0.05		**0.20**	0.2500	0	81.3	0.1687	18.50	08/24/2015
Methoxychlor	0.05		**0.22**	0.2500	0	86.6	0.1715	23.23	08/24/2015
Surr: Decachlorobiphenyl			**0.13**	0.2500		53.1			08/24/2015
Surr: Tetrachloro-m-xylene			**0.19**	0.2500		77.6			08/24/2015

Batch 111703 **SampType:** MS Units µg/L

SampID: 15081254-001AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
4,4'-DDD	0.05		**0.26**	0.2500	0	105.4	49.5	144	08/24/2015
4,4'-DDE	0.05		**0.21**	0.2500	0	85.1	43.1	136	08/24/2015
4,4'-DDT	0.05		**0.25**	0.2500	0	100.2	37.7	133	08/24/2015
Aldrin	0.05		**0.19**	0.2500	0	75.9	42.4	117	08/24/2015
alpha-BHC	0.05		**0.21**	0.2500	0	83.3	40.5	120	08/24/2015
beta-BHC	0.05		**0.21**	0.2500	0	82.5	69.2	130	08/24/2015
delta-BHC	0.05		**0.22**	0.2500	0	88.6	43.1	128	08/24/2015
Dieldrin	0.05		**0.24**	0.2500	0	94.6	54.9	132	08/24/2015
Endosulfan I	0.05		**0.22**	0.2500	0	89.0	51.3	135	08/24/2015
Endosulfan II	0.05		**0.22**	0.2500	0	87.4	58.9	137	08/24/2015
Endosulfan sulfate	0.05		**0.32**	0.2500	0	127.0	57.1	131	08/24/2015
Endrin	0.05		**0.24**	0.2500	0	94.8	47.6	139	08/24/2015
Endrin aldehyde	0.05		**0.23**	0.2500	0	91.2	52	141	08/24/2015
gamma-BHC	0.05		**0.20**	0.2500	0	81.9	47.6	127	08/24/2015
Heptachlor	0.05		**0.21**	0.2500	0	84.0	47.8	117	08/24/2015
Heptachlor epoxide	0.05		**0.22**	0.2500	0	87.7	52.6	136	08/24/2015
Methoxychlor	0.05		**0.26**	0.2500	0	102.8	45.3	140	08/24/2015
Surr: Decachlorobiphenyl			**0.18**	0.2500		72.6	5.57	150	08/24/2015
Surr: Tetrachloro-m-xylene			**0.20**	0.2500		79.8	13	129	08/24/2015

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081254
Report Date: 26-Aug-15

SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD

Batch 111703 **SampType:** MSD Units µg/L RPD Limit 30

SampID: 15081254-001AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
4,4´-DDD	0.05		**0.22**	0.2500	0	89.7	0.2634	16.09	08/24/2015
4,4´-DDE	0.05		**0.20**	0.2500	0	80.4	0.2127	5.63	08/24/2015
4,4´-DDT	0.05		**0.24**	0.2500	0	98.0	0.2505	2.28	08/24/2015
Aldrin	0.05		**0.17**	0.2500	0	69.6	0.1898	8.63	08/24/2015
alpha-BHC	0.05		**0.19**	0.2500	0	77.8	0.2083	6.78	08/24/2015
beta-BHC	0.05		**0.20**	0.2500	0	80.7	0.2062	2.24	08/24/2015
delta-BHC	0.05		**0.22**	0.2500	0	86.2	0.2216	2.77	08/24/2015
Dieldrin	0.05		**0.23**	0.2500	0	91.5	0.2365	3.30	08/24/2015
Endosulfan I	0.05		**0.21**	0.2500	0	84.5	0.2225	5.13	08/24/2015
Endosulfan II	0.05		**0.22**	0.2500	0	86.1	0.2186	1.57	08/24/2015
Endosulfan sulfate	0.05		**0.30**	0.2500	0	119.2	0.3176	6.36	08/24/2015
Endrin	0.05		**0.23**	0.2500	0	92.6	0.2370	2.38	08/24/2015
Endrin aldehyde	0.05		**0.23**	0.2500	0	90.3	0.2281	1.09	08/24/2015
gamma-BHC	0.05		**0.19**	0.2500	0	77.1	0.2048	6.08	08/24/2015
Heptachlor	0.05		**0.20**	0.2500	0	78.4	0.2101	6.98	08/24/2015
Heptachlor epoxide	0.05		**0.20**	0.2500	0	81.1	0.2192	7.80	08/24/2015
Methoxychlor	0.05		**0.24**	0.2500	0	97.2	0.2570	5.58	08/24/2015
Surr: Decachlorobiphenyl			**0.17**	0.2500		66.0			08/24/2015
Surr: Tetrachloro-m-xylene			**0.18**	0.2500		73.8			08/24/2015

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 111703 **SampType:** MBLK Units µg/L

SampID: MBLK-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	1.00		**ND**						08/24/2015
Aroclor 1221	1.00		**ND**						08/24/2015
Aroclor 1232	1.00		**ND**						08/24/2015
Aroclor 1242	1.00		**ND**						08/24/2015
Aroclor 1248	1.00		**ND**						08/24/2015
Aroclor 1254	1.00		**ND**						08/24/2015
Aroclor 1260	1.00		**ND**						08/24/2015
Surr: Decachlorobiphenyl			**0.17**	0.2500		68.6	11.3	138	08/24/2015
Surr: Tetrachloro-meta-xylene			**0.21**	0.2500		83.8	26.8	110	08/24/2015

Batch 111703 **SampType:** LCS Units µg/L

SampID: LCSPCB-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	1.00		**3.71**	5.000	0	74.3	52	122	08/24/2015
Aroclor 1260	1.00		**2.26**	5.000	0	45.3	28.7	119	08/24/2015
Surr: Decachlorobiphenyl			**0.17**	0.2500		69.7	11.3	138	08/24/2015
Surr: Tetrachloro-meta-xylene			**0.19**	0.2500		76.4	26.8	110	08/24/2015

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081254
Report Date: 26-Aug-15

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 111703 **SampType:** LCSD Units µg/L RPD Limit 21.1
SampID: LCSPCBD-111703

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016	1.00		**4.05**	5.000	0	80.9	3.713	8.58	08/24/2015
Aroclor 1260	1.00		**2.72**	5.000	0	54.4	2.263	18.39	08/24/2015
Surr: Decachlorobiphenyl			**0.18**	0.2500		72.3			08/24/2015
Surr: Tetrachloro-meta-xylene			**0.18**	0.2500		73.4			08/24/2015

SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD

Batch 111790 **SampType:** MBLK Units µg/L
SampID: MBLK-111790

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
2,4,5-T	0.200		**ND**						08/26/2015
2,4,5-TP (Silvex)	0.200		**ND**						08/26/2015
2,4-D	0.200		**ND**						08/26/2015
Dinoseb	0.200		**ND**						08/26/2015
Surr: 2,4-Dichlorophenylacetic acid			**0.594**	0.8000		74.3	23.8	117	08/26/2015

Batch 111790 **SampType:** LCS Units µg/L
SampID: LCS-111790

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
2,4,5-T	0.200		**0.798**	0.8000	0	99.7	23.9	155	08/26/2015
2,4,5-TP (Silvex)	0.200		**0.783**	0.8000	0	97.9	32.1	115	08/26/2015
2,4-D	0.200		**0.746**	0.8000	0	93.2	5	239	08/26/2015
Dinoseb	0.200		**0.492**	0.8000	0	61.5	9.62	105	08/26/2015
Surr: 2,4-Dichlorophenylacetic acid			**0.608**	0.8000		76.0	23.8	117	08/26/2015

Batch 111790 **SampType:** LCSD Units µg/L RPD Limit 30
SampID: LCSD-111790

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
2,4,5-T	0.200		**0.717**	0.8000	0	89.6	0.7980	10.71	08/26/2015
2,4,5-TP (Silvex)	0.200		**0.659**	0.8000	0	82.4	0.7834	17.21	08/26/2015
2,4-D	0.200		**0.640**	0.8000	0	80.0	0.7458	15.30	08/26/2015
Dinoseb	0.200		**0.405**	0.8000	0	50.6	0.4924	19.54	08/26/2015
Surr: 2,4-Dichlorophenylacetic acid			**0.479**	0.8000		59.9			08/26/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111666 **SampType:** MBLK Units mg/L
SampID: MBLK-111666

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		ND						08/21/2015
2,4,5-Trichlorophenol	0.010		ND						08/21/2015
2,4,6-Trichlorophenol	0.010		ND						08/21/2015
2,4-Dichlorophenol	0.010		ND						08/21/2015
2,4-Dimethylphenol	0.010		ND						08/21/2015
2,4-Dinitrophenol	0.020		ND						08/21/2015
2,4-Dinitrotoluene	0.010		ND						08/21/2015
2,6-Dinitrotoluene	0.010		ND						08/21/2015
2-Chloronaphthalene	0.010		ND						08/21/2015
2-Chlorophenol	0.010		ND						08/21/2015
2-Methylnaphthalene	0.010		ND						08/21/2015
2-Nitroaniline	0.040		ND						08/21/2015
2-Nitrophenol	0.020		ND						08/21/2015
3,3´-Dichlorobenzidine	0.010		ND						08/21/2015
3-Nitroaniline	0.040		ND						08/21/2015
4,6-Dinitro-2-methylphenol	0.020		ND						08/21/2015
4-Bromophenyl phenyl ether	0.010		ND						08/21/2015
4-Chloro-3-methylphenol	0.020		ND						08/21/2015
4-Chloroaniline	0.020		ND						08/21/2015
4-Chlorophenyl phenyl ether	0.010		ND						08/21/2015
4-Nitroaniline	0.020		ND						08/21/2015
4-Nitrophenol	0.020		ND						08/21/2015
Acenaphthene	0.010		ND						08/21/2015
Acenaphthylene	0.010		ND						08/21/2015
Anthracene	0.010		ND						08/21/2015
Benzo(a)anthracene	0.010		ND						08/21/2015
Benzo(a)pyrene	0.010		ND						08/21/2015
Benzo(b)fluoranthene	0.010		ND						08/21/2015
Benzo(g,h,i)perylene	0.010		ND						08/21/2015
Benzo(k)fluoranthene	0.010		ND						08/21/2015
Benzyl alcohol	0.020		ND						08/21/2015
Bis(2-chloroethoxy)methane	0.010		ND						08/21/2015
Bis(2-chloroethyl)ether	0.010		ND						08/21/2015
Bis(2-chloroisopropyl)ether	0.010		ND						08/21/2015
Bis(2-ethylhexyl)phthalate	0.006		ND						08/21/2015
Butyl benzyl phthalate	0.010		ND						08/21/2015
Chrysene	0.010		ND						08/21/2015
Dibenzo(a,h)anthracene	0.010		ND						08/21/2015
Dibenzofuran	0.010		ND						08/21/2015
Diethyl phthalate	0.010		ND						08/21/2015
Dimethyl phthalate	0.010		ND						08/21/2015
Di-n-butyl phthalate	0.010		ND						08/21/2015
Di-n-octyl phthalate	0.010		ND						08/21/2015
Fluoranthene	0.010		ND						08/21/2015
Fluorene	0.010		ND						08/21/2015
Hexachlorobenzene	0.010		ND						08/21/2015
Hexachlorocyclopentadiene	0.020		ND						08/21/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111666 **SampType:** MBLK Units mg/L
SampID: MBLK-111666

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Indeno(1,2,3-cd)pyrene	0.010		**ND**						08/21/2015
Isophorone	0.010		**ND**						08/21/2015
m,p-Cresol	0.010		**ND**						08/21/2015
Naphthalene	0.010		**ND**						08/21/2015
Nitrobenzene	0.010		**ND**						08/21/2015
N-Nitrosodimethylamine	0.020		**ND**						08/21/2015
N-Nitroso-di-n-propylamine	0.010		**ND**						08/21/2015
N-Nitrosodiphenylamine	0.010		**ND**						08/21/2015
o-Cresol	0.010		**ND**						08/21/2015
Pentachlorophenol	0.020		**ND**						08/21/2015
Phenanthrene	0.010		**ND**						08/21/2015
Phenol	0.005		**ND**						08/21/2015
Pyrene	0.010		**ND**						08/21/2015
1,2-Diphenylhydrazine	0.010		**ND**						08/21/2015
Surr: 2,4,6-Tribromophenol			**0.049**	0.05000		98.9	48.9	120	08/21/2015
Surr: 2-Fluorobiphenyl			**0.021**	0.02500		84.3	51.1	102	08/21/2015
Surr: 2-Fluorophenol			**0.027**	0.05000		54.3	32	75.8	08/21/2015
Surr: Nitrobenzene-d5			**0.019**	0.02500		74.7	19.5	133	08/21/2015
Surr: Phenol-d5			**0.020**	0.05000		40.1	24.1	54.7	08/21/2015
Surr: p-Terphenyl-d14			**0.025**	0.02500		101.4	51.6	124	08/21/2015

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081254
Report Date: 26-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111666 **SampType:** LCS Units mg/L
SampID: LCS-111666

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.042**	0.05000	0	83.9	42.3	104	08/21/2015
2,4,5-Trichlorophenol	0.010		**0.091**	0.1000	0	90.8	55	116	08/21/2015
2,4,6-Trichlorophenol	0.010		**0.084**	0.1000	0	84.1	52.3	109	08/21/2015
2,4-Dimethylphenol	0.010		**0.079**	0.1000	0	78.8	50	107	08/21/2015
2,4-Dinitrophenol	0.020		**0.066**	0.1000	0	66.0	5.78	112	08/21/2015
2,4-Dinitrotoluene	0.010		**0.048**	0.05000	0	96.2	58.7	119	08/21/2015
2-Chlorophenol	0.010		**0.074**	0.1000	0	73.5	44.4	94.7	08/21/2015
4-Chloro-3-methylphenol	0.020		**0.083**	0.1000	0	83.1	52.1	109	08/21/2015
4-Nitrophenol	0.020		**0.040**	0.1000	0	39.5	24.2	55.7	08/21/2015
Acenaphthene	0.010		**0.044**	0.05000	0	88.6	51.2	109	08/21/2015
Acenaphthylene	0.010		**0.047**	0.05000	0	93.2	54.8	117	08/21/2015
Anthracene	0.010		**0.046**	0.05000	0	91.1	56.1	116	08/21/2015
Benzo(a)anthracene	0.010		**0.044**	0.05000	0	88.4	55	113	08/21/2015
Benzo(a)pyrene	0.010		**0.047**	0.05000	0	93.6	60.4	126	08/21/2015
Benzo(b)fluoranthene	0.010		**0.043**	0.05000	0	86.0	57.6	119	08/21/2015
Benzo(g,h,i)perylene	0.010		**0.047**	0.05000	0	94.5	51.2	130	08/21/2015
Benzo(k)fluoranthene	0.010		**0.049**	0.05000	0	98.6	57.9	126	08/21/2015
Bis(2-ethylhexyl)phthalate	0.006		**0.045**	0.05000	0	90.5	52.8	122	08/21/2015
Chrysene	0.010		**0.047**	0.05000	0	93.6	57.9	120	08/21/2015
Dibenzo(a,h)anthracene	0.010		**0.048**	0.05000	0	95.7	54.7	130	08/21/2015
Diethyl phthalate	0.010		**0.090**	0.1000	0	90.3	54.3	116	08/21/2015
Dimethyl phthalate	0.010		**0.089**	0.1000	0	89.0	53.5	111	08/21/2015
Di-n-butyl phthalate	0.010		**0.043**	0.05000	0	86.9	50.8	116	08/21/2015
Fluoranthene	0.010		**0.046**	0.05000	0	92.9	56.9	117	08/21/2015
Fluorene	0.010		**0.045**	0.05000	0	90.6	55.1	112	08/21/2015
Hexachlorobenzene	0.010		**0.092**	0.1000	0	92.2	54.3	119	08/21/2015
Indeno(1,2,3-cd)pyrene	0.010		**0.049**	0.05000	0	97.9	56.2	135	08/21/2015
m,p-Cresol	0.010		**0.032**	0.05000	0	63.9	39.5	94	08/21/2015
Naphthalene	0.010		**0.038**	0.05000	0	76.8	40.3	98.1	08/21/2015
Nitrobenzene	0.010		**0.080**	0.1000	0	79.7	44.9	95.5	08/21/2015
N-Nitroso-di-n-propylamine	0.010		**0.044**	0.05000	0	87.5	49.2	107	08/21/2015
o-Cresol	0.010		**0.035**	0.05000	0	69.1	42.5	95	08/21/2015
Pentachlorophenol	0.020		**0.087**	0.1000	0	87.1	35.2	104	08/21/2015
Phenanthrene	0.010		**0.046**	0.05000	0	91.3	55.2	115	08/21/2015
Phenol	0.005		**0.038**	0.1000	0	38.4	22.7	51.8	08/21/2015
Pyrene	0.010		**0.047**	0.05000	0	93.6	56	116	08/21/2015
Surr: 2,4,6-Tribromophenol			**0.049**	0.05000		97.1	48.9	120	08/21/2015
Surr: 2-Fluorobiphenyl			**0.021**	0.02500		84.1	51.1	102	08/21/2015
Surr: 2-Fluorophenol			**0.025**	0.05000		50.9	32	75.8	08/21/2015
Surr: Nitrobenzene-d5			**0.025**	0.02500		99.8	19.5	133	08/21/2015
Surr: Phenol-d5			**0.019**	0.05000		37.1	24.1	54.7	08/21/2015
Surr: p-Terphenyl-d14			**0.024**	0.02500		97.2	51.6	124	08/21/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111666 **SampType:** LCSD Units mg/L RPD Limit 40

SampID: LCSD-111666

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.044**	0.05000	0	88.9	0.04197	5.78	08/21/2015
2,4,5-Trichlorophenol	0.010		**0.094**	0.1000	0	93.5	0.09082	2.95	08/21/2015
2,4,6-Trichlorophenol	0.010		**0.087**	0.1000	0	87.0	0.08406	3.39	08/21/2015
2,4-Dimethylphenol	0.010		**0.083**	0.1000	0	82.8	0.07876	4.94	08/21/2015
2,4-Dinitrophenol	0.020		**0.072**	0.1000	0	71.7	0.06600	8.30	08/21/2015
2,4-Dinitrotoluene	0.010		**0.049**	0.05000	0	97.7	0.04808	1.57	08/21/2015
2-Chlorophenol	0.010		**0.077**	0.1000	0	77.4	0.07353	5.17	08/21/2015
4-Chloro-3-methylphenol	0.020		**0.085**	0.1000	0	85.2	0.08311	2.50	08/21/2015
4-Nitrophenol	0.020		**0.041**	0.1000	0	40.7	0.03952	2.91	08/21/2015
Acenaphthene	0.010		**0.045**	0.05000	0	90.8	0.04432	2.42	08/21/2015
Acenaphthylene	0.010		**0.048**	0.05000	0	95.3	0.04658	2.27	08/21/2015
Anthracene	0.010		**0.046**	0.05000	0	92.0	0.04555	0.94	08/21/2015
Benzo(a)anthracene	0.010		**0.045**	0.05000	0	89.1	0.04421	0.75	08/21/2015
Benzo(a)pyrene	0.010		**0.047**	0.05000	0	94.8	0.04681	1.21	08/21/2015
Benzo(b)fluoranthene	0.010		**0.043**	0.05000	0	86.7	0.04299	0.84	08/21/2015
Benzo(g,h,i)perylene	0.010		**0.048**	0.05000	0	96.5	0.04727	2.08	08/21/2015
Benzo(k)fluoranthene	0.010		**0.050**	0.05000	0	100.0	0.04930	1.43	08/21/2015
Bis(2-ethylhexyl)phthalate	0.006		**0.045**	0.05000	0	90.1	0.04525	0.42	08/21/2015
Chrysene	0.010		**0.047**	0.05000	0	94.7	0.04678	1.17	08/21/2015
Dibenzo(a,h)anthracene	0.010		**0.049**	0.05000	0	98.3	0.04785	2.68	08/21/2015
Diethyl phthalate	0.010		**0.092**	0.1000	0	92.3	0.09027	2.17	08/21/2015
Dimethyl phthalate	0.010		**0.090**	0.1000	0	90.2	0.08900	1.32	08/21/2015
Di-n-butyl phthalate	0.010		**0.044**	0.05000	0	88.1	0.04345	1.43	08/21/2015
Fluoranthene	0.010		**0.047**	0.05000	0	93.9	0.04646	1.07	08/21/2015
Fluorene	0.010		**0.046**	0.05000	0	92.3	0.04532	1.78	08/21/2015
Hexachlorobenzene	0.010		**0.094**	0.1000	0	93.8	0.09220	1.75	08/21/2015
Indeno(1,2,3-cd)pyrene	0.010		**0.050**	0.05000	0	100.2	0.04894	2.31	08/21/2015
m,p-Cresol	0.010		**0.033**	0.05000	0	65.5	0.03193	2.57	08/21/2015
Naphthalene	0.010		**0.040**	0.05000	0	79.8	0.03842	3.83	08/21/2015
Nitrobenzene	0.010		**0.082**	0.1000	0	82.1	0.07971	2.99	08/21/2015
N-Nitroso-di-n-propylamine	0.010		**0.044**	0.05000	0	88.5	0.04373	1.20	08/21/2015
o-Cresol	0.010		**0.036**	0.05000	0	72.5	0.03454	4.89	08/21/2015
Pentachlorophenol	0.020		**0.090**	0.1000	0	90.0	0.08708	3.29	08/21/2015
Phenanthrene	0.010		**0.046**	0.05000	0	91.7	0.04566	0.44	08/21/2015
Phenol	0.005		**0.042**	0.1000	0	41.6	0.03844	7.81	08/21/2015
Pyrene	0.010		**0.047**	0.05000	0	94.6	0.04678	1.16	08/21/2015
Surr: 2,4,6-Tribromophenol			**0.048**	0.05000		96.6			08/21/2015
Surr: 2-Fluorobiphenyl			**0.022**	0.02500		86.6			08/21/2015
Surr: 2-Fluorophenol			**0.026**	0.05000		52.3			08/21/2015
Surr: Nitrobenzene-d5			**0.026**	0.02500		102.3			08/21/2015
Surr: Phenol-d5			**0.019**	0.05000		38.2			08/21/2015
Surr: p-Terphenyl-d14			**0.024**	0.02500		96.1			08/21/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111666 **SampType:** MS Units mg/L
SampID: 15081254-001AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.040**	0.05000	0	80.1	33	98.5	08/24/2015
2,4,5-Trichlorophenol	0.010		**0.088**	0.1000	0	87.6	38.6	123	08/24/2015
2,4,6-Trichlorophenol	0.010		**0.082**	0.1000	0	82.0	35.9	123	08/24/2015
2,4-Dimethylphenol	0.010		**0.077**	0.1000	0	76.7	38.3	88	08/24/2015
2,4-Dinitrophenol	0.020		**0.074**	0.1000	0	73.9	1.88	162	08/24/2015
2,4-Dinitrotoluene	0.010		**0.044**	0.05000	0	88.2	60	108	08/24/2015
2-Chlorophenol	0.010		**0.074**	0.1000	0	74.1	44.9	105	08/24/2015
4-Chloro-3-methylphenol	0.020		**0.083**	0.1000	0	83.4	54.7	112	08/24/2015
4-Nitrophenol	0.020		**0.036**	0.1000	0	36.1	17.7	51.5	08/24/2015
Acenaphthene	0.010		**0.040**	0.05000	0	79.8	55.8	108	08/24/2015
Acenaphthylene	0.010		**0.042**	0.05000	0	83.8	53.5	102	08/24/2015
Anthracene	0.010		**0.040**	0.05000	0	79.4	52.8	105	08/24/2015
Benzo(a)anthracene	0.010		**0.039**	0.05000	0	77.8	61.8	100	08/24/2015
Benzo(a)pyrene	0.010		**0.042**	0.05000	0	83.7	59.2	104	08/24/2015
Benzo(b)fluoranthene	0.010		**0.040**	0.05000	0	79.5	50.6	105	08/24/2015
Benzo(g,h,i)perylene	0.010		**0.045**	0.05000	0	90.9	47.1	112	08/24/2015
Benzo(k)fluoranthene	0.010		**0.043**	0.05000	0	85.5	50.3	123	08/24/2015
Bis(2-ethylhexyl)phthalate	0.006		**0.040**	0.05000	0	79.2	56.3	109	08/24/2015
Chrysene	0.010		**0.041**	0.05000	0	82.6	58.8	106	08/24/2015
Dibenzo(a,h)anthracene	0.010		**0.045**	0.05000	0	90.9	54.7	107	08/24/2015
Diethyl phthalate	0.010		**0.082**	0.1000	0	81.5	51.7	106	08/24/2015
Dimethyl phthalate	0.010		**0.078**	0.1000	0	77.9	58.8	104	08/24/2015
Di-n-butyl phthalate	0.010		**0.037**	0.05000	0	74.2	54.3	105	08/24/2015
Fluoranthene	0.010		**0.040**	0.05000	0	80.7	58.5	103	08/24/2015
Fluorene	0.010		**0.040**	0.05000	0	80.8	49.1	105	08/24/2015
Hexachlorobenzene	0.010		**0.079**	0.1000	0	79.3	55.9	106	08/24/2015
Indeno(1,2,3-cd)pyrene	0.010		**0.046**	0.05000	0	92.8	54.5	107	08/24/2015
m,p-Cresol	0.010		**0.035**	0.05000	0.002484	64.4	37.6	93.7	08/24/2015
Naphthalene	0.010		**0.036**	0.05000	0	71.4	50.9	92.3	08/24/2015
Nitrobenzene	0.010		**0.074**	0.1000	0	74.3	51.8	104	08/24/2015
N-Nitroso-di-n-propylamine	0.010		**0.043**	0.05000	0	85.6	50.8	109	08/24/2015
o-Cresol	0.010		**0.035**	0.05000	0	70.3	43	101	08/24/2015
Pentachlorophenol	0.020		**0.081**	0.1000	0	80.8	26.8	134	08/24/2015
Phenanthrene	0.010		**0.040**	0.05000	0	79.9	49.6	107	08/24/2015
Phenol	0.005		**0.042**	0.1000	0.003760	38.4	17.7	45.8	08/24/2015
Pyrene	0.010		**0.040**	0.05000	0	80.9	61.3	108	08/24/2015
Surr: 2,4,6-Tribromophenol			**0.046**	0.05000		91.6	26.4	130	08/24/2015
Surr: 2-Fluorobiphenyl			**0.021**	0.02500		82.2	38.3	115	08/24/2015
Surr: 2-Fluorophenol			**0.027**	0.05000		53.2	16.5	65	08/24/2015
Surr: Nitrobenzene-d5			**0.025**	0.02500		100.4	47.6	107	08/24/2015
Surr: Phenol-d5			**0.019**	0.05000		37.6	9.94	41.7	08/24/2015
Surr: p-Terphenyl-d14			**0.019**	0.02500		76.0	1	136	08/24/2015

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081254
Report Date: 26-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111666 **SampType:** MSD Units mg/L RPD Limit 40

SampID: 15081254-001AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.041**	0.05000	0	81.6	0.04006	1.80	08/24/2015
2,4,5-Trichlorophenol	0.010		**0.086**	0.1000	0	85.6	0.08755	2.21	08/24/2015
2,4,6-Trichlorophenol	0.010		**0.080**	0.1000	0	79.8	0.08195	2.67	08/24/2015
2,4-Dimethylphenol	0.010		**0.075**	0.1000	0	75.3	0.07670	1.89	08/24/2015
2,4-Dinitrophenol	0.020		**0.075**	0.1000	0	74.7	0.07393	1.08	08/24/2015
2,4-Dinitrotoluene	0.010		**0.044**	0.05000	0	87.7	0.04409	0.58	08/24/2015
2-Chlorophenol	0.010		**0.072**	0.1000	0	72.1	0.07406	2.74	08/24/2015
4-Chloro-3-methylphenol	0.020		**0.083**	0.1000	0	83.4	0.08335	0.06	08/24/2015
4-Nitrophenol	0.020		**0.039**	0.1000	0	38.8	0.03609	7.31	08/24/2015
Acenaphthene	0.010		**0.041**	0.05000	0	81.6	0.03990	2.23	08/24/2015
Acenaphthylene	0.010		**0.043**	0.05000	0	85.2	0.04192	1.57	08/24/2015
Anthracene	0.010		**0.040**	0.05000	0	79.5	0.03969	0.18	08/24/2015
Benzo(a)anthracene	0.010		**0.039**	0.05000	0	78.7	0.03892	1.05	08/24/2015
Benzo(a)pyrene	0.010		**0.042**	0.05000	0	84.5	0.04186	0.96	08/24/2015
Benzo(b)fluoranthene	0.010		**0.038**	0.05000	0	76.2	0.03975	4.19	08/24/2015
Benzo(g,h,i)perylene	0.010		**0.046**	0.05000	0	92.1	0.04546	1.26	08/24/2015
Benzo(k)fluoranthene	0.010		**0.044**	0.05000	0	88.6	0.04273	3.64	08/24/2015
Bis(2-ethylhexyl)phthalate	0.006		**0.039**	0.05000	0	78.5	0.03960	0.91	08/24/2015
Chrysene	0.010		**0.041**	0.05000	0	82.9	0.04132	0.27	08/24/2015
Dibenzo(a,h)anthracene	0.010		**0.046**	0.05000	0	92.5	0.04547	1.74	08/24/2015
Diethyl phthalate	0.010		**0.082**	0.1000	0	82.1	0.08152	0.74	08/24/2015
Dimethyl phthalate	0.010		**0.078**	0.1000	0	77.5	0.07790	0.48	08/24/2015
Di-n-butyl phthalate	0.010		**0.038**	0.05000	0	76.2	0.03710	2.70	08/24/2015
Fluoranthene	0.010		**0.041**	0.05000	0	81.9	0.04035	1.51	08/24/2015
Fluorene	0.010		**0.041**	0.05000	0	82.5	0.04038	2.09	08/24/2015
Hexachlorobenzene	0.010		**0.082**	0.1000	0	81.5	0.07927	2.81	08/24/2015
Indeno(1,2,3-cd)pyrene	0.010		**0.047**	0.05000	0	94.6	0.04641	1.86	08/24/2015
m,p-Cresol	0.010		**0.034**	0.05000	0.002484	63.5	0.03471	1.31	08/24/2015
Naphthalene	0.010		**0.036**	0.05000	0	72.8	0.03568	2.04	08/24/2015
Nitrobenzene	0.010		**0.078**	0.1000	0	78.3	0.07434	5.13	08/24/2015
N-Nitroso-di-n-propylamine	0.010		**0.043**	0.05000	0	85.3	0.04280	0.37	08/24/2015
o-Cresol	0.010		**0.034**	0.05000	0	68.1	0.03515	3.16	08/24/2015
Pentachlorophenol	0.020		**0.078**	0.1000	0	78.0	0.08075	3.48	08/24/2015
Phenanthrene	0.010		**0.041**	0.05000	0	81.0	0.03995	1.39	08/24/2015
Phenol	0.005		**0.041**	0.1000	0.003760	37.6	0.04219	2.08	08/24/2015
Pyrene	0.010		**0.041**	0.05000	0	82.3	0.04044	1.72	08/24/2015
Surr: 2,4,6-Tribromophenol			**0.046**	0.05000		92.2			08/24/2015
Surr: 2-Fluorobiphenyl			**0.020**	0.02500		80.5			08/24/2015
Surr: 2-Fluorophenol			**0.026**	0.05000		51.4			08/24/2015
Surr: Nitrobenzene-d5			**0.025**	0.02500		100.6			08/24/2015
Surr: Phenol-d5			**0.019**	0.05000		37.1			08/24/2015
Surr: p-Terphenyl-d14			**0.017**	0.02500		69.1			08/24/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** MBLK Units µg/L
SampID: MBLK-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		ND						08/24/2015
1,1,1-Trichloroethane	5.0		ND						08/24/2015
1,1,2,2-Tetrachloroethane	5.0		ND						08/24/2015
1,1,2-Trichloroethane	5.0		ND						08/24/2015
1,1-Dichloroethane	5.0		ND						08/24/2015
1,1-Dichloroethene	5.0		ND						08/24/2015
1,1-Dichloropropene	5.0		ND						08/24/2015
1,2,3-Trichloropropane	5.0		ND						08/24/2015
1,2-Dibromo-3-chloropropane	5.0		ND						08/24/2015
1,2-Dibromoethane	5.0		ND						08/24/2015
1,2-Dichlorobenzene	5.0		ND						08/24/2015
1,2-Dichloroethane	5.0		ND						08/24/2015
1,2-Dichloropropane	5.0		ND						08/24/2015
1,3-Dichlorobenzene	5.0		ND						08/24/2015
1,3-Dichloropropane	5.0		ND						08/24/2015
1,4-Dichlorobenzene	5.0		ND						08/24/2015
2,2-Dichloropropane	5.0		ND						08/24/2015
2-Butanone	25.0		ND						08/24/2015
2-Hexanone	25.0		ND						08/24/2015
4-Methyl-2-pentanone	25.0		ND						08/24/2015
Acetone	25.0		ND						08/24/2015
Acetonitrile	50.0		ND						08/24/2015
Acrolein	100		ND						08/24/2015
Acrylonitrile	5.0		ND						08/24/2015
Allyl chloride	5.0		ND						08/24/2015
Benzene	2.0		ND						08/24/2015
Bromochloromethane	5.0		ND						08/24/2015
Bromodichloromethane	5.0		ND						08/24/2015
Bromoform	5.0		ND						08/24/2015
Bromomethane	10.0		ND						08/24/2015
Carbon disulfide	5.0		ND						08/24/2015
Carbon tetrachloride	5.0		ND						08/24/2015
Chlorobenzene	5.0		ND						08/24/2015
Chloroethane	10.0		ND						08/24/2015
Chloroform	5.0		ND						08/24/2015
Chloromethane	10.0		ND						08/24/2015
cis-1,2-Dichloroethene	5.0		ND						08/24/2015
cis-1,3-Dichloropropene	5.0		ND						08/24/2015
Dibromochloromethane	5.0		ND						08/24/2015
Dibromomethane	5.0		ND						08/24/2015
Dichlorodifluoromethane	10.0		ND						08/24/2015
Ethyl methacrylate	5.0		ND						08/24/2015
Ethylbenzene	5.0		ND						08/24/2015
Hexachlorobutadiene	5.0		ND						08/24/2015
Hexachloroethane	10.0		ND						08/24/2015
Iodomethane	5.0		ND						08/24/2015
m,p-Xylenes	5.0		ND						08/24/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** MBLK Units µg/L
SampID: MBLK-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methacrylonitrile	10.0		ND						08/24/2015
Methyl Methacrylate	5.0		ND						08/24/2015
Methylene chloride	5.0		ND						08/24/2015
Naphthalene	10.0		ND						08/24/2015
o-Xylene	5.0		ND						08/24/2015
Propionitrile	50.0		ND						08/24/2015
Styrene	5.0		ND						08/24/2015
Tetrachloroethene	5.0		ND						08/24/2015
Toluene	5.0		ND						08/24/2015
trans-1,2-Dichloroethene	5.0		ND						08/24/2015
trans-1,3-Dichloropropene	5.0		ND						08/24/2015
trans-1,4-Dichloro-2-butene	10.0		ND						08/24/2015
Trichloroethene	5.0		ND						08/24/2015
Trichlorofluoromethane	5.0		ND						08/24/2015
Vinyl acetate	10.0		ND						08/24/2015
Vinyl chloride	2.0		ND						08/24/2015
Xylenes, Total	5.0		ND						08/24/2015
Surr: 1,2-Dichloroethane-d4			**50.6**	50.00		101.1	74.7	129	08/24/2015
Surr: 4-Bromofluorobenzene			**50.3**	50.00		100.6	86	119	08/24/2015
Surr: Dibromofluoromethane			**50.9**	50.00		101.8	81.7	123	08/24/2015
Surr: Toluene-d8			**49.2**	50.00		98.3	84.3	114	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** LCSD Units µg/L RPD Limit **40**

SampID: LCSD-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**51.8**	50.00	0	103.5	50.14	3.20	08/24/2015
1,1,1-Trichloroethane	5.0		**48.3**	50.00	0	96.6	46.06	4.77	08/24/2015
1,1,2,2-Tetrachloroethane	5.0		**47.5**	50.00	0	95.1	48.29	1.59	08/24/2015
1,1,2-Trichloroethane	5.0		**46.2**	50.00	0	92.5	44.06	4.83	08/24/2015
1,1-Dichloroethane	5.0		**43.9**	50.00	0	87.8	43.45	1.08	08/24/2015
1,1-Dichloroethene	5.0		**45.3**	50.00	0	90.6	43.69	3.62	08/24/2015
1,1-Dichloropropene	5.0		**46.2**	50.00	0	92.5	44.02	4.90	08/24/2015
1,2,3-Trichloropropane	5.0		**47.0**	50.00	0	94.0	47.82	1.73	08/24/2015
1,2-Dibromo-3-chloropropane	5.0		**44.1**	50.00	0	88.2	43.75	0.77	08/24/2015
1,2-Dibromoethane	5.0		**49.9**	50.00	0	99.7	47.84	4.16	08/24/2015
1,2-Dichlorobenzene	5.0		**49.9**	50.00	0	99.8	49.72	0.38	08/24/2015
1,2-Dichloroethane	5.0		**46.7**	50.00	0	93.4	44.67	4.44	08/24/2015
1,2-Dichloropropane	5.0		**44.4**	50.00	0	88.9	43.85	1.36	08/24/2015
1,3-Dichlorobenzene	5.0		**50.7**	50.00	0	101.4	50.77	0.14	08/24/2015
1,3-Dichloropropane	5.0		**46.4**	50.00	0	92.8	44.03	5.20	08/24/2015
1,4-Dichlorobenzene	5.0		**52.2**	50.00	0	104.3	51.93	0.44	08/24/2015
2,2-Dichloropropane	5.0		**47.7**	50.00	0	95.5	46.82	1.92	08/24/2015
2-Butanone	25.0		**129**	125.0	0	102.9	130.5	1.48	08/24/2015
2-Hexanone	25.0		**120**	125.0	0	95.7	118.2	1.19	08/24/2015
4-Methyl-2-pentanone	25.0		**114**	125.0	0	91.2	111.2	2.44	08/24/2015
Acetone	25.0		**135**	125.0	0	108.4	153.6	12.55	08/24/2015
Acetonitrile	50.0		**535**	500.0	0	107.0	533.9	0.17	08/24/2015
Acrolein	100		**356**	500.0	0	71.1	337.6	5.20	08/24/2015
Acrylonitrile	5.0		**45.6**	50.00	0	91.2	45.65	0.07	08/24/2015
Allyl chloride	5.0		**44.0**	50.00	0	87.9	42.94	2.32	08/24/2015
Benzene	2.0		**47.7**	50.00	0	95.4	45.56	4.59	08/24/2015
Bromochloromethane	5.0		**44.7**	50.00	0	89.4	43.94	1.74	08/24/2015
Bromodichloromethane	5.0		**46.2**	50.00	0	92.5	45.55	1.50	08/24/2015
Bromoform	5.0		**53.0**	50.00	0	106.0	51.09	3.63	08/24/2015
Bromomethane	10.0		**50.0**	50.00	0	100.1	48.12	3.89	08/24/2015
Carbon disulfide	5.0		**41.5**	50.00	0	83.1	39.93	3.95	08/24/2015
Carbon tetrachloride	5.0		**51.8**	50.00	0	103.6	49.58	4.42	08/24/2015
Chlorobenzene	5.0		**50.9**	50.00	0	101.9	49.69	2.46	08/24/2015
Chloroethane	10.0		**46.0**	50.00	0	92.1	44.76	2.82	08/24/2015
Chloroform	5.0		**47.4**	50.00	0	94.9	46.15	2.76	08/24/2015
Chloromethane	10.0		**38.3**	50.00	0	76.5	38.04	0.58	08/24/2015
cis-1,2-Dichloroethene	5.0		**45.7**	50.00	0	91.4	43.99	3.81	08/24/2015
cis-1,3-Dichloropropene	5.0		**45.8**	50.00	0	91.6	44.99	1.83	08/24/2015
Dibromochloromethane	5.0		**52.6**	50.00	0	105.2	50.60	3.88	08/24/2015
Dibromomethane	5.0		**47.4**	50.00	0	94.7	46.45	1.94	08/24/2015
Dichlorodifluoromethane	10.0		**30.5**	50.00	0	61.0	30.23	0.89	08/24/2015
Ethyl methacrylate	5.0		**47.4**	50.00	0	94.8	46.15	2.63	08/24/2015
Ethylbenzene	5.0		**51.1**	50.00	0	102.3	49.99	2.27	08/24/2015
Hexachlorobutadiene	5.0		**52.4**	50.00	0	104.7	53.29	1.74	08/24/2015
Hexachloroethane	10.0		**46.0**	50.00	0	92.1	46.01	0.07	08/24/2015
Iodomethane	5.0		**50.8**	50.00	0	101.6	45.37	11.31	08/24/2015
m,p-Xylenes	5.0		**102**	100.0	0	101.9	98.16	3.78	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** LCSD Units µg/L RPD Limit 40

SampID: LCSD-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methacrylonitrile	10.0		**43.5**	50.00	0	86.9	42.38	2.52	08/24/2015
Methyl Methacrylate	5.0		**45.3**	50.00	0	90.6	45.92	1.38	08/24/2015
Methylene chloride	5.0		**42.6**	50.00	0	85.1	42.08	1.11	08/24/2015
Naphthalene	10.0		**53.8**	50.00	0	107.5	50.09	7.07	08/24/2015
o-Xylene	5.0		**49.2**	50.00	0	98.4	47.89	2.70	08/24/2015
Propionitrile	50.0		**512**	500.0	0	102.3	500.2	2.26	08/24/2015
Styrene	5.0		**51.9**	50.00	0	103.8	50.06	3.65	08/24/2015
Tetrachloroethene	5.0		**47.8**	50.00	0	95.7	48.93	2.25	08/24/2015
Toluene	5.0		**49.3**	50.00	0	98.6	47.83	3.07	08/24/2015
trans-1,2-Dichloroethene	5.0		**44.9**	50.00	0	89.8	43.48	3.26	08/24/2015
trans-1,3-Dichloropropene	5.0		**48.1**	50.00	0	96.2	45.62	5.33	08/24/2015
trans-1,4-Dichloro-2-butene	10.0		**45.0**	50.00	0	90.1	42.65	5.43	08/24/2015
Trichloroethene	5.0		**46.7**	50.00	0	93.4	45.53	2.54	08/24/2015
Trichlorofluoromethane	5.0		**45.4**	50.00	0	90.8	43.83	3.52	08/24/2015
Vinyl acetate	10.0		**48.3**	50.00	0	96.5	46.36	4.02	08/24/2015
Vinyl chloride	2.0		**42.1**	50.00	0	84.3	41.28	2.06	08/24/2015
Xylenes, Total	5.0		**151**	150.0	0	100.8	146.0	3.43	08/24/2015
Surr: 1,2-Dichloroethane-d4			**47.8**	50.00		95.6			08/24/2015
Surr: 4-Bromofluorobenzene			**47.1**	50.00		94.3			08/24/2015
Surr: Dibromofluoromethane			**50.8**	50.00		101.5			08/24/2015
Surr: Toluene-d8			**49.2**	50.00		98.3			08/24/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** LCS Units µg/L
SampID: LCS-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**50.1**	50.00	0	100.3	81.9	115	08/24/2015
1,1,1-Trichloroethane	5.0		**46.1**	50.00	0	92.1	79.4	124	08/24/2015
1,1,2,2-Tetrachloroethane	5.0		**48.3**	50.00	0	96.6	74.7	116	08/24/2015
1,1,2-Trichloroethane	5.0		**44.1**	50.00	0	88.1	80.8	111	08/24/2015
1,1-Dichloroethane	5.0		**43.4**	50.00	0	86.9	79.4	114	08/24/2015
1,1-Dichloroethene	5.0		**43.7**	50.00	0	87.4	74.1	117	08/24/2015
1,1-Dichloropropene	5.0		**44.0**	50.00	0	88.0	81.7	116	08/24/2015
1,2,3-Trichloropropane	5.0		**47.8**	50.00	0	95.6	77.3	112	08/24/2015
1,2-Dibromo-3-chloropropane	5.0		**43.8**	50.00	0	87.5	76	122	08/24/2015
1,2-Dibromoethane	5.0		**47.8**	50.00	0	95.7	80.8	114	08/24/2015
1,2-Dichlorobenzene	5.0		**49.7**	50.00	0	99.4	78.3	112	08/24/2015
1,2-Dichloroethane	5.0		**44.7**	50.00	0	89.3	70.6	118	08/24/2015
1,2-Dichloropropane	5.0		**43.8**	50.00	0	87.7	79.6	113	08/24/2015
1,3-Dichlorobenzene	5.0		**50.8**	50.00	0	101.5	78.6	117	08/24/2015
1,3-Dichloropropane	5.0		**44.0**	50.00	0	88.1	78.8	112	08/24/2015
1,4-Dichlorobenzene	5.0		**51.9**	50.00	0	103.9	77.8	114	08/24/2015
2,2-Dichloropropane	5.0		**46.8**	50.00	0	93.6	74.9	130	08/24/2015
2-Butanone	25.0		**131**	125.0	0	104.4	70.7	136	08/24/2015
2-Hexanone	25.0		**118**	125.0	0	94.6	73.3	125	08/24/2015
4-Methyl-2-pentanone	25.0		**111**	125.0	0	89.0	76.3	122	08/24/2015
Acetone	25.0		**154**	125.0	0	122.9	56.4	147	08/24/2015
Acetonitrile	50.0		**534**	500.0	0	106.8	59.3	129	08/24/2015
Acrolein	100		**338**	500.0	0	67.5	1	201	08/24/2015
Acrylonitrile	5.0		**45.6**	50.00	0	91.3	74.1	128	08/24/2015
Allyl chloride	5.0		**42.9**	50.00	0	85.9	71.5	123	08/24/2015
Benzene	2.0		**45.6**	50.00	0	91.1	80	114	08/24/2015
Bromochloromethane	5.0		**43.9**	50.00	0	87.9	73.3	121	08/24/2015
Bromodichloromethane	5.0		**45.6**	50.00	0	91.1	81.6	121	08/24/2015
Bromoform	5.0		**51.1**	50.00	0	102.2	83.1	127	08/24/2015
Bromomethane	10.0		**48.1**	50.00	0	96.2	44.4	154	08/24/2015
Carbon disulfide	5.0		**39.9**	50.00	0	79.9	73.2	118	08/24/2015
Carbon tetrachloride	5.0		**49.6**	50.00	0	99.2	79.4	130	08/24/2015
Chlorobenzene	5.0		**49.7**	50.00	0	99.4	81.4	110	08/24/2015
Chloroethane	10.0		**44.8**	50.00	0	89.5	52.1	137	08/24/2015
Chloroform	5.0		**46.2**	50.00	0	92.3	82.7	116	08/24/2015
Chloromethane	10.0		**38.0**	50.00	0	76.1	48.2	144	08/24/2015
cis-1,2-Dichloroethene	5.0		**44.0**	50.00	0	88.0	78.2	116	08/24/2015
cis-1,3-Dichloropropene	5.0		**45.0**	50.00	0	90.0	83	119	08/24/2015
Dibromochloromethane	5.0		**50.6**	50.00	0	101.2	81.2	121	08/24/2015
Dibromomethane	5.0		**46.4**	50.00	0	92.9	78.3	118	08/24/2015
Dichlorodifluoromethane	10.0		**30.2**	50.00	0	60.5	20.6	154	08/24/2015
Ethyl methacrylate	5.0		**46.2**	50.00	0	92.3	80.1	113	08/24/2015
Ethylbenzene	5.0		**50.0**	50.00	0	100.0	77.2	113	08/24/2015
Hexachlorobutadiene	5.0		**53.3**	50.00	0	106.6	77.3	123	08/24/2015
Hexachloroethane	10.0		**46.0**	50.00	0	92.0	74.6	117	08/24/2015
Iodomethane	5.0		**45.4**	50.00	0	90.7	61.3	140	08/24/2015
m,p-Xylenes	5.0		**98.2**	100.0	0	98.2	79.6	113	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081254
Client Project: J024889.02 BLF
Report Date: 26-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** LCS Units µg/L
SampID: LCS-N150824-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methacrylonitrile	10.0		**42.4**	50.00	0	84.8	77.2	125	08/24/2015
Methyl Methacrylate	5.0		**45.9**	50.00	0	91.8	74.2	121	08/24/2015
Methylene chloride	5.0		**42.1**	50.00	0	84.2	74.1	114	08/24/2015
Naphthalene	10.0		**50.1**	50.00	0	100.2	77.9	122	08/24/2015
o-Xylene	5.0		**47.9**	50.00	0	95.8	80.1	111	08/24/2015
Propionitrile	50.0		**500**	500.0	0	100.0	72.9	137	08/24/2015
Styrene	5.0		**50.1**	50.00	0	100.1	83.4	113	08/24/2015
Tetrachloroethene	5.0		**48.9**	50.00	0	97.9	72.5	125	08/24/2015
Toluene	5.0		**47.8**	50.00	0	95.7	77.5	113	08/24/2015
trans-1,2-Dichloroethene	5.0		**43.5**	50.00	0	87.0	79	114	08/24/2015
trans-1,3-Dichloropropene	5.0		**45.6**	50.00	0	91.2	78	115	08/24/2015
trans-1,4-Dichloro-2-butene	10.0		**42.6**	50.00	0	85.3	63.3	128	08/24/2015
Trichloroethene	5.0		**45.5**	50.00	0	91.1	84.4	114	08/24/2015
Trichlorofluoromethane	5.0		**43.8**	50.00	0	87.7	75.2	132	08/24/2015
Vinyl acetate	10.0		**46.4**	50.00	0	92.7	64.5	127	08/24/2015
Vinyl chloride	2.0		**41.3**	50.00	0	82.6	58	134	08/24/2015
Xylenes, Total	5.0		**146**	150.0	0	97.4	80.1	111	08/24/2015
Surr: 1,2-Dichloroethane-d4			**46.4**	50.00		92.8	74.7	129	08/24/2015
Surr: 4-Bromofluorobenzene			**49.0**	50.00		98.0	86	119	08/24/2015
Surr: Dibromofluoromethane			**50.4**	50.00		100.8	81.7	123	08/24/2015
Surr: Toluene-d8			**49.2**	50.00		98.4	84.1	114	08/24/2015

Batch 111731 **SampType:** MS Units µg/L
SampID: 15081254-001IMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1-Dichloroethene	5.0		**39.5**	50.00	0	79.0	35.7	136	08/24/2015
Benzene	2.0		**71.1**	50.00	28.14	86.0	62.5	121	08/24/2015
Chlorobenzene	5.0		**47.0**	50.00	1.340	91.4	78.6	114	08/24/2015
Ethylbenzene	5.0		**48.6**	50.00	1.480	94.1	74.4	130	08/24/2015
m,p-Xylenes	5.0		**46.9**	50.00	1.270	91.2	70.5	126	08/24/2015
o-Xylene	5.0		**43.9**	50.00	0	87.8	71.2	124	08/24/2015
Toluene	5.0		**50.5**	50.00	7.100	86.8	69.5	118	08/24/2015
Trichloroethene	5.0		**44.3**	50.00	0	88.6	69.4	117	08/24/2015
Xylenes, Total	5.0		**90.8**	100.0	1.270	89.5	71.1	125	08/24/2015
Surr: 1,2-Dichloroethane-d4			**51.0**	50.00		102.1	74.7	129	08/24/2015
Surr: 4-Bromofluorobenzene			**50.5**	50.00		101.0	86	119	08/24/2015
Surr: Dibromofluoromethane			**51.3**	50.00		102.6	81.7	123	08/24/2015
Surr: Toluene-d8			**49.9**	50.00		99.8	84.3	114	08/24/2015

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081254
Report Date: 26-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111731 **SampType:** MSD Units µg/L RPD Limit 20

SampID: 15081254-001IMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1-Dichloroethene	5.0		**39.5**	50.00	0	79.0	39.48	0.03	08/24/2015
Benzene	2.0		**70.9**	50.00	28.14	85.6	71.13	0.28	08/24/2015
Chlorobenzene	5.0		**47.0**	50.00	1.340	91.3	47.04	0.13	08/24/2015
Ethylbenzene	5.0		**48.2**	50.00	1.480	93.5	48.55	0.64	08/24/2015
m,p-Xylenes	5.0		**47.4**	50.00	1.270	92.3	46.86	1.23	08/24/2015
o-Xylene	5.0		**44.3**	50.00	0	88.6	43.92	0.86	08/24/2015
Toluene	5.0		**50.9**	50.00	7.100	87.5	50.51	0.69	08/24/2015
Trichloroethene	5.0		**44.5**	50.00	0	89.0	44.30	0.41	08/24/2015
Xylenes, Total	5.0		**91.7**	100.0	1.270	90.5	90.78	1.05	08/24/2015
Surr: 1,2-Dichloroethane-d4			**50.9**	50.00		101.8			08/24/2015
Surr: 4-Bromofluorobenzene			**49.9**	50.00		99.9			08/24/2015
Surr: Dibromofluoromethane			**50.6**	50.00		101.2			08/24/2015
Surr: Toluene-d8			**49.2**	50.00		98.4			08/24/2015

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: J024889.02 BLF

Work Order: 15081254
Report Date: 26-Aug-15

Carrier: Anthony Kimutis

Received By: EEP

Completed by: Emily E. Pohlman
On: 21-Aug-15

Reviewed by: Elizabeth A. Hurley
On: 21-Aug-15

Pages to follow: Chain of custody [1] Extra pages included [0]

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 5.42
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
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 ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Three of the MO-3-SS vials were broken in the laboratory during sample log in. MAK 8/21/15

Additional nitric acid was needed in MO-3-SS upon arrival at the laboratory. MAK 8/21/15

Trip Blank collection date and time will be reported as the received date and time (end of trip).

State of MO v. Republic Services, Inc. et al
Price - 0000610

CHAIN OF CUSTODY

pg. ____ of ____ Work Order # 1508254

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

State of MO v. Republic Services, Inc. et al
Price - 0000611

Client: MO State Atty Generals Office
Address: c/o MDNR
City / State / Zip:
Contact: Peter Price Phone:
E-Mail: peter.price@dnr.mo.gov Fax:

Samples on: ☑ Ice ☐ Blue Ice ☐ No Ice 5 c/2 °C
Preserved in: ☒ Lab ☐ Field
FOR LAB USE ONLY
Lab Notes: 8/21/15 SAH Added HNO3 to MS/MSD ONE DAY TAT
Comments: OK head Space MRK 8/21/15 Courier

Are these samples known to be involved in litigation? If yes, a surcharge will apply. ☐ Yes ☐ No
Are these samples known to be hazardous? ☐ Yes ☐ No
Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in comment section. ☐ Yes ☐ No

Project Name / Number	Sample Collector's Name
JO24889.02 BLF	Vince Epps

Results Requested: Standard ☒ 1-2 Day (100% Surcharge) ☐ Other ____ ☐ 3 Day (50% Surcharge)
Billing Instructions: MO AGO

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO_3	NaOH	H_2SO_4	HCL	MeOH	$NaHSO_4$	Other	MATRIX: Water	Drinking Water	Soil	Sludge	Sp. Waste	INDICATE ANALYSIS REQUESTED: List 1	List 2
1508254-01	MO-3-SS	8/20/15 1000									X					X	X
-02	MO-2-SD	8/20/15 1600									X					X	X
-03	MO-3-SDR	8/20/15 1245									X					X	X
	MS MSD	8/20/15 1000									X						X
-04	Trip Blank						4										

Relinquished By	Date / Time	Received By	Date / Time
	8/21/15 0800		8/21/15 1115
	8/21/15 1230		8/21/15 1230

The individual signing this agreement on behalf of client acknowledges that he/she has read and understands the terms and conditions of this agreement, on the reverse side, and that he/she has the authority to sign on behalf of client.

WHITE – LAB YELLOW – SAMPLER'S COPY

August 28, 2015

Brenna McDonald
Missouri Geological Survey
111 Fairgrounds Road
Rolla, MO 65401
TEL: (573) 368-2163
FAX:

RE: Bridgeton Landfill

WorkOrder: 15081255

Dear Brenna McDonald:

TEKLAB, INC received 4 samples on 8/21/2015 12:30:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

State of MO v. Republic Services, Inc. et al
Price - 0000612

Report Contents

Client: Missouri Geological Survey
Client Project: Bridgeton Landfill

Work Order: 15081255
Report Date: 28-Aug-15

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	4
Laboratory Results	5
Sample Summary	22
Dates Report	23
Quality Control Results	25
Receiving Check List	43
Chain of Custody	Appended

Client: Missouri Geological Survey
Work Order: 15081255

Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

Abbr Definition

CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
DNI	Did not ignite
DUP	Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Qualifiers

# - Unknown hydrocarbon	B - Analyte detected in associated Method Blank
E - Value above quantitation range	H - Holding times exceeded
I - Associated internal standard was outside method criteria	J - Analyte detected below quantitation limits
M - Manual Integration used to determine area response	ND - Not Detected at the Reporting Limit
R - RPD outside accepted recovery limits	S - Spike Recovery outside recovery limits
T - TIC(Tentatively identified compound)	X - Value exceeds Maximum Contaminant Level

State of MO v. Republic Services, Inc. et al
Price - 0000614

Client: Missouri Geological Survey
Client Project: Bridgeton Landfill

Work Order: 15081255
Report Date: 28-Aug-15

Cooler Receipt Temp: 3.02 °C

Locations and Accreditations

	Collinsville	Springfield	Kansas City	Collinsville Air
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425	3920 Pintail Dr Springfield, IL 62711-9415	8421 Nieman Road Lenexa, KS 66214	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004	(217) 698-1004	(913) 541-1998	(618) 344-1004
Fax	(618) 344-1005	(217) 698-1005	(913) 541-1998	(618) 344-1005
Email	jhriley@teklabinc.com	KKlostermann@teklabinc.com	dthompson@teklabinc.com	EHurley@teklabinc.com

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2016	Collinsville
Kansas	KDHE	E-10374	NELAP	9/30/2015	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2016	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2016	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2016	Collinsville
Arkansas	ADEQ	88-0966		3/14/2016	Collinsville
Illinois	IDPH	17584		5/31/2017	Collinsville
Kentucky	KDEP	98006		12/31/2015	Collinsville
Kentucky	UST	0073		1/31/2016	Collinsville
Missouri	MDNR	00930		5/31/2015	Collinsville
Oklahoma	ODEQ	9978		8/31/2015	Collinsville

State of MO v. Republic Services, Inc. et al
Price - 0000615

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15
Lab ID: 15081255-001
Client Sample ID: PZ-210-SD
Matrix: AQUEOUS
Collection Date: 08/19/2015 14:36

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 4500-S D (TOTAL)								
Sulfide, Total - Colorimetric	NELAP	0.50	J	**0.3**	mg/L	10	08/26/2015 13:15	R208541
Elevated reporting limit due to matrix interference.								
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.007	R	**< 0.007**	mg/L	1	08/24/2015 15:54	111747
RPD for MS/MSD was outside of QC limit.								
Insufficient sample for re-analysis.								
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	08/24/2015 16:02	111715
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	08/24/2015 16:02	111715
Barium	NELAP	0.0025		**0.0848**	mg/L	1	08/24/2015 16:02	111715
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/24/2015 16:02	111715
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/24/2015 16:02	111715
Chromium	NELAP	0.0050	J	**0.0020**	mg/L	1	08/24/2015 16:02	111715
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/24/2015 16:02	111715
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	08/24/2015 16:02	111715
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	08/24/2015 16:02	111715
Magnesium	NELAP	0.0500	S	**44.6**	mg/L	1	08/24/2015 16:02	111715
Manganese	NELAP	0.0030		**0.116**	mg/L	1	08/24/2015 16:02	111715
Nickel	NELAP	0.0050		**0.0072**	mg/L	1	08/24/2015 16:02	111715
Selenium	NELAP	0.0400		**< 0.0400**	mg/L	1	08/24/2015 16:02	111715
Silver	NELAP	0.0050		**< 0.0050**	mg/L	1	08/24/2015 16:02	111715
Thallium	NELAP	0.0500		**< 0.0500**	mg/L	1	08/24/2015 16:02	111715
Tin	NELAP	0.0200		**< 0.0200**	mg/L	1	08/24/2015 16:02	111715
Vanadium	NELAP	0.0100		**< 0.0100**	mg/L	1	08/24/2015 16:02	111715
Zinc	NELAP	0.0100	J	**0.0045**	mg/L	1	08/24/2015 16:02	111715
MS QC limits for Mg are not applicable due to high sample/spike ratio.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/24/2015 13:34	111717
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4'-DDD	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
4,4'-DDE	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
4,4'-DDT	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
Aldrin	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
alpha-BHC	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
beta-BHC	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
Chlordane	NELAP	0.50		**ND**	µg/L	1	08/25/2015 12:45	111760
delta-BHC	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
Dieldrin	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
Endosulfan I	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
Endosulfan II	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
Endosulfan sulfate	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
Endrin	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
Endrin aldehyde	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
gamma-BHC	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
Heptachlor	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
Heptachlor epoxide	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760
Methoxychlor	NELAP	0.05		**ND**	µg/L	1	08/25/2015 12:45	111760

Client: Missouri Geological Survey | **Work Order:** 15081255

Client Project: Bridgeton Landfill | **Report Date:** 28-Aug-15

Lab ID: 15081255-001 | **Client Sample ID:** PZ-210-SD

Matrix: AQUEOUS | **Collection Date:** 08/19/2015 14:36

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
Toxaphene	NELAP	0.50		ND	µg/L	1	08/25/2015 12:45	111760
Surr: Decachlorobiphenyl		5.54-150		61.4	%REC	1	08/25/2015 12:45	111760
Surr: Tetrachloro-m-xylene		13-129		82.8	%REC	1	08/25/2015 12:45	111760
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	08/25/2015 10:38	111760
Aroclor 1221	NELAP	1.00		ND	µg/L	1	08/25/2015 10:38	111760
Aroclor 1232	NELAP	1.00		ND	µg/L	1	08/25/2015 10:38	111760
Aroclor 1242	NELAP	1.00		ND	µg/L	1	08/25/2015 10:38	111760
Aroclor 1248	NELAP	1.00		ND	µg/L	1	08/25/2015 10:38	111760
Aroclor 1254	NELAP	1.00		ND	µg/L	1	08/25/2015 10:38	111760
Aroclor 1260	NELAP	1.00		ND	µg/L	1	08/25/2015 10:38	111760
Surr: Decachlorobiphenyl		5-174		72.7	%REC	1	08/25/2015 10:38	111760
Surr: Tetrachloro-meta-xylene		22.2-139		85.5	%REC	1	08/25/2015 10:38	111760
SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD								
2,4,5-T	NELAP	0.200		ND	µg/L	1	08/26/2015 13:58	111790
2,4,5-TP (Silvex)	NELAP	0.200		ND	µg/L	1	08/26/2015 13:58	111790
2,4-D	NELAP	0.200		ND	µg/L	1	08/26/2015 13:58	111790
Dinoseb	NELAP	0.200		ND	µg/L	1	08/26/2015 13:58	111790
Surr: 2,4-Dichlorophenylacetic acid		9.03-112		58.3	%REC	1	08/26/2015 13:58	111790
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,4-Trichlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
2,4,5-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
2,4,6-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
2,4-Dichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
2,4-Dimethylphenol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
2,4-Dinitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:16	111713
2,4-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
2,6-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
2-Chloronaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
2-Chlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
2-Methylnaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
2-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 15:16	111713
2-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:16	111713
3,3`-Dichlorobenzidine	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
3-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 15:16	111713
4,6-Dinitro-2-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:16	111713
4-Bromophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
4-Chloro-3-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:16	111713
4-Chloroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 15:16	111713
4-Chlorophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
4-Nitroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 15:16	111713
4-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:16	111713
Acenaphthene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Acenaphthylene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Benzo(a)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Benzo(a)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713

Client: Missouri Geological Survey | **Work Order:** 15081255

Client Project: Bridgeton Landfill | **Report Date:** 28-Aug-15

Lab ID: 15081255-001 | **Client Sample ID:** PZ-210-SD

Matrix: AQUEOUS | **Collection Date:** 08/19/2015 14:36

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Benzo(b)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Benzo(g,h,i)perylene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Benzo(k)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Benzyl alcohol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:16	111713
Bis(2-chloroethoxy)methane	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Bis(2-chloroethyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Bis(2-chloroisopropyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Bis(2-ethylhexyl)phthalate	NELAP	0.006		ND	mg/L	1	08/24/2015 15:16	111713
Butyl benzyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Chrysene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Dibenzo(a,h)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Dibenzofuran	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Diethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Dimethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Di-n-butyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Di-n-octyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Fluorene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Hexachlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Hexachlorocyclopentadiene	NELAP	0.020		ND	mg/L	1	08/24/2015 15:16	111713
Indeno(1,2,3-cd)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Isophorone	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
m,p-Cresol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Naphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Nitrobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
N-Nitrosodimethylamine	NELAP	0.020		ND	mg/L	1	08/24/2015 15:16	111713
N-Nitroso-di-n-propylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
N-Nitrosodiphenylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
o-Cresol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Pentachlorophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:16	111713
Phenanthrene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
Phenol	NELAP	0.005		ND	mg/L	1	08/24/2015 15:16	111713
Pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:16	111713
1,2-Diphenylhydrazine		0.010		ND	mg/L	1	08/24/2015 15:16	111713
Surr: 2,4,6-Tribromophenol		36.9-125		80.7	%REC	1	08/24/2015 15:16	111713
Surr: 2-Fluorobiphenyl		36.7-114		70.3	%REC	1	08/24/2015 15:16	111713
Surr: 2-Fluorophenol		23.9-78.3		41.4	%REC	1	08/24/2015 15:16	111713
Surr: Nitrobenzene-d5		49.9-124		65.7	%REC	1	08/24/2015 15:16	111713
Surr: Phenol-d5		14.1-51.6		31.9	%REC	1	08/24/2015 15:16	111713
Surr: p-Terphenyl-d14		41.6-133		56.2	%REC	1	08/24/2015 15:16	111713
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,1,1-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,1,2,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,1,2-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,1-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,1-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15
Lab ID: 15081255-001
Client Sample ID: PZ-210-SD
Matrix: AQUEOUS
Collection Date: 08/19/2015 14:36

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,2,3-Trichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,2-Dibromo-3-chloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,2-Dibromoethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,2-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,2-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,3-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,3-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
1,4-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
2,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
2-Butanone	NELAP	25.0		ND	µg/L	1	08/25/2015 10:41	111788
2-Hexanone	NELAP	25.0		ND	µg/L	1	08/25/2015 10:41	111788
4-Methyl-2-pentanone	NELAP	25.0		ND	µg/L	1	08/25/2015 10:41	111788
Acetone	NELAP	25.0		ND	µg/L	1	08/25/2015 10:41	111788
Acetonitrile	NELAP	50.0		ND	µg/L	1	08/25/2015 10:41	111788
Acrolein	NELAP	100		ND	µg/L	1	08/25/2015 10:41	111788
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Benzene	NELAP	2.0		3.2	µg/L	1	08/25/2015 10:41	111788
Bromochloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Bromodichloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Bromoform	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Bromomethane	NELAP	10.0		ND	µg/L	1	08/25/2015 10:41	111788
Carbon disulfide	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Carbon tetrachloride	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Chlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Chloroethane	NELAP	10.0		ND	µg/L	1	08/25/2015 10:41	111788
Chloroform	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Chloromethane	NELAP	10.0		ND	µg/L	1	08/25/2015 10:41	111788
cis-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
cis-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Dibromochloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Dibromomethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Dichlorodifluoromethane	NELAP	10.0		ND	µg/L	1	08/25/2015 10:41	111788
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Ethylbenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Hexachloroethane	NELAP	10.0		ND	µg/L	1	08/25/2015 10:41	111788
Iodomethane	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
m,p-Xylenes	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Methacrylonitrile	NELAP	10.0		ND	µg/L	1	08/25/2015 10:41	111788
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Methylene chloride	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Naphthalene	NELAP	10.0		ND	µg/L	1	08/25/2015 10:41	111788
o-Xylene	NELAP	5.0		ND	µg/L	1	08/25/2015 10:41	111788
Propionitrile	NELAP	50.0		ND	µg/L	1	08/25/2015 10:41	111788

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15
Lab ID: 15081255-001
Client Sample ID: PZ-210-SD
Matrix: AQUEOUS
Collection Date: 08/19/2015 14:36

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Styrene	NELAP	5.0		**ND**	µg/L	1	08/25/2015 10:41	111788
Tetrachloroethene	NELAP	5.0		**ND**	µg/L	1	08/25/2015 10:41	111788
Toluene	NELAP	5.0		**ND**	µg/L	1	08/25/2015 10:41	111788
trans-1,2-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	08/25/2015 10:41	111788
trans-1,3-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	08/25/2015 10:41	111788
trans-1,4-Dichloro-2-butene	NELAP	10.0		**ND**	µg/L	1	08/25/2015 10:41	111788
Trichloroethene	NELAP	5.0	S	**ND**	µg/L	1	08/25/2015 10:41	111788
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	08/25/2015 10:41	111788
Vinyl acetate	NELAP	10.0		**ND**	µg/L	1	08/25/2015 10:41	111788
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	08/25/2015 10:41	111788
Xylenes, Total	NELAP	5.0		**ND**	µg/L	1	08/25/2015 10:41	111788
Surr: 1,2-Dichloroethane-d4		74.7-129		**95.3**	%REC	1	08/25/2015 10:41	111788
Surr: 4-Bromofluorobenzene		86-119		**97.5**	%REC	1	08/25/2015 10:41	111788
Surr: Dibromofluoromethane		81.7-123		**97.9**	%REC	1	08/25/2015 10:41	111788
Surr: Toluene-d8		84.3-114		**93.0**	%REC	1	08/25/2015 10:41	111788

MS recovered outside upper QC limits for trichloroethene. Sample results are below reporting limit. Data is reportable per 2009 TNI Standard (Volume1, Module 4, section 1.7.4.2).

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15
Lab ID: 15081255-002
Client Sample ID: PZ-211-SD
Matrix: AQUEOUS
Collection Date: 08/20/2015 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 4500-S D (TOTAL)								
Sulfide, Total - Colorimetric	NELAP	0.75		2.4	mg/L	15	08/25/2015 15:43	R208489
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.007		< 0.007	mg/L	1	08/24/2015 15:37	111747
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 16:13	111715
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	08/24/2015 16:13	111715
Barium	NELAP	0.0025		0.0433	mg/L	1	08/24/2015 16:13	111715
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	08/24/2015 16:13	111715
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	08/24/2015 16:13	111715
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 16:13	111715
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 16:13	111715
Copper	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 16:13	111715
Lead	NELAP	0.0150		< 0.0150	mg/L	1	08/24/2015 16:13	111715
Magnesium	NELAP	0.0500		28.3	mg/L	1	08/24/2015 16:13	111715
Manganese	NELAP	0.0030		0.0475	mg/L	1	08/24/2015 16:13	111715
Nickel	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 16:13	111715
Selenium	NELAP	0.0400		< 0.0400	mg/L	1	08/24/2015 16:13	111715
Silver	NELAP	0.0050		< 0.0050	mg/L	1	08/24/2015 16:13	111715
Thallium	NELAP	0.0500		< 0.0500	mg/L	1	08/24/2015 16:13	111715
Tin	NELAP	0.0200		< 0.0200	mg/L	1	08/24/2015 16:13	111715
Vanadium	NELAP	0.0100		< 0.0100	mg/L	1	08/24/2015 16:13	111715
Zinc	NELAP	0.0100	J	0.0023	mg/L	1	08/24/2015 16:13	111715
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	08/24/2015 13:36	111717
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4`-DDD	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
4,4`-DDE	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
4,4`-DDT	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Aldrin	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
alpha-BHC	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
beta-BHC	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Chlordane	NELAP	0.50		ND	µg/L	1	08/25/2015 13:09	111760
delta-BHC	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Dieldrin	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Endosulfan I	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Endosulfan II	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Endosulfan sulfate	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Endrin	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Endrin aldehyde	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
gamma-BHC	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Heptachlor	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Heptachlor epoxide	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Methoxychlor	NELAP	0.05		ND	µg/L	1	08/25/2015 13:09	111760
Toxaphene	NELAP	0.50		ND	µg/L	1	08/25/2015 13:09	111760
Surr: Decachlorobiphenyl		5.54-150		68.4	%REC	1	08/25/2015 13:09	111760
Surr: Tetrachloro-m-xylene		13-129		75.2	%REC	1	08/25/2015 13:09	111760

Client: Missouri Geological Survey
Work Order: 15081255
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Collection Date: 08/20/2015 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	08/25/2015 11:45	111760
Aroclor 1221	NELAP	1.00		ND	µg/L	1	08/25/2015 11:45	111760
Aroclor 1232	NELAP	1.00		ND	µg/L	1	08/25/2015 11:45	111760
Aroclor 1242	NELAP	1.00		ND	µg/L	1	08/25/2015 11:45	111760
Aroclor 1248	NELAP	1.00		ND	µg/L	1	08/25/2015 11:45	111760
Aroclor 1254	NELAP	1.00		ND	µg/L	1	08/25/2015 11:45	111760
Aroclor 1260	NELAP	1.00		ND	µg/L	1	08/25/2015 11:45	111760
Surr: Decachlorobiphenyl		5-174		78.5	%REC	1	08/25/2015 11:45	111760
Surr: Tetrachloro-meta-xylene		22.2-139		65.5	%REC	1	08/25/2015 11:45	111760
SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD								
2,4,5-T	NELAP	0.200		ND	µg/L	1	08/26/2015 14:29	111790
2,4,5-TP (Silvex)	NELAP	0.200		ND	µg/L	1	08/26/2015 14:29	111790
2,4-D	NELAP	0.200		ND	µg/L	1	08/26/2015 14:29	111790
Dinoseb	NELAP	0.200		ND	µg/L	1	08/26/2015 14:29	111790
Surr: 2,4-Dichlorophenylacetic acid		9.03-112		72.7	%REC	1	08/26/2015 14:29	111790
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,4-Trichlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
2,4,5-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
2,4,6-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
2,4-Dichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
2,4-Dimethylphenol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
2,4-Dinitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:48	111713
2,4-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
2,6-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
2-Chloronaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
2-Chlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
2-Methylnaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
2-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 15:48	111713
2-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:48	111713
3,3'-Dichlorobenzidine	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
3-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 15:48	111713
4,6-Dinitro-2-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:48	111713
4-Bromophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
4-Chloro-3-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:48	111713
4-Chloroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 15:48	111713
4-Chlorophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
4-Nitroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 15:48	111713
4-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:48	111713
Acenaphthene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Acenaphthylene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Benzo(a)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Benzo(a)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Benzo(b)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Benzo(g,h,i)perylene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Benzo(k)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Benzyl alcohol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:48	111713

Client: Missouri Geological Survey
Work Order: 15081255
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Collection Date: 08/20/2015 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Bis(2-chloroethoxy)methane	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Bis(2-chloroethyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Bis(2-chloroisopropyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Bis(2-ethylhexyl)phthalate	NELAP	0.006		ND	mg/L	1	08/24/2015 15:48	111713
Butyl benzyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Chrysene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Dibenzo(a,h)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Dibenzofuran	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Diethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Dimethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Di-n-butyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Di-n-octyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Fluorene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Hexachlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Hexachlorocyclopentadiene	NELAP	0.020		ND	mg/L	1	08/24/2015 15:48	111713
Indeno(1,2,3-cd)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Isophorone	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
m,p-Cresol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Naphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Nitrobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
N-Nitrosodimethylamine	NELAP	0.020		ND	mg/L	1	08/24/2015 15:48	111713
N-Nitroso-di-n-propylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
N-Nitrosodiphenylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
o-Cresol	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Pentachlorophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 15:48	111713
Phenanthrene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
Phenol	NELAP	0.005		ND	mg/L	1	08/24/2015 15:48	111713
Pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 15:48	111713
1,2-Diphenylhydrazine		0.010		ND	mg/L	1	08/24/2015 15:48	111713
Surr: 2,4,6-Tribromophenol		36.9-125		81.3	%REC	1	08/24/2015 15:48	111713
Surr: 2-Fluorobiphenyl		36.7-114		66.7	%REC	1	08/24/2015 15:48	111713
Surr: 2-Fluorophenol		23.9-78.3		41.8	%REC	1	08/24/2015 15:48	111713
Surr: Nitrobenzene-d5		49.9-124		59.2	%REC	1	08/24/2015 15:48	111713
Surr: Phenol-d5		14.1-51.6		31.6	%REC	1	08/24/2015 15:48	111713
Surr: p-Terphenyl-d14		41.6-133		77.0	%REC	1	08/24/2015 15:48	111713
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,1,1-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,1,2,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,1,2-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,1-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,1-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,1-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,2,3-Trichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,2-Dibromo-3-chloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,2-Dibromoethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788

Client: Missouri Geological Survey
Work Order: 15081255

Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

Lab ID: 15081255-002
Client Sample ID: PZ-211-SD

Matrix: AQUEOUS
Collection Date: 08/20/2015 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,2-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,3-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,3-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
1,4-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
2,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
2-Butanone	NELAP	25.0		ND	µg/L	1	08/25/2015 11:08	111788
2-Hexanone	NELAP	25.0		ND	µg/L	1	08/25/2015 11:08	111788
4-Methyl-2-pentanone	NELAP	25.0		ND	µg/L	1	08/25/2015 11:08	111788
Acetone	NELAP	25.0		ND	µg/L	1	08/25/2015 11:08	111788
Acetonitrile	NELAP	50.0		ND	µg/L	1	08/25/2015 11:08	111788
Acrolein	NELAP	100		ND	µg/L	1	08/25/2015 11:08	111788
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Benzene	NELAP	2.0		4.0	µg/L	1	08/25/2015 11:08	111788
Bromochloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Bromodichloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Bromoform	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Bromomethane	NELAP	10.0		ND	µg/L	1	08/25/2015 11:08	111788
Carbon disulfide	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Carbon tetrachloride	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Chlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Chloroethane	NELAP	10.0		ND	µg/L	1	08/25/2015 11:08	111788
Chloroform	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Chloromethane	NELAP	10.0		ND	µg/L	1	08/25/2015 11:08	111788
cis-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
cis-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Dibromochloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Dibromomethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Dichlorodifluoromethane	NELAP	10.0		ND	µg/L	1	08/25/2015 11:08	111788
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Ethylbenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Hexachloroethane	NELAP	10.0		ND	µg/L	1	08/25/2015 11:08	111788
Iodomethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
m,p-Xylenes	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Methacrylonitrile	NELAP	10.0		ND	µg/L	1	08/25/2015 11:08	111788
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Methylene chloride	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Naphthalene	NELAP	10.0		ND	µg/L	1	08/25/2015 11:08	111788
o-Xylene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Propionitrile	NELAP	50.0		ND	µg/L	1	08/25/2015 11:08	111788
Styrene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Tetrachloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
Toluene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788
trans-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:08	111788

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15
Lab ID: 15081255-002
Client Sample ID: PZ-211-SD
Matrix: AQUEOUS
Collection Date: 08/20/2015 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
trans-1,3-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	08/25/2015 11:08	111788
trans-1,4-Dichloro-2-butene	NELAP	10.0		**ND**	µg/L	1	08/25/2015 11:08	111788
Trichloroethene	NELAP	5.0		**ND**	µg/L	1	08/25/2015 11:08	111788
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	08/25/2015 11:08	111788
Vinyl acetate	NELAP	10.0		**ND**	µg/L	1	08/25/2015 11:08	111788
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	08/25/2015 11:08	111788
Xylenes, Total	NELAP	5.0		**ND**	µg/L	1	08/25/2015 11:08	111788
Surr: 1,2-Dichloroethane-d4		74.7-129		**94.0**	%REC	1	08/25/2015 11:08	111788
Surr: 4-Bromofluorobenzene		86-119		**96.8**	%REC	1	08/25/2015 11:08	111788
Surr: Dibromofluoromethane		81.7-123		**98.4**	%REC	1	08/25/2015 11:08	111788
Surr: Toluene-d8		84.3-114		**92.4**	%REC	1	08/25/2015 11:08	111788

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15
Lab ID: 15081255-003
Client Sample ID: PZ-104-SD
Matrix: AQUEOUS
Collection Date: 08/20/2015 12:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 4500-S D (TOTAL)								
Sulfide, Total - Colorimetric	NELAP	0.25		**0.38**	mg/L	5	08/25/2015 15:48	R208489
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.007		**< 0.007**	mg/L	1	08/24/2015 15:41	111747
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	08/24/2015 16:17	111715
Arsenic	NELAP	0.0250	J	**0.017**	mg/L	1	08/24/2015 16:17	111715
Barium	NELAP	0.0025		**0.635**	mg/L	1	08/24/2015 16:17	111715
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/24/2015 16:17	111715
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/24/2015 16:17	111715
Chromium	NELAP	0.0050		**0.0138**	mg/L	1	08/24/2015 16:17	111715
Cobalt	NELAP	0.0050		**0.0050**	mg/L	1	08/24/2015 16:17	111715
Copper	NELAP	0.0050	J	**0.0031**	mg/L	1	08/24/2015 16:17	111715
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	08/24/2015 16:17	111715
Magnesium	NELAP	0.0500		**64.0**	mg/L	1	08/24/2015 16:17	111715
Manganese	NELAP	0.0030		**0.153**	mg/L	1	08/24/2015 16:17	111715
Nickel	NELAP	0.0050		**0.0637**	mg/L	1	08/24/2015 16:17	111715
Selenium	NELAP	0.0400		**< 0.0400**	mg/L	1	08/24/2015 16:17	111715
Silver	NELAP	0.0050		**< 0.0050**	mg/L	1	08/24/2015 16:17	111715
Thallium	NELAP	0.0500		**< 0.0500**	mg/L	1	08/24/2015 16:17	111715
Tin	NELAP	0.0200		**< 0.0200**	mg/L	1	08/24/2015 16:17	111715
Vanadium	NELAP	0.0100		**0.0117**	mg/L	1	08/24/2015 16:17	111715
Zinc	NELAP	0.0100		**0.0101**	mg/L	1	08/24/2015 16:17	111715
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/24/2015 13:43	111717
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4'-DDD	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
4,4'-DDE	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
4,4'-DDT	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Aldrin	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
alpha-BHC	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
beta-BHC	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Chlordane	NELAP	0.50		**ND**	µg/L	1	08/25/2015 13:33	111760
delta-BHC	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Dieldrin	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Endosulfan I	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Endosulfan II	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Endosulfan sulfate	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Endrin	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Endrin aldehyde	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
gamma-BHC	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Heptachlor	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Heptachlor epoxide	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Methoxychlor	NELAP	0.05		**ND**	µg/L	1	08/25/2015 13:33	111760
Toxaphene	NELAP	0.50		**ND**	µg/L	1	08/25/2015 13:33	111760
Surr: Decachlorobiphenyl		5.54-150		**34.5**	%REC	1	08/25/2015 13:33	111760
Surr: Tetrachloro-m-xylene		13-129		**72.3**	%REC	1	08/25/2015 13:33	111760

Client: Missouri Geological Survey
Work Order: 15081255

Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

Lab ID: 15081255-003
Client Sample ID: PZ-104-SD

Matrix: AQUEOUS
Collection Date: 08/20/2015 12:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	08/25/2015 11:12	111760
Aroclor 1221	NELAP	1.00		ND	µg/L	1	08/25/2015 11:12	111760
Aroclor 1232	NELAP	1.00		ND	µg/L	1	08/25/2015 11:12	111760
Aroclor 1242	NELAP	1.00		ND	µg/L	1	08/25/2015 11:12	111760
Aroclor 1248	NELAP	1.00		ND	µg/L	1	08/25/2015 11:12	111760
Aroclor 1254	NELAP	1.00		ND	µg/L	1	08/25/2015 11:12	111760
Aroclor 1260	NELAP	1.00		ND	µg/L	1	08/25/2015 11:12	111760
Surr: Decachlorobiphenyl		5-174		39.9	%REC	1	08/25/2015 11:12	111760
Surr: Tetrachloro-meta-xylene		22.2-139		71.6	%REC	1	08/25/2015 11:12	111760
SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD								
2,4,5-T	NELAP	0.200		ND	µg/L	1	08/26/2015 15:00	111790
2,4,5-TP (Silvex)	NELAP	0.200		ND	µg/L	1	08/26/2015 15:00	111790
2,4-D	NELAP	0.200		ND	µg/L	1	08/26/2015 15:00	111790
Dinoseb	NELAP	0.200		ND	µg/L	1	08/26/2015 15:00	111790
Surr: 2,4-Dichlorophenylacetic acid		9.03-112	S	0	%REC	1	08/26/2015 15:00	111790
Surrogate recovery could not be quantitated due to matrix interference.								
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,4-Trichlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
2,4,5-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
2,4,6-Trichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
2,4-Dichlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
2,4-Dimethylphenol	NELAP	0.010	J	0.003	mg/L	1	08/24/2015 16:20	111713
2,4-Dinitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 16:20	111713
2,4-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
2,6-Dinitrotoluene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
2-Chloronaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
2-Chlorophenol	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
2-Methylnaphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
2-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 16:20	111713
2-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 16:20	111713
3,3'-Dichlorobenzidine	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
3-Nitroaniline	NELAP	0.040		ND	mg/L	1	08/24/2015 16:20	111713
4,6-Dinitro-2-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 16:20	111713
4-Bromophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
4-Chloro-3-methylphenol	NELAP	0.020		ND	mg/L	1	08/24/2015 16:20	111713
4-Chloroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 16:20	111713
4-Chlorophenyl phenyl ether	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
4-Nitroaniline	NELAP	0.020		ND	mg/L	1	08/24/2015 16:20	111713
4-Nitrophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 16:20	111713
Acenaphthene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Acenaphthylene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Benzo(a)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Benzo(a)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Benzo(b)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Benzo(g,h,i)perylene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Benzo(k)fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713

Client: Missouri Geological Survey
Work Order: 15081255
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Matrix: AQUEOUS
Collection Date: 08/20/2015 12:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Benzyl alcohol	NELAP	0.020		ND	mg/L	1	08/24/2015 16:20	111713
Bis(2-chloroethoxy)methane	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Bis(2-chloroethyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Bis(2-chloroisopropyl)ether	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Bis(2-ethylhexyl)phthalate	NELAP	0.006		ND	mg/L	1	08/24/2015 16:20	111713
Butyl benzyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Chrysene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Dibenzo(a,h)anthracene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Dibenzofuran	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Diethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Dimethyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Di-n-butyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Di-n-octyl phthalate	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Fluoranthene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Fluorene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Hexachlorobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Hexachlorocyclopentadiene	NELAP	0.020		ND	mg/L	1	08/24/2015 16:20	111713
Indeno(1,2,3-cd)pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Isophorone	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
m,p-Cresol	NELAP	0.010		0.063	mg/L	1	08/24/2015 16:20	111713
Naphthalene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Nitrobenzene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
N-Nitrosodimethylamine	NELAP	0.020		ND	mg/L	1	08/24/2015 16:20	111713
N-Nitroso-di-n-propylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
N-Nitrosodiphenylamine	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
o-Cresol	NELAP	0.010	J	0.002	mg/L	1	08/24/2015 16:20	111713
Pentachlorophenol	NELAP	0.020		ND	mg/L	1	08/24/2015 16:20	111713
Phenanthrene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
Phenol	NELAP	0.005	J	0.004	mg/L	1	08/24/2015 16:20	111713
Pyrene	NELAP	0.010		ND	mg/L	1	08/24/2015 16:20	111713
1,2-Diphenylhydrazine		0.010		ND	mg/L	1	08/24/2015 16:20	111713
Surr: 2,4,6-Tribromophenol		36.9-125		82.8	%REC	1	08/24/2015 16:20	111713
Surr: 2-Fluorobiphenyl		36.7-114		61.8	%REC	1	08/24/2015 16:20	111713
Surr: 2-Fluorophenol		23.9-78.3		38.3	%REC	1	08/24/2015 16:20	111713
Surr: Nitrobenzene-d5		49.9-124		55.0	%REC	1	08/24/2015 16:20	111713
Surr: Phenol-d5		14.1-51.6		30.6	%REC	1	08/24/2015 16:20	111713
Surr: p-Terphenyl-d14		41.6-133		73.8	%REC	1	08/24/2015 16:20	111713
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,1,1-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,1,2,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,1,2-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,1-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,1-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,1-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,2,3-Trichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,2-Dibromo-3-chloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788

Client: Missouri Geological Survey
Work Order: 15081255

Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

Lab ID: 15081255-003
Client Sample ID: PZ-104-SD

Matrix: AQUEOUS
Collection Date: 08/20/2015 12:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2-Dibromoethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,2-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,2-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,3-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,3-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
1,4-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
2,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
2-Butanone	NELAP	25.0		ND	µg/L	1	08/25/2015 11:35	111788
2-Hexanone	NELAP	25.0		ND	µg/L	1	08/25/2015 11:35	111788
4-Methyl-2-pentanone	NELAP	25.0		ND	µg/L	1	08/25/2015 11:35	111788
Acetone	NELAP	25.0		ND	µg/L	1	08/25/2015 11:35	111788
Acetonitrile	NELAP	50.0		ND	µg/L	1	08/25/2015 11:35	111788
Acrolein	NELAP	100		ND	µg/L	1	08/25/2015 11:35	111788
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Benzene	NELAP	20.0		648	µg/L	10	08/25/2015 12:27	111788
Bromochloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Bromodichloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Bromoform	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Bromomethane	NELAP	10.0		ND	µg/L	1	08/25/2015 11:35	111788
Carbon disulfide	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Carbon tetrachloride	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Chlorobenzene	NELAP	5.0	J	1.9	µg/L	1	08/25/2015 11:35	111788
Chloroethane	NELAP	10.0		ND	µg/L	1	08/25/2015 11:35	111788
Chloroform	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Chloromethane	NELAP	10.0		ND	µg/L	1	08/25/2015 11:35	111788
cis-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
cis-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Dibromochloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Dibromomethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Dichlorodifluoromethane	NELAP	10.0		ND	µg/L	1	08/25/2015 11:35	111788
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Ethylbenzene	NELAP	5.0		6.1	µg/L	1	08/25/2015 11:35	111788
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Hexachloroethane	NELAP	10.0		ND	µg/L	1	08/25/2015 11:35	111788
Iodomethane	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
m,p-Xylenes	NELAP	5.0		12.1	µg/L	1	08/25/2015 11:35	111788
Methacrylonitrile	NELAP	10.0		ND	µg/L	1	08/25/2015 11:35	111788
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Methylene chloride	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Naphthalene	NELAP	10.0		ND	µg/L	1	08/25/2015 11:35	111788
o-Xylene	NELAP	5.0		8.3	µg/L	1	08/25/2015 11:35	111788
Propionitrile	NELAP	50.0		ND	µg/L	1	08/25/2015 11:35	111788
Styrene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Tetrachloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 11:35	111788
Toluene	NELAP	5.0		14.8	µg/L	1	08/25/2015 11:35	111788

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15
Lab ID: 15081255-003
Client Sample ID: PZ-104-SD
Matrix: AQUEOUS
Collection Date: 08/20/2015 12:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
trans-1,2-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	08/25/2015 11:35	111788
trans-1,3-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	08/25/2015 11:35	111788
trans-1,4-Dichloro-2-butene	NELAP	10.0		**ND**	µg/L	1	08/25/2015 11:35	111788
Trichloroethene	NELAP	5.0		**ND**	µg/L	1	08/25/2015 11:35	111788
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	08/25/2015 11:35	111788
Vinyl acetate	NELAP	10.0		**ND**	µg/L	1	08/25/2015 11:35	111788
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	08/25/2015 11:35	111788
Xylenes, Total	NELAP	5.0		**20.4**	µg/L	1	08/25/2015 11:35	111788
Surr: 1,2-Dichloroethane-d4		74.7-129		**91.5**	%REC	1	08/25/2015 11:35	111788
Surr: 4-Bromofluorobenzene		86-119		**95.6**	%REC	1	08/25/2015 11:35	111788
Surr: Dibromofluoromethane		81.7-123		**95.9**	%REC	1	08/25/2015 11:35	111788
Surr: Toluene-d8		84.3-114		**93.5**	%REC	1	08/25/2015 11:35	111788

Client: Missouri Geological Survey
Work Order: 15081255

Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

Lab ID: 15081255-004
Client Sample ID: Trip Blank

Matrix: TRIP BLANK
Collection Date: 08/21/2015 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,1,1-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,1,2,2-Tetrachloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,1,2-Trichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,1-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,1-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,1-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,2,3-Trichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,2-Dibromo-3-chloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,2-Dibromoethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,2-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,2-Dichloroethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,3-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,3-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
1,4-Dichlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
2,2-Dichloropropane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
2-Butanone	NELAP	25.0		ND	µg/L	1	08/25/2015 12:01	111788
2-Hexanone	NELAP	25.0		ND	µg/L	1	08/25/2015 12:01	111788
4-Methyl-2-pentanone	NELAP	25.0		ND	µg/L	1	08/25/2015 12:01	111788
Acetone	NELAP	25.0		ND	µg/L	1	08/25/2015 12:01	111788
Acetonitrile	NELAP	50.0		ND	µg/L	1	08/25/2015 12:01	111788
Acrolein	NELAP	100		ND	µg/L	1	08/25/2015 12:01	111788
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Benzene	NELAP	2.0		ND	µg/L	1	08/25/2015 12:01	111788
Bromochloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Bromodichloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Bromoform	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Bromomethane	NELAP	10.0		ND	µg/L	1	08/25/2015 12:01	111788
Carbon disulfide	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Carbon tetrachloride	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Chlorobenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Chloroethane	NELAP	10.0		ND	µg/L	1	08/25/2015 12:01	111788
Chloroform	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Chloromethane	NELAP	10.0		ND	µg/L	1	08/25/2015 12:01	111788
cis-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
cis-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Dibromochloromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Dibromomethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Dichlorodifluoromethane	NELAP	10.0		ND	µg/L	1	08/25/2015 12:01	111788
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Ethylbenzene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Hexachloroethane	NELAP	10.0		ND	µg/L	1	08/25/2015 12:01	111788
Iodomethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
m,p-Xylenes	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15
Lab ID: 15081255-004
Client Sample ID: Trip Blank
Matrix: TRIP BLANK
Collection Date: 08/21/2015 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Methacrylonitrile	NELAP	10.0		ND	µg/L	1	08/25/2015 12:01	111788
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Methylene chloride	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Naphthalene	NELAP	10.0		ND	µg/L	1	08/25/2015 12:01	111788
o-Xylene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Propionitrile	NELAP	50.0		ND	µg/L	1	08/25/2015 12:01	111788
Styrene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Tetrachloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Toluene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
trans-1,2-Dichloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
trans-1,3-Dichloropropene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
trans-1,4-Dichloro-2-butene	NELAP	10.0		ND	µg/L	1	08/25/2015 12:01	111788
Trichloroethene	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Vinyl acetate	NELAP	10.0		ND	µg/L	1	08/25/2015 12:01	111788
Vinyl chloride	NELAP	2.0		ND	µg/L	1	08/25/2015 12:01	111788
Xylenes, Total	NELAP	5.0		ND	µg/L	1	08/25/2015 12:01	111788
Surr: 1,2-Dichloroethane-d4		74.7-129		95.4	%REC	1	08/25/2015 12:01	111788
Surr: 4-Bromofluorobenzene		86-119		96.0	%REC	1	08/25/2015 12:01	111788
Surr: Dibromofluoromethane		81.7-123		98.8	%REC	1	08/25/2015 12:01	111788
Surr: Toluene-d8		84.3-114		93.4	%REC	1	08/25/2015 12:01	111788

Sample Summary

Client: Missouri Geological Survey
Client Project: Bridgeton Landfill

Work Order: 15081255
Report Date: 28-Aug-15

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
15081255-001	PZ-210-SD	Aqueous	7	08/19/2015 14:36
15081255-002	PZ-211-SD	Aqueous	7	08/20/2015 9:15
15081255-003	PZ-104-SD	Aqueous	7	08/20/2015 12:06
15081255-004	Trip Blank	Trip Blank	1	08/21/2015 12:30

State of MO v. Republic Services, Inc. et al
Price - 0000633

Client: Missouri Geological Survey
Client Project: Bridgeton Landfill

Work Order: 15081255
Report Date: 28-Aug-15

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
15081255-001A	PZ-210-SD	08/19/2015 14:36	08/21/2015 12:30		
	SW-846 3510C, 8081B, Chlorinated Pesticides by GC/ECD			08/25/2015 5:40	08/25/2015 12:45
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			08/25/2015 5:40	08/25/2015 10:38
	SW-846 3510C, 8151A, Chlorinated Herbicides by GC/ECD			08/25/2015 14:44	08/26/2015 13:58
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			08/24/2015 8:10	08/24/2015 15:16
15081255-001C	PZ-210-SD	08/19/2015 14:36	08/21/2015 12:30		
	SW-846 3005A, 6010B, Metals by ICP (Total)			08/24/2015 7:58	08/24/2015 16:02
	SW-846 7470A (Total)			08/24/2015 8:18	08/24/2015 13:34
15081255-001D	PZ-210-SD	08/19/2015 14:36	08/21/2015 12:30		
	SW-846 9012A (Total)			08/21/2015 20:00	08/24/2015 15:54
15081255-001E	PZ-210-SD	08/19/2015 14:36	08/21/2015 12:30		
	Standard Methods 4500-S D (Total)				08/26/2015 13:15
15081255-001G	PZ-210-SD	08/19/2015 14:36	08/21/2015 12:30		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/25/2015 10:41
15081255-002A	PZ-211-SD	08/20/2015 9:15	08/21/2015 12:30		
	SW-846 3510C, 8081B, Chlorinated Pesticides by GC/ECD			08/25/2015 5:40	08/25/2015 13:09
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			08/25/2015 5:40	08/25/2015 11:45
	SW-846 3510C, 8151A, Chlorinated Herbicides by GC/ECD			08/25/2015 14:44	08/26/2015 14:29
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			08/24/2015 8:10	08/24/2015 15:48
15081255-002C	PZ-211-SD	08/20/2015 9:15	08/21/2015 12:30		
	SW-846 3005A, 6010B, Metals by ICP (Total)			08/24/2015 7:58	08/24/2015 16:13
	SW-846 7470A (Total)			08/24/2015 8:18	08/24/2015 13:36
15081255-002D	PZ-211-SD	08/20/2015 9:15	08/21/2015 12:30		
	SW-846 9012A (Total)			08/21/2015 20:00	08/24/2015 15:37
15081255-002E	PZ-211-SD	08/20/2015 9:15	08/21/2015 12:30		
	Standard Methods 4500-S D (Total)				08/25/2015 15:43
15081255-002G	PZ-211-SD	08/20/2015 9:15	08/21/2015 12:30		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/25/2015 11:08
15081255-003A	PZ-104-SD	08/20/2015 12:06	08/21/2015 12:30		
	SW-846 3510C, 8081B, Chlorinated Pesticides by GC/ECD			08/25/2015 5:40	08/25/2015 13:33
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			08/25/2015 5:40	08/25/2015 11:12
	SW-846 3510C, 8151A, Chlorinated Herbicides by GC/ECD			08/25/2015 14:44	08/26/2015 15:00
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			08/24/2015 8:10	08/24/2015 16:20
15081255-003C	PZ-104-SD	08/20/2015 12:06	08/21/2015 12:30		
	SW-846 3005A, 6010B, Metals by ICP (Total)			08/24/2015 7:58	08/24/2015 16:17
	SW-846 7470A (Total)			08/24/2015 8:18	08/24/2015 13:43

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
15081255-003D	PZ-104-SD	08/20/2015 12:06	08/21/2015 12:30		
	SW-846 9012A (Total)			08/21/2015 20:00	08/24/2015 15:41
15081255-003E	PZ-104-SD	08/20/2015 12:06	08/21/2015 12:30		
	Standard Methods 4500-S D (Total)				08/25/2015 15:48
15081255-003G	PZ-104-SD	08/20/2015 12:06	08/21/2015 12:30		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/25/2015 11:35
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/25/2015 12:27
15081255-004A	Trip Blank	08/21/2015 12:30	08/21/2015 12:30		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				08/25/2015 12:01

Client: Missouri Geological Survey
Client Project: Bridgeton Landfill

Work Order: 15081255
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STANDARD METHODS 4500-S D (TOTAL)

Batch R208489 **SampType:** MBLK Units **mg/L**
SampID: MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.05		**< 0.05**						08/25/2015

Batch R208489 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.05		**0.07**	0.06700	0	100.0	90	110	08/25/2015

Batch R208489 **SampType:** MS Units **mg/L**
SampID: 15081255-002EMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.75		**3.3**	1.005	2.430	88.1	85	115	08/25/2015

Batch R208489 **SampType:** MS Units **mg/L**
SampID: 15081255-003EMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.25		**0.76**	0.3350	0.3800	111.9	85	115	08/25/2015

Batch R208489 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 15081255-003EMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfide, Total - Colorimetric	0.25		**0.75**	0.3350	0.3800	110.4	0.7550	0.66	08/25/2015

Batch R208541 **SampType:** MBLK Units **mg/L**
SampID: MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.05		**< 0.05**						08/26/2015

Batch R208541 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.05		**0.07**	0.06700	0	101.5	90	110	08/26/2015

Batch R208541 **SampType:** MS Units **mg/L**
SampID: 15081255-001EMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfide, Total - Colorimetric	0.50		**0.95**	0.6700	0.3300	92.5	85	115	08/26/2015

Batch R208541 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 15081255-001EMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfide, Total - Colorimetric	0.50		**0.95**	0.6700	0.3300	92.5	0.9500	0.00	08/26/2015

Client: Missouri Geological Survey
Client Project: Bridgeton Landfill

Work Order: 15081255
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SW-846 9012A (TOTAL)

Batch 111747 **SampType:** MBLK Units mg/L
SampID: MBLK 150821 TCN3

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide	0.007		< 0.007						08/24/2015

Batch 111747 **SampType:** LCS Units mg/L
SampID: LCS 150821 TCN3

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide	0.007		0.026	0.02500	0	103.9	85	115	08/24/2015

Batch 111747 **SampType:** MS Units mg/L
SampID: 15081255-001DMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide	0.007		0.025	0.02500	0	99.5	75	125	08/24/2015

Batch 111747 **SampType:** MSD Units mg/L RPD Limit 15
SampID: 15081255-001DMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Cyanide	0.007	R	0.021	0.02500	0	83.3	0.02488	17.72	08/24/2015

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 111715 **SampType:** MBLK Units mg/L
SampID: MBLK-111715

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		< 0.0500	0.05000	0	0	-100	100	08/24/2015
Arsenic	0.0250		< 0.0250	0.02500	0	0	-100	100	08/24/2015
Barium	0.0025		< 0.0025	).00250(	0	0	-100	100	08/24/2015
Beryllium	0.0005		< 0.0005	.000500	0	0	-100	100	08/24/2015
Cadmium	0.0020		< 0.0020	).00200(	0	0	-100	100	08/24/2015
Chromium	0.0050		< 0.0050	).00500(	0	0	-100	100	08/24/2015
Cobalt	0.0050		< 0.0050	).00500(	0	0	-100	100	08/24/2015
Copper	0.0050		< 0.0050	).00500(	0	0	-100	100	08/24/2015
Lead	0.0150		< 0.0150	0.01500	0	0	-100	100	08/24/2015
Magnesium	0.0500		< 0.0500	0.05000	0	0	-100	100	08/24/2015
Manganese	0.0030		< 0.0030	).00300(	0	0	-100	100	08/24/2015
Nickel	0.0050		< 0.0050	).00500(	0	0	-100	100	08/24/2015
Selenium	0.0400		< 0.0400	0.04000	0	0	-100	100	08/24/2015
Silver	0.0050		< 0.0050	).00500(	0	0	-100	100	08/24/2015
Thallium	0.0500		< 0.0500	0.05000	0	0	-100	100	08/24/2015
Tin	0.0200		< 0.0200	0.02000	0	0	-100	100	08/24/2015
Vanadium	0.0100		< 0.0100	0.01000	0	0	-100	100	08/24/2015
Zinc	0.0100		< 0.0100	0.01000	0	0	-100	100	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081255

Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 111715 **SampType:** LCS Units mg/L

SampID: LCS-111715

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**0.486**	0.5000	0	97.3	85	115	08/24/2015
Arsenic	0.0250		**2.02**	2.000	0	101.0	85	115	08/24/2015
Barium	0.0025		**2.06**	2.000	0	103.2	85	115	08/24/2015
Beryllium	0.0005		**0.0497**	0.05000	0	99.4	85	115	08/24/2015
Cadmium	0.0020		**0.0496**	0.05000	0	99.2	85	115	08/24/2015
Chromium	0.0050		**0.206**	0.2000	0	102.9	85	115	08/24/2015
Cobalt	0.0050		**0.496**	0.5000	0	99.1	85	115	08/24/2015
Copper	0.0050		**0.249**	0.2500	0	99.7	85	115	08/24/2015
Lead	0.0150		**0.506**	0.5000	0	101.1	85	115	08/24/2015
Magnesium	0.0500		**2.49**	2.500	0	99.4	85	115	08/24/2015
Manganese	0.0030		**0.512**	0.5000	0	102.5	85	115	08/24/2015
Nickel	0.0050		**0.516**	0.5000	0	103.3	85	115	08/24/2015
Selenium	0.0400		**1.98**	2.000	0	98.8	85	115	08/24/2015
Silver	0.0050		**0.0484**	0.05000	0	96.8	85	115	08/24/2015
Thallium	0.0500		**2.02**	2.000	0	101.0	85	115	08/24/2015
Tin	0.0200		**0.504**	0.5000	0	100.8	85	115	08/24/2015
Vanadium	0.0100		**0.507**	0.5000	0	101.4	85	115	08/24/2015
Zinc	0.0100		**0.480**	0.5000	0	96.0	85	115	08/24/2015

Batch 111715 **SampType:** MS Units mg/L

SampID: 15081255-001CMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**0.460**	0.5000	0	92.1	75	125	08/24/2015
Arsenic	0.0250		**1.97**	2.000	0	98.4	75	125	08/24/2015
Barium	0.0025		**2.11**	2.000	0.08480	101.4	75	125	08/24/2015
Beryllium	0.0005		**0.0484**	0.05000	0	96.8	75	125	08/24/2015
Cadmium	0.0020		**0.0473**	0.05000	0	94.6	75	125	08/24/2015
Chromium	0.0050		**0.201**	0.2000	0.002000	99.6	75	125	08/24/2015
Cobalt	0.0050		**0.477**	0.5000	0	95.5	75	125	08/24/2015
Copper	0.0050		**0.249**	0.2500	0	99.5	75	125	08/24/2015
Lead	0.0150		**0.487**	0.5000	0	97.4	75	125	08/24/2015
Magnesium	0.0500	S	**45.8**	2.500	44.61	47.6	75	125	08/24/2015
Manganese	0.0030		**0.609**	0.5000	0.1157	98.6	75	125	08/24/2015
Nickel	0.0050		**0.502**	0.5000	0.007200	99.0	75	125	08/24/2015
Selenium	0.0400		**1.92**	2.000	0	95.8	75	125	08/24/2015
Silver	0.0050		**0.0478**	0.05000	0	95.6	75	125	08/24/2015
Thallium	0.0500		**1.93**	2.000	0	96.4	75	125	08/24/2015
Tin	0.0200		**0.488**	0.5000	0	97.5	75	125	08/24/2015
Vanadium	0.0100		**0.496**	0.5000	0	99.1	75	125	08/24/2015
Zinc	0.0100		**0.459**	0.5000	0.004500	90.9	75	125	08/24/2015

Client: Missouri Geological Survey
Client Project: Bridgeton Landfill

Work Order: 15081255
Report Date: 28-Aug-15

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 111715 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 15081255-001CMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony	0.0500		**0.470**	0.5000	0	93.9	0.4605	1.98	08/24/2015
Arsenic	0.0250		**2.02**	2.000	0	100.8	1.968	2.36	08/24/2015
Barium	0.0025		**2.16**	2.000	0.08480	103.9	2.113	2.29	08/24/2015
Beryllium	0.0005		**0.0494**	0.05000	0	98.8	0.04840	2.04	08/24/2015
Cadmium	0.0020		**0.0485**	0.05000	0	97.0	0.04730	2.51	08/24/2015
Chromium	0.0050		**0.206**	0.2000	0.002000	102.0	0.2011	2.41	08/24/2015
Cobalt	0.0050		**0.488**	0.5000	0	97.6	0.4774	2.18	08/24/2015
Copper	0.0050		**0.254**	0.2500	0	101.6	0.2487	2.07	08/24/2015
Lead	0.0150		**0.496**	0.5000	0	99.2	0.4870	1.81	08/24/2015
Magnesium	0.0500	S	**46.4**	2.500	44.61	72.8	45.80	1.37	08/24/2015
Manganese	0.0030		**0.621**	0.5000	0.1157	101.1	0.6087	2.05	08/24/2015
Nickel	0.0050		**0.513**	0.5000	0.007200	101.2	0.5024	2.13	08/24/2015
Selenium	0.0400		**1.96**	2.000	0	97.8	1.917	1.96	08/24/2015
Silver	0.0050		**0.0488**	0.05000	0	97.6	0.04780	2.07	08/24/2015
Thallium	0.0500		**1.97**	2.000	0	98.6	1.929	2.26	08/24/2015
Tin	0.0200		**0.500**	0.5000	0	100.0	0.4875	2.49	08/24/2015
Vanadium	0.0100		**0.506**	0.5000	0	101.2	0.4955	2.14	08/24/2015
Zinc	0.0100		**0.468**	0.5000	0.004500	92.7	0.4589	2.01	08/24/2015

SW-846 7470A (TOTAL)

Batch 111717 **SampType:** MBLK Units **mg/L**

SampID: MBLK-111717

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**< 0.00020**	.000200	0	0	-100	100	08/24/2015

Batch 111717 **SampType:** LCS Units **mg/L**

SampID: LCS-111717

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**0.00480**	).005000	0	96.0	85	115	08/24/2015

Batch 111717 **SampType:** MS Units **mg/L**

SampID: 15081255-002CMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**0.00476**	).005000	0	95.1	75	125	08/24/2015

Batch 111717 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 15081255-002CMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury	0.00020		**0.00477**	).005000	0	95.4	0.004755	0.32	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD

Batch 111760 **SampType:** MBLK Units µg/L
SampID: MBLK-111760

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
4,4'-DDD	0.05		ND						08/25/2015
4,4'-DDE	0.05		ND						08/25/2015
4,4'-DDT	0.05		ND						08/25/2015
Aldrin	0.05		ND						08/25/2015
alpha-BHC	0.05		ND						08/25/2015
beta-BHC	0.05	J	0.02						08/25/2015
delta-BHC	0.05		ND						08/25/2015
Dieldrin	0.05		ND						08/25/2015
Endosulfan I	0.05		ND						08/25/2015
Endosulfan II	0.05		ND						08/25/2015
Endosulfan sulfate	0.05		ND						08/25/2015
Endrin	0.05		ND						08/25/2015
Endrin aldehyde	0.05		ND						08/25/2015
gamma-BHC	0.05		ND						08/25/2015
Heptachlor	0.05		ND						08/25/2015
Heptachlor epoxide	0.05		ND						08/25/2015
Methoxychlor	0.05		ND						08/25/2015
Toxaphene	0.50		ND						08/25/2015
Chlordane	0.50		ND						08/25/2015
Surr: Decachlorobiphenyl			0.15	0.2500		58.0	11.3	138	08/25/2015
Surr: Tetrachloro-m-xylene			0.17	0.2500		69.2	13	114	08/25/2015

Batch 111760 **SampType:** LCS Units µg/L
SampID: LCSPST-111760

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
4,4'-DDD	0.05		0.21	0.2500	0	84.0	49	118	08/25/2015
4,4'-DDE	0.05		0.19	0.2500	0	74.8	34.3	106	08/25/2015
4,4'-DDT	0.05		0.20	0.2500	0	81.0	39	118	08/25/2015
Aldrin	0.05		0.18	0.2500	0	73.0	33.1	98.8	08/25/2015
alpha-BHC	0.05		0.21	0.2500	0	83.7	33.5	110	08/25/2015
beta-BHC	0.05		0.22	0.2500	0	88.3	64.2	119	08/25/2015
delta-BHC	0.05		0.22	0.2500	0	87.4	25.6	126	08/25/2015
Dieldrin	0.05		0.22	0.2500	0	87.3	55	117	08/25/2015
Endosulfan I	0.05		0.21	0.2500	0	82.4	49.5	117	08/25/2015
Endosulfan II	0.05		0.22	0.2500	0	86.7	58.4	129	08/25/2015
Endosulfan sulfate	0.05		0.30	0.2500	0	118.0	54.9	136	08/25/2015
Endrin	0.05		0.22	0.2500	0	89.5	62.6	128	08/25/2015
Endrin aldehyde	0.05		0.24	0.2500	0	94.0	70.5	126	08/25/2015
gamma-BHC	0.05		0.22	0.2500	0	86.4	47.7	117	08/25/2015
Heptachlor	0.05		0.19	0.2500	0	76.0	42.4	110	08/25/2015
Heptachlor epoxide	0.05		0.20	0.2500	0	81.9	53.4	117	08/25/2015
Methoxychlor	0.05		0.23	0.2500	0	91.4	56.4	132	08/25/2015
Surr: Decachlorobiphenyl			0.14	0.2500		57.4	9.42	147	08/25/2015
Surr: Tetrachloro-m-xylene			0.17	0.2500		68.3	13	114	08/25/2015

Client: Missouri Geological Survey
Client Project: Bridgeton Landfill

Work Order: 15081255
Report Date: 28-Aug-15

SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD

Batch 111760 **SampType:** LCSD Units µg/L RPD Limit 30

SampID: LCSPSTD-111760

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
4,4´-DDD	0.05		**0.18**	0.2500	0	71.1	0.2099	16.61	08/25/2015
4,4´-DDE	0.05		**0.16**	0.2500	0	64.5	0.1870	14.70	08/25/2015
4,4´-DDT	0.05		**0.18**	0.2500	0	71.4	0.2026	12.66	08/25/2015
Aldrin	0.05		**0.16**	0.2500	0	62.4	0.1825	15.67	08/25/2015
alpha-BHC	0.05		**0.17**	0.2500	0	69.5	0.2094	18.57	08/25/2015
beta-BHC	0.05		**0.19**	0.2500	0	74.0	0.2208	17.60	08/25/2015
delta-BHC	0.05		**0.18**	0.2500	0	72.8	0.2185	18.27	08/25/2015
Dieldrin	0.05		**0.19**	0.2500	0	74.3	0.2183	16.13	08/25/2015
Endosulfan I	0.05		**0.18**	0.2500	0	71.8	0.2060	13.83	08/25/2015
Endosulfan II	0.05		**0.19**	0.2500	0	74.6	0.2168	14.95	08/25/2015
Endosulfan sulfate	0.05		**0.25**	0.2500	0	99.0	0.2951	17.53	08/25/2015
Endrin	0.05		**0.19**	0.2500	0	76.9	0.2238	15.15	08/25/2015
Endrin aldehyde	0.05		**0.19**	0.2500	0	77.8	0.2351	18.94	08/25/2015
gamma-BHC	0.05		**0.18**	0.2500	0	72.1	0.2161	18.13	08/25/2015
Heptachlor	0.05		**0.17**	0.2500	0	68.8	0.1901	10.00	08/25/2015
Heptachlor epoxide	0.05		**0.18**	0.2500	0	70.3	0.2048	15.24	08/25/2015
Methoxychlor	0.05		**0.20**	0.2500	0	80.8	0.2286	12.36	08/25/2015
Surr: Decachlorobiphenyl			**0.12**	0.2500		47.8			08/25/2015
Surr: Tetrachloro-m-xylene			**0.16**	0.2500		64.9			08/25/2015

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 111760 **SampType:** MBLK Units µg/L

SampID: MBLK-111760

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	1.00		**ND**						08/25/2015
Aroclor 1221	1.00		**ND**						08/25/2015
Aroclor 1232	1.00		**ND**						08/25/2015
Aroclor 1242	1.00		**ND**						08/25/2015
Aroclor 1248	1.00		**ND**						08/25/2015
Aroclor 1254	1.00		**ND**						08/25/2015
Aroclor 1260	1.00		**ND**						08/25/2015
Surr: Decachlorobiphenyl			**0.15**	0.2500		59.9	11.3	138	08/25/2015
Surr: Tetrachloro-meta-xylene			**0.16**	0.2500		64.2	26.8	110	08/25/2015

Batch 111760 **SampType:** LCS Units µg/L

SampID: LCSPCB-111760

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	1.00		**3.93**	5.000	0	78.6	52	122	08/25/2015
Aroclor 1260	1.00		**3.68**	5.000	0	73.5	28.7	119	08/25/2015
Surr: Decachlorobiphenyl			**0.20**	0.2500		81.6	11.3	138	08/25/2015
Surr: Tetrachloro-meta-xylene			**0.17**	0.2500		68.8	26.8	110	08/25/2015

Client: Missouri Geological Survey
Client Project: Bridgeton Landfill

Work Order: 15081255
Report Date: 28-Aug-15

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 111760 **SampType:** LCSD Units µg/L RPD Limit 21.1

SampID: LCSPCBD-111760

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016	1.00		**4.49**	5.000	0	89.8	3.930	13.28	08/25/2015
Aroclor 1260	1.00		**3.20**	5.000	0	64.1	3.675	13.73	08/25/2015
Surr: Decachlorobiphenyl			**0.18**	0.2500		71.8			08/25/2015
Surr: Tetrachloro-meta-xylene			**0.21**	0.2500		85.7			08/25/2015

SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD

Batch 111790 **SampType:** MBLK Units µg/L

SampID: MBLK-111790

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
2,4,5-T	0.200		**ND**						08/26/2015
2,4,5-TP (Silvex)	0.200		**ND**						08/26/2015
2,4-D	0.200		**ND**						08/26/2015
Dinoseb	0.200		**ND**						08/26/2015
Surr: 2,4-Dichlorophenylacetic acid			**0.594**	0.8000		74.3	23.8	117	08/26/2015

Batch 111790 **SampType:** LCS Units µg/L

SampID: LCS-111790

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
2,4,5-T	0.200		**0.798**	0.8000	0	99.7	23.9	155	08/26/2015
2,4,5-TP (Silvex)	0.200		**0.783**	0.8000	0	97.9	32.1	115	08/26/2015
2,4-D	0.200		**0.746**	0.8000	0	93.2	5	239	08/26/2015
Dinoseb	0.200		**0.492**	0.8000	0	61.5	9.62	105	08/26/2015
Surr: 2,4-Dichlorophenylacetic acid			**0.608**	0.8000		76.0	23.8	117	08/26/2015

Batch 111790 **SampType:** LCSD Units µg/L RPD Limit 30

SampID: LCSD-111790

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
2,4,5-T	0.200		**0.717**	0.8000	0	89.6	0.7980	10.71	08/26/2015
2,4,5-TP (Silvex)	0.200		**0.659**	0.8000	0	82.4	0.7834	17.21	08/26/2015
2,4-D	0.200		**0.640**	0.8000	0	80.0	0.7458	15.30	08/26/2015
Dinoseb	0.200		**0.405**	0.8000	0	50.6	0.4924	19.54	08/26/2015
Surr: 2,4-Dichlorophenylacetic acid			**0.479**	0.8000		59.9			08/26/2015

Client: Missouri Geological Survey

Client Project: Bridgeton Landfill

Work Order: 15081255

Report Date: 28-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111713 **SampType:** MBLK Units mg/L

SampID: MBLK-111713

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		ND						08/24/2015
2,4,5-Trichlorophenol	0.010		ND						08/24/2015
2,4,6-Trichlorophenol	0.010		ND						08/24/2015
2,4-Dichlorophenol	0.010		ND						08/24/2015
2,4-Dimethylphenol	0.010		ND						08/24/2015
2,4-Dinitrophenol	0.020		ND						08/24/2015
2,4-Dinitrotoluene	0.010		ND						08/24/2015
2,6-Dinitrotoluene	0.010		ND						08/24/2015
2-Chloronaphthalene	0.010		ND						08/24/2015
2-Chlorophenol	0.010		ND						08/24/2015
2-Methylnaphthalene	0.010		ND						08/24/2015
2-Nitroaniline	0.040		ND						08/24/2015
2-Nitrophenol	0.020		ND						08/24/2015
3,3'-Dichlorobenzidine	0.010		ND						08/24/2015
3-Nitroaniline	0.040		ND						08/24/2015
4,6-Dinitro-2-methylphenol	0.020		ND						08/24/2015
4-Bromophenyl phenyl ether	0.010		ND						08/24/2015
4-Chloro-3-methylphenol	0.020		ND						08/24/2015
4-Chloroaniline	0.020		ND						08/24/2015
4-Chlorophenyl phenyl ether	0.010		ND						08/24/2015
4-Nitroaniline	0.020		ND						08/24/2015
4-Nitrophenol	0.020		ND						08/24/2015
Acenaphthene	0.010		ND						08/24/2015
Acenaphthylene	0.010		ND						08/24/2015
Anthracene	0.010		ND						08/24/2015
Benzo(a)anthracene	0.010		ND						08/24/2015
Benzo(a)pyrene	0.010		ND						08/24/2015
Benzo(b)fluoranthene	0.010		ND						08/24/2015
Benzo(g,h,i)perylene	0.010		ND						08/24/2015
Benzo(k)fluoranthene	0.010		ND						08/24/2015
Benzyl alcohol	0.020		ND						08/24/2015
Bis(2-chloroethoxy)methane	0.010		ND						08/24/2015
Bis(2-chloroethyl)ether	0.010		ND						08/24/2015
Bis(2-chloroisopropyl)ether	0.010		ND						08/24/2015
Bis(2-ethylhexyl)phthalate	0.006		ND						08/24/2015
Butyl benzyl phthalate	0.010		ND						08/24/2015
Chrysene	0.010		ND						08/24/2015
Dibenzo(a,h)anthracene	0.010		ND						08/24/2015
Dibenzofuran	0.010		ND						08/24/2015
Diethyl phthalate	0.010		ND						08/24/2015
Dimethyl phthalate	0.010		ND						08/24/2015
Di-n-butyl phthalate	0.010		ND						08/24/2015
Di-n-octyl phthalate	0.010		ND						08/24/2015
Fluoranthene	0.010		ND						08/24/2015
Fluorene	0.010		ND						08/24/2015
Hexachlorobenzene	0.010		ND						08/24/2015
Hexachlorocyclopentadiene	0.020		ND						08/24/2015

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111713 **SampType:** MBLK Units mg/L
SampID: MBLK-111713

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Indeno(1,2,3-cd)pyrene	0.010		**ND**						08/24/2015
Isophorone	0.010		**ND**						08/24/2015
m,p-Cresol	0.010		**ND**						08/24/2015
Naphthalene	0.010		**ND**						08/24/2015
Nitrobenzene	0.010		**ND**						08/24/2015
N-Nitrosodimethylamine	0.020		**ND**						08/24/2015
N-Nitroso-di-n-propylamine	0.010		**ND**						08/24/2015
N-Nitrosodiphenylamine	0.010		**ND**						08/24/2015
o-Cresol	0.010		**ND**						08/24/2015
Pentachlorophenol	0.020		**ND**						08/24/2015
Phenanthrene	0.010		**ND**						08/24/2015
Phenol	0.005		**ND**						08/24/2015
Pyrene	0.010		**ND**						08/24/2015
1,2-Diphenylhydrazine	0.010		**ND**						08/24/2015
Surr: 2,4,6-Tribromophenol			**0.045**	0.05000		89.4	48.9	120	08/24/2015
Surr: 2-Fluorobiphenyl			**0.020**	0.02500		78.7	51.1	102	08/24/2015
Surr: 2-Fluorophenol			**0.030**	0.05000		60.0	32	75.8	08/24/2015
Surr: Nitrobenzene-d5			**0.018**	0.02500		71.6	19.5	133	08/24/2015
Surr: Phenol-d5			**0.022**	0.05000		44.5	24.1	54.7	08/24/2015
Surr: p-Terphenyl-d14			**0.023**	0.02500		90.4	51.6	124	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111713 **SampType:** LCS Units mg/L
SampID: LCS-111713

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.034**	0.05000	0	67.4	42.3	104	08/24/2015
2,4,5-Trichlorophenol	0.010		**0.079**	0.1000	0	78.6	55	116	08/24/2015
2,4,6-Trichlorophenol	0.010		**0.072**	0.1000	0	72.2	52.3	109	08/24/2015
2,4-Dimethylphenol	0.010		**0.070**	0.1000	0	69.8	50	107	08/24/2015
2,4-Dinitrophenol	0.020		**0.062**	0.1000	0	61.9	5.78	112	08/24/2015
2,4-Dinitrotoluene	0.010		**0.042**	0.05000	0	83.5	58.7	119	08/24/2015
2-Chlorophenol	0.010		**0.065**	0.1000	0	65.0	44.4	94.7	08/24/2015
4-Chloro-3-methylphenol	0.020		**0.078**	0.1000	0	78.2	52.1	109	08/24/2015
4-Nitrophenol	0.020		**0.040**	0.1000	0	39.7	24.2	55.7	08/24/2015
Acenaphthene	0.010		**0.037**	0.05000	0	74.0	51.2	109	08/24/2015
Acenaphthylene	0.010		**0.039**	0.05000	0	78.1	54.8	117	08/24/2015
Anthracene	0.010		**0.039**	0.05000	0	77.4	56.1	116	08/24/2015
Benzo(a)anthracene	0.010		**0.038**	0.05000	0	75.1	55	113	08/24/2015
Benzo(a)pyrene	0.010		**0.040**	0.05000	0	80.5	60.4	126	08/24/2015
Benzo(b)fluoranthene	0.010		**0.038**	0.05000	0	76.4	57.6	119	08/24/2015
Benzo(g,h,i)perylene	0.010		**0.041**	0.05000	0	81.2	51.2	130	08/24/2015
Benzo(k)fluoranthene	0.010		**0.041**	0.05000	0	81.9	57.9	126	08/24/2015
Bis(2-ethylhexyl)phthalate	0.006		**0.038**	0.05000	0	76.6	52.8	122	08/24/2015
Chrysene	0.010		**0.040**	0.05000	0	79.0	57.9	120	08/24/2015
Dibenzo(a,h)anthracene	0.010		**0.042**	0.05000	0	84.4	54.7	130	08/24/2015
Diethyl phthalate	0.010		**0.078**	0.1000	0	77.8	54.3	116	08/24/2015
Dimethyl phthalate	0.010		**0.074**	0.1000	0	73.8	53.5	111	08/24/2015
Di-n-butyl phthalate	0.010		**0.036**	0.05000	0	73.0	50.8	116	08/24/2015
Fluoranthene	0.010		**0.040**	0.05000	0	79.2	56.9	117	08/24/2015
Fluorene	0.010		**0.038**	0.05000	0	76.4	55.1	112	08/24/2015
Hexachlorobenzene	0.010		**0.077**	0.1000	0	76.6	54.3	119	08/24/2015
Indeno(1,2,3-cd)pyrene	0.010		**0.043**	0.05000	0	85.9	56.2	135	08/24/2015
m,p-Cresol	0.010		**0.032**	0.05000	0	63.2	39.5	94	08/24/2015
Naphthalene	0.010		**0.031**	0.05000	0	61.7	40.3	98.1	08/24/2015
Nitrobenzene	0.010		**0.066**	0.1000	0	66.4	44.9	95.5	08/24/2015
N-Nitroso-di-n-propylamine	0.010		**0.037**	0.05000	0	74.1	49.2	107	08/24/2015
o-Cresol	0.010		**0.033**	0.05000	0	65.3	42.5	95	08/24/2015
Pentachlorophenol	0.020		**0.053**	0.1000	0	53.5	35.2	104	08/24/2015
Phenanthrene	0.010		**0.038**	0.05000	0	76.8	55.2	115	08/24/2015
Phenol	0.005		**0.041**	0.1000	0	41.2	22.7	51.8	08/24/2015
Pyrene	0.010		**0.040**	0.05000	0	80.4	56	116	08/24/2015
Surr: 2,4,6-Tribromophenol			**0.041**	0.05000		81.4	48.9	120	08/24/2015
Surr: 2-Fluorobiphenyl			**0.018**	0.02500		73.1	51.1	102	08/24/2015
Surr: 2-Fluorophenol			**0.026**	0.05000		52.3	32	75.8	08/24/2015
Surr: Nitrobenzene-d5			**0.021**	0.02500		84.7	19.5	133	08/24/2015
Surr: Phenol-d5			**0.020**	0.05000		40.4	24.1	54.7	08/24/2015
Surr: p-Terphenyl-d14			**0.020**	0.02500		79.7	51.6	124	08/24/2015

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111713 **SampType:** LCSD Units mg/L RPD Limit 40

SampID: LCSD-111713

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.036**	0.05000	0	72.8	0.03372	7.60	08/24/2015
2,4,5-Trichlorophenol	0.010		**0.083**	0.1000	0	83.1	0.07863	5.56	08/24/2015
2,4,6-Trichlorophenol	0.010		**0.078**	0.1000	0	78.3	0.07222	8.11	08/24/2015
2,4-Dimethylphenol	0.010		**0.071**	0.1000	0	70.8	0.06976	1.55	08/24/2015
2,4-Dinitrophenol	0.020		**0.069**	0.1000	0	68.8	0.06188	10.53	08/24/2015
2,4-Dinitrotoluene	0.010		**0.044**	0.05000	0	88.6	0.04177	5.94	08/24/2015
2-Chlorophenol	0.010		**0.068**	0.1000	0	67.8	0.06504	4.18	08/24/2015
4-Chloro-3-methylphenol	0.020		**0.082**	0.1000	0	81.5	0.07822	4.16	08/24/2015
4-Nitrophenol	0.020		**0.040**	0.1000	0	40.1	0.03965	1.23	08/24/2015
Acenaphthene	0.010		**0.040**	0.05000	0	80.8	0.03702	8.78	08/24/2015
Acenaphthylene	0.010		**0.041**	0.05000	0	82.8	0.03907	5.83	08/24/2015
Anthracene	0.010		**0.041**	0.05000	0	82.4	0.03872	6.26	08/24/2015
Benzo(a)anthracene	0.010		**0.040**	0.05000	0	80.3	0.03753	6.73	08/24/2015
Benzo(a)pyrene	0.010		**0.043**	0.05000	0	86.1	0.04025	6.69	08/24/2015
Benzo(b)fluoranthene	0.010		**0.039**	0.05000	0	79.0	0.03819	3.32	08/24/2015
Benzo(g,h,i)perylene	0.010		**0.043**	0.05000	0	86.8	0.04058	6.73	08/24/2015
Benzo(k)fluoranthene	0.010		**0.045**	0.05000	0	90.3	0.04093	9.84	08/24/2015
Bis(2-ethylhexyl)phthalate	0.006		**0.041**	0.05000	0	82.7	0.03831	7.66	08/24/2015
Chrysene	0.010		**0.042**	0.05000	0	83.9	0.03951	6.00	08/24/2015
Dibenzo(a,h)anthracene	0.010		**0.045**	0.05000	0	90.2	0.04218	6.68	08/24/2015
Diethyl phthalate	0.010		**0.083**	0.1000	0	83.3	0.07779	6.86	08/24/2015
Dimethyl phthalate	0.010		**0.080**	0.1000	0	79.8	0.07384	7.79	08/24/2015
Di-n-butyl phthalate	0.010		**0.040**	0.05000	0	79.0	0.03650	7.97	08/24/2015
Fluoranthene	0.010		**0.042**	0.05000	0	84.1	0.03959	6.01	08/24/2015
Fluorene	0.010		**0.041**	0.05000	0	81.7	0.03822	6.59	08/24/2015
Hexachlorobenzene	0.010		**0.084**	0.1000	0	83.5	0.07662	8.61	08/24/2015
Indeno(1,2,3-cd)pyrene	0.010		**0.046**	0.05000	0	91.5	0.04296	6.35	08/24/2015
m,p-Cresol	0.010		**0.033**	0.05000	0	65.5	0.03160	3.58	08/24/2015
Naphthalene	0.010		**0.033**	0.05000	0	66.0	0.03084	6.78	08/24/2015
Nitrobenzene	0.010		**0.072**	0.1000	0	72.5	0.06637	8.78	08/24/2015
N-Nitroso-di-n-propylamine	0.010		**0.040**	0.05000	0	79.2	0.03703	6.75	08/24/2015
o-Cresol	0.010		**0.034**	0.05000	0	68.2	0.03264	4.36	08/24/2015
Pentachlorophenol	0.020		**0.059**	0.1000	0	58.6	0.05347	9.22	08/24/2015
Phenanthrene	0.010		**0.042**	0.05000	0	83.1	0.03838	7.98	08/24/2015
Phenol	0.005		**0.040**	0.1000	0	40.2	0.04118	2.38	08/24/2015
Pyrene	0.010		**0.043**	0.05000	0	85.0	0.04019	5.63	08/24/2015
Surr: 2,4,6-Tribromophenol			**0.044**	0.05000		87.0			08/24/2015
Surr: 2-Fluorobiphenyl			**0.019**	0.02500		77.4			08/24/2015
Surr: 2-Fluorophenol			**0.026**	0.05000		51.5			08/24/2015
Surr: Nitrobenzene-d5			**0.022**	0.02500		87.8			08/24/2015
Surr: Phenol-d5			**0.020**	0.05000		39.3			08/24/2015
Surr: p-Terphenyl-d14			**0.022**	0.02500		86.8			08/24/2015

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111788 **SampType:** MBLK Units µg/L
SampID: MBLK-R150825-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		ND						08/25/2015
1,1,1-Trichloroethane	5.0		ND						08/25/2015
1,1,2,2-Tetrachloroethane	5.0		ND						08/25/2015
1,1,2-Trichloroethane	5.0		ND						08/25/2015
1,1-Dichloroethane	5.0		ND						08/25/2015
1,1-Dichloroethene	5.0		ND						08/25/2015
1,1-Dichloropropene	5.0		ND						08/25/2015
1,2,3-Trichloropropane	5.0		ND						08/25/2015
1,2-Dibromo-3-chloropropane	5.0		ND						08/25/2015
1,2-Dibromoethane	5.0		ND						08/25/2015
1,2-Dichlorobenzene	5.0		ND						08/25/2015
1,2-Dichloroethane	5.0		ND						08/25/2015
1,2-Dichloropropane	5.0		ND						08/25/2015
1,3-Dichlorobenzene	5.0		ND						08/25/2015
1,3-Dichloropropane	5.0		ND						08/25/2015
1,4-Dichlorobenzene	5.0		ND						08/25/2015
2,2-Dichloropropane	5.0		ND						08/25/2015
2-Butanone	25.0		ND						08/25/2015
2-Hexanone	25.0		ND						08/25/2015
4-Methyl-2-pentanone	25.0		ND						08/25/2015
Acetone	25.0		ND						08/25/2015
Acetonitrile	50.0		ND						08/25/2015
Acrolein	100		ND						08/25/2015
Acrylonitrile	5.0		ND						08/25/2015
Allyl chloride	5.0		ND						08/25/2015
Benzene	2.0		ND						08/25/2015
Bromochloromethane	5.0		ND						08/25/2015
Bromodichloromethane	5.0		ND						08/25/2015
Bromoform	5.0		ND						08/25/2015
Bromomethane	10.0		ND						08/25/2015
Carbon disulfide	5.0		ND						08/25/2015
Carbon tetrachloride	5.0		ND						08/25/2015
Chlorobenzene	5.0		ND						08/25/2015
Chloroethane	10.0		ND						08/25/2015
Chloroform	5.0		ND						08/25/2015
Chloromethane	10.0		ND						08/25/2015
cis-1,2-Dichloroethene	5.0		ND						08/25/2015
cis-1,3-Dichloropropene	5.0		ND						08/25/2015
Dibromochloromethane	5.0		ND						08/25/2015
Dibromomethane	5.0		ND						08/25/2015
Dichlorodifluoromethane	10.0		ND						08/25/2015
Ethyl methacrylate	5.0		ND						08/25/2015
Ethylbenzene	5.0		ND						08/25/2015
Hexachlorobutadiene	5.0		ND						08/25/2015
Hexachloroethane	10.0		ND						08/25/2015
Iodomethane	5.0		ND						08/25/2015
m,p-Xylenes	5.0		ND						08/25/2015

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111788 **SampType:** MBLK Units µg/L
SampID: MBLK-R150825-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methacrylonitrile	10.0		ND						08/25/2015
Methyl Methacrylate	5.0		ND						08/25/2015
Methylene chloride	5.0		ND						08/25/2015
Naphthalene	10.0		ND						08/25/2015
o-Xylene	5.0		ND						08/25/2015
Propionitrile	50.0		ND						08/25/2015
Styrene	5.0		ND						08/25/2015
Tetrachloroethene	5.0		ND						08/25/2015
Toluene	5.0		ND						08/25/2015
trans-1,2-Dichloroethene	5.0		ND						08/25/2015
trans-1,3-Dichloropropene	5.0		ND						08/25/2015
trans-1,4-Dichloro-2-butene	10.0		ND						08/25/2015
Trichloroethene	5.0		ND						08/25/2015
Trichlorofluoromethane	5.0		ND						08/25/2015
Vinyl acetate	10.0		ND						08/25/2015
Vinyl chloride	2.0		ND						08/25/2015
Xylenes, Total	5.0		ND						08/25/2015
Surr: 1,2-Dichloroethane-d4			**46.7**	50.00		93.4	74.7	129	08/25/2015
Surr: 4-Bromofluorobenzene			**47.9**	50.00		95.9	86	119	08/25/2015
Surr: Dibromofluoromethane			**49.0**	50.00		97.9	81.7	123	08/25/2015
Surr: Toluene-d8			**46.1**	50.00		92.2	84.3	114	08/25/2015

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111788 **SampType:** LCSD Units µg/L RPD Limit 40

SampID: LCSD-R150825-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**49.8**	50.00	0	99.7	50.88	2.07	08/25/2015
1,1,1-Trichloroethane	5.0		**50.7**	50.00	0	101.4	51.77	2.13	08/25/2015
1,1,2,2-Tetrachloroethane	5.0		**47.0**	50.00	0	94.1	47.81	1.64	08/25/2015
1,1,2-Trichloroethane	5.0		**47.8**	50.00	0	95.6	48.69	1.80	08/25/2015
1,1-Dichloroethane	5.0		**49.5**	50.00	0	99.0	51.00	2.94	08/25/2015
1,1-Dichloroethene	5.0		**48.8**	50.00	0	97.7	49.94	2.23	08/25/2015
1,1-Dichloropropene	5.0		**51.5**	50.00	0	102.9	53.32	3.55	08/25/2015
1,2,3-Trichloropropane	5.0		**44.0**	50.00	0	88.0	44.28	0.63	08/25/2015
1,2-Dibromo-3-chloropropane	5.0		**42.2**	50.00	0	84.3	42.90	1.76	08/25/2015
1,2-Dibromoethane	5.0		**48.0**	50.00	0	96.0	48.61	1.24	08/25/2015
1,2-Dichlorobenzene	5.0		**45.3**	50.00	0	90.6	46.90	3.47	08/25/2015
1,2-Dichloroethane	5.0		**48.6**	50.00	0	97.1	49.87	2.68	08/25/2015
1,2-Dichloropropane	5.0		**53.0**	50.00	0	106.0	54.19	2.20	08/25/2015
1,3-Dichlorobenzene	5.0		**47.0**	50.00	0	94.0	48.11	2.31	08/25/2015
1,3-Dichloropropane	5.0		**45.3**	50.00	0	90.6	46.49	2.59	08/25/2015
1,4-Dichlorobenzene	5.0		**45.2**	50.00	0	90.4	47.03	3.97	08/25/2015
2,2-Dichloropropane	5.0		**53.1**	50.00	0	106.2	54.92	3.41	08/25/2015
2-Butanone	25.0		**146**	125.0	0	117.1	154.3	5.30	08/25/2015
2-Hexanone	25.0		**128**	125.0	0	102.0	131.0	2.67	08/25/2015
4-Methyl-2-pentanone	25.0		**123**	125.0	0	98.3	125.2	1.89	08/25/2015
Acetone	25.0		**154**	125.0	0	123.4	172.5	11.16	08/25/2015
Acetonitrile	50.0		**604**	500.0	0	120.8	599.0	0.85	08/25/2015
Acrolein	100		**568**	500.0	0	113.7	611.7	7.36	08/25/2015
Acrylonitrile	5.0		**57.8**	50.00	0	115.6	58.28	0.79	08/25/2015
Allyl chloride	5.0		**56.5**	50.00	0	113.0	59.76	5.64	08/25/2015
Benzene	2.0		**51.0**	50.00	0	101.9	52.37	2.75	08/25/2015
Bromochloromethane	5.0		**52.9**	50.00	0	105.9	54.26	2.48	08/25/2015
Bromodichloromethane	5.0		**52.9**	50.00	0	105.8	54.50	3.02	08/25/2015
Bromoform	5.0		**49.0**	50.00	0	98.1	50.14	2.20	08/25/2015
Bromomethane	10.0		**40.5**	50.00	0	81.0	38.85	4.16	08/25/2015
Carbon disulfide	5.0		**46.4**	50.00	0	92.7	47.34	2.11	08/25/2015
Carbon tetrachloride	5.0		**53.4**	50.00	0	106.9	54.15	1.30	08/25/2015
Chlorobenzene	5.0		**47.7**	50.00	0	95.3	48.96	2.67	08/25/2015
Chloroethane	10.0		**44.4**	50.00	0	88.8	44.98	1.25	08/25/2015
Chloroform	5.0		**49.7**	50.00	0	99.4	51.50	3.60	08/25/2015
Chloromethane	10.0		**36.1**	50.00	0	72.3	36.36	0.63	08/25/2015
cis-1,2-Dichloroethene	5.0		**51.3**	50.00	0	102.6	52.72	2.75	08/25/2015
cis-1,3-Dichloropropene	5.0		**54.7**	50.00	0	109.3	55.61	1.72	08/25/2015
Dibromochloromethane	5.0		**49.3**	50.00	0	98.6	48.92	0.79	08/25/2015
Dibromomethane	5.0		**49.5**	50.00	0	99.0	51.52	3.98	08/25/2015
Dichlorodifluoromethane	10.0		**32.7**	50.00	0	65.4	32.59	0.40	08/25/2015
Ethyl methacrylate	5.0		**51.1**	50.00	0	102.2	51.84	1.40	08/25/2015
Ethylbenzene	5.0		**49.5**	50.00	0	99.0	50.05	1.10	08/25/2015
Hexachlorobutadiene	5.0		**47.5**	50.00	0	95.0	48.08	1.17	08/25/2015
Hexachloroethane	10.0		**48.9**	50.00	0	97.8	51.28	4.79	08/25/2015
Iodomethane	5.0		**34.6**	50.00	0	69.3	36.01	3.91	08/25/2015
m,p-Xylenes	5.0		**99.2**	100.0	0	99.2	100.7	1.45	08/25/2015

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111788 **SampType:** LCSD Units µg/L RPD Limit **40**

SampID: LCSD-R150825-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methacrylonitrile	10.0		**56.1**	50.00	0	112.3	57.33	2.12	08/25/2015
Methyl Methacrylate	5.0		**53.3**	50.00	0	106.6	54.40	2.02	08/25/2015
Methylene chloride	5.0		**52.5**	50.00	0	105.0	53.70	2.30	08/25/2015
Naphthalene	10.0		**49.6**	50.00	0	99.1	50.92	2.71	08/25/2015
o-Xylene	5.0		**48.4**	50.00	0	96.9	49.43	2.04	08/25/2015
Propionitrile	50.0		**597**	500.0	0	119.4	612.2	2.47	08/25/2015
Styrene	5.0		**51.4**	50.00	0	102.8	52.45	2.02	08/25/2015
Tetrachloroethene	5.0		**48.2**	50.00	0	96.5	48.70	0.95	08/25/2015
Toluene	5.0		**47.1**	50.00	0	94.2	48.40	2.74	08/25/2015
trans-1,2-Dichloroethene	5.0		**49.2**	50.00	0	98.3	50.52	2.75	08/25/2015
trans-1,3-Dichloropropene	5.0		**47.9**	50.00	0	95.8	49.16	2.62	08/25/2015
trans-1,4-Dichloro-2-butene	10.0		**44.5**	50.00	0	89.0	47.27	6.06	08/25/2015
Trichloroethene	5.0		**50.8**	50.00	0	101.5	51.95	2.34	08/25/2015
Trichlorofluoromethane	5.0		**50.9**	50.00	0	101.8	48.00	5.84	08/25/2015
Vinyl acetate	10.0		**56.2**	50.00	0	112.4	57.79	2.79	08/25/2015
Vinyl chloride	2.0		**39.7**	50.00	0	79.5	41.33	3.95	08/25/2015
Xylenes, Total	5.0		**148**	150.0	0	98.4	150.1	1.65	08/25/2015
Surr: 1,2-Dichloroethane-d4			**47.4**	50.00		94.9			08/25/2015
Surr: 4-Bromofluorobenzene			**47.2**	50.00		94.5			08/25/2015
Surr: Dibromofluoromethane			**50.4**	50.00		100.9			08/25/2015
Surr: Toluene-d8			**46.8**	50.00		93.7			08/25/2015

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111788 **SampType:** LCS Units µg/L
SampID: LCS-R150825-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**50.9**	50.00	0	101.8	81.9	115	08/25/2015
1,1,1-Trichloroethane	5.0		**51.8**	50.00	0	103.5	79.4	124	08/25/2015
1,1,2,2-Tetrachloroethane	5.0		**47.8**	50.00	0	95.6	74.7	116	08/25/2015
1,1,2-Trichloroethane	5.0		**48.7**	50.00	0	97.4	80.8	111	08/25/2015
1,1-Dichloroethane	5.0		**51.0**	50.00	0	102.0	79.4	114	08/25/2015
1,1-Dichloroethene	5.0		**49.9**	50.00	0	99.9	74.1	117	08/25/2015
1,1-Dichloropropene	5.0		**53.3**	50.00	0	106.6	81.7	116	08/25/2015
1,2,3-Trichloropropane	5.0		**44.3**	50.00	0	88.6	77.3	112	08/25/2015
1,2-Dibromo-3-chloropropane	5.0		**42.9**	50.00	0	85.8	76	122	08/25/2015
1,2-Dibromoethane	5.0		**48.6**	50.00	0	97.2	80.8	114	08/25/2015
1,2-Dichlorobenzene	5.0		**46.9**	50.00	0	93.8	78.3	112	08/25/2015
1,2-Dichloroethane	5.0		**49.9**	50.00	0	99.7	70.6	118	08/25/2015
1,2-Dichloropropane	5.0		**54.2**	50.00	0	108.4	79.6	113	08/25/2015
1,3-Dichlorobenzene	5.0		**48.1**	50.00	0	96.2	78.6	117	08/25/2015
1,3-Dichloropropane	5.0		**46.5**	50.00	0	93.0	78.8	112	08/25/2015
1,4-Dichlorobenzene	5.0		**47.0**	50.00	0	94.1	77.8	114	08/25/2015
2,2-Dichloropropane	5.0		**54.9**	50.00	0	109.8	74.9	130	08/25/2015
2-Butanone	25.0		**154**	125.0	0	123.4	70.7	136	08/25/2015
2-Hexanone	25.0		**131**	125.0	0	104.8	73.3	125	08/25/2015
4-Methyl-2-pentanone	25.0		**125**	125.0	0	100.2	76.3	122	08/25/2015
Acetone	25.0		**172**	125.0	0	138.0	56.4	147	08/25/2015
Acetonitrile	50.0		**599**	500.0	0	119.8	59.3	129	08/25/2015
Acrolein	100		**612**	500.0	0	122.3	1	201	08/25/2015
Acrylonitrile	5.0		**58.3**	50.00	0	116.6	74.1	128	08/25/2015
Allyl chloride	5.0		**59.8**	50.00	0	119.5	71.5	123	08/25/2015
Benzene	2.0		**52.4**	50.00	0	104.7	80	114	08/25/2015
Bromochloromethane	5.0		**54.3**	50.00	0	108.5	73.3	121	08/25/2015
Bromodichloromethane	5.0		**54.5**	50.00	0	109.0	81.6	121	08/25/2015
Bromoform	5.0		**50.1**	50.00	0	100.3	83.1	127	08/25/2015
Bromomethane	10.0		**38.8**	50.00	0	77.7	44.4	154	08/25/2015
Carbon disulfide	5.0		**47.3**	50.00	0	94.7	73.2	118	08/25/2015
Carbon tetrachloride	5.0		**54.2**	50.00	0	108.3	79.4	130	08/25/2015
Chlorobenzene	5.0		**49.0**	50.00	0	97.9	81.4	110	08/25/2015
Chloroethane	10.0		**45.0**	50.00	0	90.0	52.1	137	08/25/2015
Chloroform	5.0		**51.5**	50.00	0	103.0	82.7	116	08/25/2015
Chloromethane	10.0		**36.4**	50.00	0	72.7	48.2	144	08/25/2015
cis-1,2-Dichloroethene	5.0		**52.7**	50.00	0	105.4	78.2	116	08/25/2015
cis-1,3-Dichloropropene	5.0		**55.6**	50.00	0	111.2	83	119	08/25/2015
Dibromochloromethane	5.0		**48.9**	50.00	0	97.8	81.2	121	08/25/2015
Dibromomethane	5.0		**51.5**	50.00	0	103.0	78.3	118	08/25/2015
Dichlorodifluoromethane	10.0		**32.6**	50.00	0	65.2	20.6	154	08/25/2015
Ethyl methacrylate	5.0		**51.8**	50.00	0	103.7	80.1	113	08/25/2015
Ethylbenzene	5.0		**50.0**	50.00	0	100.1	77.2	113	08/25/2015
Hexachlorobutadiene	5.0		**48.1**	50.00	0	96.2	77.3	123	08/25/2015
Hexachloroethane	10.0		**51.3**	50.00	0	102.6	74.6	117	08/25/2015
Iodomethane	5.0		**36.0**	50.00	0	72.0	61.3	140	08/25/2015
m,p-Xylenes	5.0		**101**	100.0	0	100.7	79.6	113	08/25/2015

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111788 **SampType:** LCS Units µg/L
SampID: LCS-R150825-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methacrylonitrile	10.0		**57.3**	50.00	0	114.7	77.2	125	08/25/2015
Methyl Methacrylate	5.0		**54.4**	50.00	0	108.8	74.2	121	08/25/2015
Methylene chloride	5.0		**53.7**	50.00	0	107.4	74.1	114	08/25/2015
Naphthalene	10.0		**50.9**	50.00	0	101.8	77.9	122	08/25/2015
o-Xylene	5.0		**49.4**	50.00	0	98.9	80.1	111	08/25/2015
Propionitrile	50.0		**612**	500.0	0	122.4	72.9	137	08/25/2015
Styrene	5.0		**52.4**	50.00	0	104.9	83.4	113	08/25/2015
Tetrachloroethene	5.0		**48.7**	50.00	0	97.4	72.5	125	08/25/2015
Toluene	5.0		**48.4**	50.00	0	96.8	77.5	113	08/25/2015
trans-1,2-Dichloroethene	5.0		**50.5**	50.00	0	101.0	79	114	08/25/2015
trans-1,3-Dichloropropene	5.0		**49.2**	50.00	0	98.3	78	115	08/25/2015
trans-1,4-Dichloro-2-butene	10.0		**47.3**	50.00	0	94.5	63.3	128	08/25/2015
Trichloroethene	5.0		**52.0**	50.00	0	103.9	84.4	114	08/25/2015
Trichlorofluoromethane	5.0		**48.0**	50.00	0	96.0	75.2	132	08/25/2015
Vinyl acetate	10.0		**57.8**	50.00	0	115.6	64.5	127	08/25/2015
Vinyl chloride	2.0		**41.3**	50.00	0	82.7	58	134	08/25/2015
Xylenes, Total	5.0		**150**	150.0	0	100.1	80.1	111	08/25/2015
Surr: 1,2-Dichloroethane-d4			**47.8**	50.00		95.6	74.7	129	08/25/2015
Surr: 4-Bromofluorobenzene			**47.9**	50.00		95.8	86	119	08/25/2015
Surr: Dibromofluoromethane			**50.6**	50.00		101.2	81.7	123	08/25/2015
Surr: Toluene-d8			**46.6**	50.00		93.1	84.1	114	08/25/2015

Batch 111788 **SampType:** MS Units µg/L
SampID: 15081255-001GMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1-Dichloroethene	5.0		**54.8**	50.00	0	109.6	35.7	136	08/25/2015
Benzene	2.0		**61.2**	50.00	3.220	116.0	62.5	121	08/25/2015
Chlorobenzene	5.0		**53.2**	50.00	0	106.3	78.6	114	08/25/2015
Ethylbenzene	5.0		**57.6**	50.00	0	115.3	74.4	130	08/25/2015
m,p-Xylenes	5.0		**56.5**	50.00	0	113.1	70.5	126	08/25/2015
o-Xylene	5.0		**53.9**	50.00	0	107.8	71.2	124	08/25/2015
Toluene	5.0		**53.0**	50.00	0	105.9	69.5	118	08/25/2015
Trichloroethene	5.0	S	**59.6**	50.00	0	119.1	69.4	117	08/25/2015
Xylenes, Total	5.0		**110**	100.0	0	110.4	71.1	125	08/25/2015
Surr: 1,2-Dichloroethane-d4			**46.8**	50.00		93.6	74.7	129	08/25/2015
Surr: 4-Bromofluorobenzene			**48.4**	50.00		96.9	86	119	08/25/2015
Surr: Dibromofluoromethane			**48.9**	50.00		97.8	81.7	123	08/25/2015
Surr: Toluene-d8			**46.5**	50.00		93.0	84.3	114	08/25/2015

Client: Missouri Geological Survey
Work Order: 15081255
Client Project: Bridgeton Landfill
Report Date: 28-Aug-15

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 111788 **SampType:** MSD Units µg/L RPD Limit 20

SampID: 15081255-001GMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1-Dichloroethene	5.0		**50.4**	50.00	0	100.7	54.81	8.48	08/25/2015
Benzene	2.0		**56.6**	50.00	3.220	106.9	61.20	7.72	08/25/2015
Chlorobenzene	5.0		**49.7**	50.00	0	99.5	53.15	6.65	08/25/2015
Ethylbenzene	5.0		**53.2**	50.00	0	106.4	57.64	7.99	08/25/2015
m,p-Xylenes	5.0		**52.8**	50.00	0	105.6	56.54	6.84	08/25/2015
o-Xylene	5.0		**50.2**	50.00	0	100.4	53.89	7.11	08/25/2015
Toluene	5.0		**49.2**	50.00	0	98.5	52.97	7.30	08/25/2015
Trichloroethene	5.0		**54.5**	50.00	0	108.9	59.57	8.94	08/25/2015
Xylenes, Total	5.0		**103**	100.0	0	103.0	110.4	6.97	08/25/2015
Surr: 1,2-Dichloroethane-d4			**48.0**	50.00		96.0			08/25/2015
Surr: 4-Bromofluorobenzene			**47.5**	50.00		95.0			08/25/2015
Surr: Dibromofluoromethane			**48.7**	50.00		97.4			08/25/2015
Surr: Toluene-d8			**46.2**	50.00		92.5			08/25/2015

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Bridgeton Landfill

Work Order: 15081255
Report Date: 28-Aug-15

Carrier: Anthony Kimutis

Completed by: Emily E. Pohlman
On: 21-Aug-15

Received By: EEP

Reviewed by: Elizabeth A. Hurley
On: 21-Aug-15

Pages to follow: Chain of custody [1] Extra pages included [0]

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 3.02
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
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 ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Trip Blank collection date and time will be reported as the received date and time (end of trip).

State of MO v. Republic Services, Inc. et al
Price - 0000654

CHAIN OF CUSTODY

pg. ____ of ____ Work Order # 1508255

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: Brenna McDonald/Missouri Geological Survey
Address: 111 Fairgrounds Rd.
City / State / Zip: Rolla, MO 65401
Contact: Brenna McDonald Phone: 573-368-2163
E-Mail: brenna.mcdonald@dnr.mo.gov Fax: 573-368-2111

Samples on: ☒ Ice ☐ Blue Ice ☐ No Ice 3.0 °C
Preserved in: ☒ Lab ☒ Field
FOR LAB USE ONLY
Courier
Lab Notes: DK headspace MBC 8/21/15

Comments: Please send analytical results to Brenna McDonald at brenna.mcdonald@dnr.mo.gov

Are these samples known to be involved in litigation? If yes, a surcharge will apply. ☒ Yes ☐ No
Are these samples known to be hazardous? ☐ Yes ☒ No
Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in comment section. ☐ Yes ☒ No

Project Name / Number: Bridgeton Landfill
Sample Collector's Name: Lynn Milberg
Results Requested: ☒ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other _____ ☐ 3 Day (50% Surcharge)
Billing Instructions: send invoice

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	MATRIX: Water	Drinking Water	Soil	Sludge	Sp. Waste	INDICATE ANALYSIS REQUESTED: Missouri Appendix II
1508255-001	PZ-210-SD	8/19/15 1436	4	✓	✓	✓	2	✗		1	X					✓
-002	PZ-211-SD	8/20/15 0915	4	1	1	1	2			1	X					✓
-003	PZ-104-SD	8/20/15 1206	4	1	1	1	2			1	X					✓
-004	Trip Blank						2									

Relinquished By	Date / Time	Received By	Date / Time
	8/21/2015 0750		8-21-2015 07:50
	8/21/2015 0812		8/21/15 1115
	8/21/15 1230		8/21/15 1230 PM

The individual signing this agreement on behalf of client acknowledges that he/she has read and understands the terms and conditions of this agreement, on the reverse side, and that he/she has the authority to sign on behalf of client.

WHITE – LAB YELLOW – SAMPLER'S COPY

State of MO v. Republic Services, Inc. et al
Price - 0000655

REMIT TO: **TEKLAB, INC**
Accounts Receivable
5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
TEL: (618) 344-1004
Email: AccountsReceivable@teklabinc.com

INVOICE

INV DATE: Aug 28, 2015
DUE DATE: *Sep 27 2015*

Invoice No: 177136

INVOICE TO: Missouri Geological Survey
111 Fairgrounds Road
Rolla, MO 65401

PO Number:

Attention: Accounts Payable
Project Name: Bridgeton Landfill
Project Contact: Brenna McDonald

Samples Received: Aug 21, 2015
Quote Number: 3933
Teklab Work Order#: 15081255

Item	*Remarks*	*Qty*	*Unit Price*	*Test Total*
Chlorinated Herbicides, Aqueous, by GC/ECD		3	$150.00	$450.00
Cyanide, Aqueous (Total)		3	$31.00	$93.00
Mercury, Aqueous, (Total)		3	$25.00	$75.00
Metals, Aqueous, by ICP (Total)		3	$144.00	$432.00
Pesticides & PCBs, Aqueous, by GC/ECD		3	$140.00	$420.00
Semi-Volatile Organic Compounds (BNA), Aqueous		3	$175.00	$525.00
Sulfide, Colorimetric, Aqueous (Total)		3	$21.00	$63.00
Volatile Organics Compounds, Aqueous		4	$90.00	$360.00

Surcharge and Miscellaneous Charge Summary

Item	*Surcharge*	*Unit*	*Qty*	*Total*
Quality Control Reporting	10%			

Subtotal:	**$2,418.00**
Discount:	0.00%
Surcharge:	10.00%
Misc Charges:	**$0.00**
Payment Received:	$0.00
INVOICE Total:	**$2,659.80**

We appreciate your business!!!!

State of MO v. Republic Services, Inc. et al
Price - 0000656

Appendix G

Missouri University of Science and Technology
David J. Wronkiewicz, Ph. D
Geochemical Analysis Report

Report on Redox Reactions Inferred from the Chemical Composition of Water Collected from the PZ-104-SD and PZ-106-SD Monitoring Wells at the Bridgeton Sanitary Landfill, St. Louis County, Missouri

David J. Wronkiewicz, Ph.D., Department of Geology-Geophysics, Geological, and Petroleum Engineering, Missouri University of Science and Technology, Rolla, MO 65401

Background on Reduction-Oxidation (Redox) and Related Solubility of Elements

The solubility of a metal in a solution may be influenced by one or more physical-or-chemical parameters. Examples of such changes include temperature, salinity, pressure, pH, etc. Changes in these parameters may induce the precipitation of a solid phase(s) when one or more occur to lower solubility, or alternatively dissolve a solid phase(s) when one occur to increase solubility. Inferences may be made about water-solid reaction processes affecting solids, even when there is not any direct observational data from the solids by examining chemical changes of a solution that has interacted with the solids over time. A solution interacting and dissolving components from a solid is normally referred to as a "leachant" in chemical terms.

Reduction-oxidation (redox) reactions occur when elements in a solution and/or solid exchange orbital electrons (e^-) with their surroundings. Elemental components that are both redox sensitive and present in relatively large amounts will thus control redox reactions in their immediate surroundings, or in adjacent regions when redox components begin to migrate within a fluid or gas phase. Organic-carbon based materials, sulfur, and iron are three components that are both redox sensitive and often present in large amounts to the point where they control local redox reactions. Iron presents itself as a good introduction point to evaluate redox processes because the behavior of iron and the solid compounds produced from it can be commonly observed (e.g., rust). Iron exists naturally in three valence (or oxidation) states: 1) metallic or zero-valence iron (Fe^o), 2) ferrous iron (Fe^{2+}), and 3) ferric iron (Fe^{3+}). These three variants may be transformed by the following redox reactions:

$$\underset{\text{Metallic Fe}}{Fe^o} \leftrightarrow \underset{\text{Ferrous Iron}}{Fe^{2+} + 2e^-} \leftrightarrow \underset{\text{Ferric Iron}}{Fe^{3+} + e^-}$$

Reducing environment $\longleftrightarrow$ Oxidizing environment

Metallic iron-nickel minerals are the dominant component in the Earth's core, but naturally occurring metallic iron is so unstable (will oxidize) in the presence of water and oxygen that it is rarely encountered outside the core. Metallic iron is also the principle component in steel, thus the behavior of steel materials altering to rust (ferric-iron oxides) can demonstrate the relative instability of metallic iron and the alteration processes that affect it. Ferrous iron is commonly found in minerals within the Earth's mantle and crust and these ferrous compounds are also not stable in the presence of water and oxygen. Ferrous iron will also lose an electron to oxygen during redox reactions and be transformed into ferric iron. Ferric iron may then combine with oxygen and/or OH^- to precipitate one of several relatively insoluble mineral compounds we commonly term rust (Fe_2O_3, $FeO(OH)$, and $Fe(OH)_3$). These minerals represent a relatively insoluble form of iron in oxidizing atmospheric conditions and thus are commonly observed as

corrosion products on metallic iron. Conversely, any ferric iron that is exposed to a reducing environment may accept electrons from its surroundings and be transformed into the more soluble ferrous iron state.

Sulfur is another element that exhibits multivalent tendencies in redox reactions. Sulfur may be found in five valence states in nature; S^{2-}, S^{0}, S^{2+}, S^{4+}, S^{6+}; with each specie in the series successively formed by removing paired electrons from the orbital shells of the sulfur atoms (e.g., $S^{4+} \Rightarrow S^{6+} + 2\ e^{-}$). The intermediate valence states of sulfur tend to be transient in nature, thus most sulfur is found either in the fully reduced sulfide ion (S^{2-}) or the fully oxidized variety (S^{6+}). Under reducing conditions the sulfide ion (S^{2-}) may bond with and immobilize transition metals such as Pb^{2+}, Zn^{2+}, Cu^{2+}, and Fe^{2+} as sulfide minerals. By contrast, the sulfate ion dominates under near-surface oxidizing systems.

The solubility of elements often change as a function of their valence state, and sometimes the difference in solubility may be quite dramatic. Thus, any perturbations of a system that may influence valence states of elements may also influence their solubility. A municipal waste landfill may be affected by numerous processes and events that can perturb the valence conditions for materials placed in the landfill. For example, the inclusion of large amounts of municipal waste with a high organic content will produce reducing conditions. As fluids in a landfill migrate, they may also promote reducing conditions in surrounding areas. Excessive pumping of the landfill leachates may promote oxidation of materials in the zone of water drawdown zone due to exposure to oxygenated surface water. Alternately, flooding of the landfill may allow reducing waters to upwell and migrate causing reducing fronts to also move upwards. Combustion in the presence of oxygen will also oxidize multivalent elements.

Reduction-Oxidation (Redox) Reactions Inferred from Changes in Element Concentrations and mobility at the Bridgeton Sanitary Landfill Site

Changing concentrations of multiple redox sensitive elements have been observed in groundwater collected from different monitoring wells and at different sampling dates at the Bridgeton Sanitary Landfill. All geochemical data discussed herein has been provided to the author by Missouri Geological Survey. Coupled oxidation-reduction trends and the changes they induce in the solubility of different elements can be reliably used to infer the chemical reactions occurring at source regions where the solids are reacting. Sampling and analysis of solid materials present in and adjacent to the groundwater sampling wells would also provide complimentary information on redox reactions, but these solid samples are not currently unavailable.

Monitoring well PZ-104-SD began to display marked changes in the concentration of several soluble elemental constituents starting on 5/11/2012 and continuing through to the last recorded sampling period on 2/3/2015. These changes include a marked increase in total organic carbon (TOC). TOC values were < 3.0 mg/L for all samplings prior to 5/11/2012. These values increased starting at 5/11/2012, reached a peak of 490 mg/L on 4/11/2013, and then decreased in a non-uniform manner over the remaining three sampling periods. The organic carbon can act as a reducing agent to other redox-sensitive components present in the landfill. Ammonia (NH_3) is the reduced form of nitrogen and this specie also showed a positive correlation that *increased* along with TOC. Ammonia concentrations were <0.50 mg/L for all samplings prior to

5/11/2012, then peaked at 66 mg/L on 4/11/2013, then decreased in an irregular manner thereafter. Iron and manganese are two redox sensitive components that are expected to also display an *increase* in solubility as the atoms incorporate electrons and are reduced during redox reactions ($Fe^{3+} \rightarrow Fe^{2+}$, and $Mn^{4+} \rightarrow Mn^{3+} \rightarrow Mn^{2+}$, respectively). The concentration of iron varied from 140 to 1500 μg/L for all sampling periods prior to 5/11/2012, with the exception of one anomalously low sample at 5 μg/L on 11/7/07. Iron displayed a moderate increase in concentration starting with the 5/11/12 sample (2500 mg/L), peaked at 29,000 μg/L on 4/11/2013, and then decreased in a non-uniform manner over the remaining three sampling periods. Manganese concentrations increased in a parallel with iron, though at a more subdued rate. The highest manganese concentration occurred on 4/11/2013, and at 190 μg/L was ~35% greater than the highest concentration observed in all samples collected prior to the 5/11/2012 sampling (<10 to 140 μg/L). Sulfate concentrations *decreased* starting with the 5/11/2012 event. Prior to this date all measurements for sulfate ranged from 72 to 100 mg/L. On 5/11/2012, the sulfate content was recorded at 35 mg/L and reached a low of 4.5 mg/L on the last recorded sampling at 2/3/2015. Sulfate and sometimes total sulfur may commonly display a lowering of solubility following a reduction in valence state due to its transformation into the sulfide ion and then its complexation with metals to precipitate as solid sulfide minerals (e.g., pyrite FeS_2).

Several other trace or minor elements also displayed concentration changes during and following the 5/11/2012 date. These included increases in the concentration of phosphorous, arsenic, chromium, nickel, and barium. Both phosphorous and arsenic occur in 3+ and 5+ valence states and thus their parallel behavior following the changes at the 5/11/2012 sampling suggest a coupling of their redox influenced solubility. Similarly chromium with 3+ and 6+ valence states follows the same trend as phosphorous and arsenic with increasing concentrations occurring on or after 5/11/2012. Phosphorous is insoluble in oxidizing and non-acidic environments where it precipitates as the mineral phase apatite ($Ca_5(PO_4)_3(OH,F,Cl)$). An increase in the concentration of phosphorous may thus result from a reduction process involving $P^{5+} \rightarrow P^{3+}$, acidification of the solution, or both. The behavior of arsenic may be more complex. It may increase in solubility following the same redox trend described previously for phosphorous. Alternatively, arsenic may be coupled to the behavior of iron as it commonly is adsorbed onto the surfaces of iron-oxide rust phases. Chromium contents in the groundwater wells follow those of phosphorous and arsenic with increased concentrations occurring with the 4/11/2013 sampling date, even though a reduction of chromium to the 3+ valence state would be expected to lower the solubility for this element. This suggests that chromium solubility is also coupled to an iron solid phase.

Nickel and barium are not redox sensitive elements under normal redox conditions expected at or near the Earth's surface (including a municipal landfill). Both elements will remain in a 2+ valence state as Ni^{2+} and Ba^{2+}. Their marked increase in solubility starting with the 5/11/2012 sampling date or later is interpreted to reflect changes in their mobility following the redox induced dissolution of other solid phases that may have complexed with these elements as solid phases in the waste material, alteration products formed during corrosion of landfill waste, and/or naturally occurring minerals. Nickel commonly occurs as a trace constituent in iron based steel components and may also adsorb onto iron oxide (rust). Dissolution of either steel components and/or rust can thus liberate any nickel present into the groundwater. Barium is commonly associated in the sulfate mineral barite ($BaSO_4$). Reduction of the sulfate ion to a

lower valence state (including fully reduced sulfide) will destabilize the barite mineral causing its dissolution and release of barium and reduced sulfur ions. The radioactive waste received by the Bridgeton Sanitary Landfill is reported to contain radium as a sulfate solid phase ($RaSO_4$). The dissolution of a radium sulfate phase would be expected to occur in a parallel fashion as $BaSO_4$. Thus any increase in sulfate concentrations in aqueous solutions derived from areas known or suspected to contain radioactive materials shipments should also be screened for the presence of Ra^{2+}.

Monitoring well PZ-106-SD also displays changes in the concentration of the major redox sensitive elements in a parallel fashion to the previously discussed PZ-104-SD monitoring well. TOC, ammonia, and iron all display increasing concentrations starting with the 9/24/2014 sampling date. As with the PZ-104-SD sampling well, these changes are interpreted as resulting from the migration of TOC enriched water into the well bore sampling area with the organic components inducing the reduction of the valence states for nitrogen (to produce ammonia), and iron (to form more soluble ferrous iron). Nickel and barium also increase and their mobility is suspected to be coupled to the dissolution of a solid iron phase(s) and solid barium sulfate minerals, respectively. Correspondingly, sulfate concentrations decreased as sulfate was reduced to sulfide. Increases were also observed for cobalt. The chemical behavior of cobalt is expected to be similar to nickel, in that its solubility may be controlled by the dissolution or precipitation of various iron oxide minerals. Vanadium also displays an increase in concentration in the PZ-106-SD well samples on and after the 9/24/2014 sampling date. The redox behavior of vanadium is identical to that of phosphorous, and thus it is also expected to increase in solubility following reduction reactions. Significant changes were not observed with respect to the concentrations of manganese, phosphorous, and arsenic, as was seen previously with the PZ-104-SD well samples. These were generally present in low concentrations (especially phosphorus and arsenic) and therefor any changes that may have occurred may be too small to be detected by the analytical methods used. Chromium did display a high concentration in the single sample collected on 9/24/2014 (42 μg/L), but had decreased back below the analytical detection limit (<5 μg/L) by the subsequent 2/3/2015 sampling.

State of MO v. Republic Services, Inc. et al
Wronkiewicz - 0000006

Bridgeton Sanitary Landfill
Missouri Solid Waste Appendix I Inorganic Constituent Concentrations
BSLF Well PZ-104-SD

PZ-104-SD	5/24/2005	5/23/06	11/10/06	5/17/07	11/7/07	5/7/08	11/3/08	5/7/2009	11/4/2009	5/20/2010	11/10/2010	5/9/2011	11/17/2011	5/11/2012	8/1/2012	11/27/2012	4/11/2013	10/7/2013	9/24/2014	2/3/2015
Field Temp.(℃)	17.1	19.8	16.2	17.2	16	16.1	17.2	16.5	16.4	15.6	17.4	25.1	16.7	18.2	19.7	17.5	17.8	21.5	25.7	25.3
Field pH (Std. Units)	7.75	7.18	7.24	7.73	7.4	7.1	7.36	7.4	6.97	6.52	6.96	7.44	6.99	7	6.95	6.6	6.46	6.44	6.75	6.8
Field Sp. Cond. (umHOS/cm)	966	709	982	1130	1119	1101	1097	1147	130.2	1130	1162	836	1123	1126	1264	1284	1329	1345	1457	1550
Field Turbidity (ntu)	1.69	520	15	3.62	1.48	0.96	2.5	4.12	0.81	0.89	5.99	9.11	6.82	1.01	1.47	1.79	1.06	5.21	2.54	2.02
Hardness (mg CaCO3/L)	500	520	490	490	510	500	520	510	500	360	500	470	480	490		560	840	570	550	522
Barium	140	180	180	200	200	190	200	190	180	130	190	170	160	340		480	2000	610	710	492
Beryllium	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		<2.0	<2.0	<2.0	<2.0	<2.0
Boron	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	200		310	1800	690	920	676
Calcium	110,000	120,000	110000	110000	120000	120000	120000	110000	110000	83000	120000	110000	110000	110000		120000	170000	120000	110000	112000
Chromium	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	6.4		<5.0	7.8	12	13	9.9
Cobalt	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	8.6	<5.0	<5.0	<5.0
Copper	<5.0	<5.0	<5.0	<5.0	180	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.9	<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Iron	1,500	1,000	390	240	5	140	280	160	380	220	320	1400	550	2500		7900	29000	8200	12000	9870
Magnesium	52,000	54,000	51000	51000	68	52000	55000	54000	53000	37000	50000	48000	50000	53000		60000	100000	64000	65000	58700
Manganese	85	120	120	140	<10	77	110	58	84	63	120	130	120	120		130	190	170	160	123
Nickel	<10	<10	<10	<10	<5.0	<10	<10	10	<10	<10	<10	<10	<10	13		11	60	32	55	29.7
Silver	<5.0	<5.0	<5.0	<5.0	39000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Sodium	26,000	31,000	23000	44000	<2.0	42000	46000	44000	47000	47000	58000	49000	39000	70000		92000	320000	130000	150000	120000
Thallium	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	38	11	10	13.1
Zinc	<20	<20	<20	<20	42	35	<20	41	<20	<20	21	39	<20	<20		<20	<20	<20	<20	<20
Arsenic	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		6.1	27	9.9	15	13.2
Cadmium	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Lead	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Antimony	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Selenium	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Solids (mg/L)	520	570	540	660	590	600	640	570	640	710	700	630	620	790		1800	1300	970	1100	1070
Chloride (mg/L)	50	66	57	110	87	96	110	99	110	120	140	110	98	160		400	260	170	210	241
Fluoride (mg/L)	0.9	0.75	0.86	0.79	0.94	0.82	0.81	0.86	0.72	0.85	0.8	0.86	0.73	0.83		<0.10	0.21	<0.10	0.93	0.9
Ammonia Nitrogen (mg/L)	0.11	0.11	0.49	0.16	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	0.38	<0.10	2.9		27	66	27	45	33.1
N (Nitrate-Nitrite (mg/L))	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	1.3	<0.10	<0.10		<0.10	<0.10	<0.10	<0.10	<0.10
Tot. Phosphorous (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.078	<0.05	0.053		0.085	0.16	0.097	0.12	0.098
Sulfate (mg/L)	72	84	73	98	87	93	100	96	97	99	95	91	84	35		34	49	28	29	4.5
COD (mg/L)	<15	28	<15	<15	22	<15	<15	21	<15	16	31	21	<10	77		290	760	290	310	174
TOC (mg/L)	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	1.7	1.3	<1.0	1.4	1.6	1.9	2.8	32		79	490	81	140	46.2

All concentrations are reported in micrograms/liter (µg/L) unless otherwise noted.

Data compiled from Bridgeton Landfill semi-annual detection monitoring summary reports (Hearst & Associates, Inc. 2005-2015).

State of MO v. Republic Services, Inc. et al
Wronkiewicz - 0000007

Bridgeton Sanitary Landfill
Missouri Solid Waste Appendix I Inorganic Constituent Concentrations
BSLF Well PZ-106-SD

PZ-106-SD	5/24/05	5/23/06	11/9/06	5/17/07	11/6/07	5/8/08	11/3/08	5/7/2009	11/3/2009	5/19/2010	11/10/2010	5/10/2011	11/17/2011	5/10/2012	7/31/2012	11/28/2012	4/9/2013	10/8/2013	9/24/2014	2/3/2015
Field Temp.(℃)	18.1	21.5	17.7	16.8	16.4	17.1	19.4	20.6	19.3	19.1	20.1	21.6	18.8		22.2	19.8	20.2	22.6	21.7	20
Field pH (Std. Units)	7.29	7.09	7.8	7.33	7.07	7.11	6.55	6.87	6.93	6.65	6.94	7.01	6.9		6.92	6.91	6.95	6.95	6.54	6.61
Field Sp. Cond. (umHOS/cm)	930	830	810	1073	964	897	888	743	951	847	849	826	874		842	865	854	827	4250	3750
Field Turbidity (ntu)	6.7	4.92	5.48	9.88	66.08	20.3	25.6	3.89	2.51	1.84	8.21	2.64	6.95		19.89	9.27	18.47	20.32	13.2	2.39
Hardness (mg CaCO3/L)	530	530	490	600	440	460	380	430	460	440	450	480	460	470		490	500	460	1300	1100
Barium	84	77	83	220	140	130	100	99	93	72	92	93	110	110		100	150	120	1400	1140
Beryllium	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		<2.0	<2.0	<2.0	<2.0	<2.0
Boron	<100	<100	<100	120	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100		<100	<100	<100	2900	2520
Calcium	120,000	120,000	110000	140000	96000	100000	83000	95000	100000	99000	100000	110000	100000	100000		110000	110000	100000	200000	176000
Chromium	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	6.1		<5.0	14	<5.0	42	<5.0
Cobalt	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	<5.0	12	8.9
Copper	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Iron	1100	610	980	3100	1900	1500	1400	1400	1600	370	710	1300	2700	2800		2200	5400	2100	13000	11800
Magnesium	56,000	57,000	51000	62000	48000	49000	44000	48000	50000	47000	48000	51000	49000	47000		49000	53000	50000	190000	160000
Manganese	230	340	330	53	99	120	80	110	180	210	190	180	170	160		170	180	66	92	104
Nickel	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	<10	<10	60	50.4
Silver	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Sodium	18,000	14,000	13000	37000	13000	11000	11000	12000	11000	11000	12000	11000	11000	11000		12000	12000	11000	560000	448000
Thallium	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	<10	<10	42	15.7
Zinc	<20	<20	<20	77	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20		<20	26	<20	<20	<20.0
Arsenic	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	5.1	<5.0	6.6	<5.0
Cadmium	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20		<0.20	0.21	<0.20	<0.20	<0.20
Lead	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	5.1	<5.0	<5.0	<5.0
Antimony	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Selenium	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	5.5
Mercury	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Solids (mg/L)	560	560	540	660	470	460	460	460	500	490	480	500	470	460		470	490	440	3200	613
Chloride (mg/L)	16	18	16	70	18	12	12	17	14	14	11	13	12	12		12	13	12	870	760
Fluoride (mg/L)	1.1	1.1	1	1.2	1.5	1.4	1.3	1.3	1.1	1.3	1.2	1.3	1.3	1.3		1.3	1.2	1.4	0.87	0.18
Ammonia Nitrogen (mg/L)	<0.10	<0.10	0.16	1.4	0.17	0.1	<0.10	0.14	0.21	1.4	0.92	0.79	0.32	0.22		0.36	0.33	0.11	73	64.2
N (Nitrate-Nitrite (mg/L))	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		<0.10	0.1	<0.10	<0.10	<0.10
Tot. Phosphorous (mg/L)	0.14	0.06	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.15	0.16	0.067	0.12	0.075		0.14	0.17	0.055	0.19	0.18
Sulfate (mg/L)	110	100	100	69	71	68	70	100	85	64	62	71	71	63		66	71	58	29	2.2
COD (mg/L)	<15	<15	<15	<15	22	<15	<15	<15	<15	15	<15	<10	<10	<10		13	10	<10	940	3360
TOC (mg/L)	<1.0	<1.0	NR	2	<1.0	<1	1.6	1.2	<1.0		1.4	1.4	1.1	1.2		1.6	1.5	1.5	370	227

All concentrations are reported in micrograms/liter (µg/L) unless otherwise noted.

Data compiled from Bridgeton Landfill semi-annual detection monitoring summary reports (Hearst & Associates, Inc. 2005-2015).

Appendix H

Missouri Department of Agriculture
Bridgeton Sanitary Landfill
Survey Report

DEPARTMENT *of* AGRICULTURE
STATE OF MISSOURI

JEREMIAH W. (JAY) NIXON
GOVERNOR

RICHARD FORDYCE
DIRECTOR

Serving, promoting and protecting the agricultural producers, processors and consumers of Missouri's food, fuel and fiber products.

August 25, 2015

Mr. Peter Price, Chief
Environmental Geology Section
Missouri Geological Survey
Department of Natural Resources
PO Box 250
Rolla, MO 65402-0250

RE: Bridgeton Landfill Survey (August 17 & 18, 2015)

Dear Mr. Price:

Enclosed are the results of the Bridgeton Landfill Survey. At the request of the Attorney General's Office, we performed a survey of the existing monitoring wells selected by your office along with the newly installed monitoring wells.

The horizontal control for this project was acquired by GPS observations utilizing the Missouri Department of Transportation's Real-time Network. The horizontal coordinates for this project are based on Missouri State Plane Coordinate System (converted to U.S. Survey Feet), East Zone, NAD 83. The vertical control for this project is based on control station "SL-137". The elevation of 481.50 feet used for this station is per the St. Louis County, Missouri Benchmark System. The elevations were transferred to the site and through the monitoring wells utilizing the level loop surveying method. The elevations shown on the attached document are the top of casing at the existing marked location, or if not marked, on the North edge of the casing. Also included in this survey are five existing control stations. These control stations are noted as "SCM...". The horizontal coordinates provided to our office for these stations appear to be Missouri State Plane Coordinates, East Zone, NAD 27 datum instead of the current NAD 83 datum used today. The elevations provided for the existing control stations and the top of casing on existing monitoring wells are approximately 0.3 feet higher than our elevations on all but two of the wells. For these two wells, the elevations provided were significantly different than ours. The elevation provided for PZ-109-SS is 1.37 feet lower than ours, and PZ-206-SS is 2.86 feet lower than ours.

Division of Weights, Measures & Consumer Protection
Land Survey Program
Ph. (573) 368-2300 • 1251 A Gale Drive • P.O. Box 937 • Rolla, MO 65402-0937 • FAX (573) 368-2379 • agriculture.mo.gov

Please review the attached document and let me know if you have questions or need additional information.

Sincerely,

LAND SURVEY PROGRAM

Ron Heimbaugh, PLS
Field Surveys Section Chief
ron.heimbaugh@mda.mo.gov

RLH/sh

Enclosures

c: Ron Hayes, Division Director, MDA/Weights, Measures & Consumer Protection
MDA File

DEPARTMENT *of* AGRICULTURE
STATE OF MISSOURI

JEREMIAH W. (JAY) NIXON
GOVERNOR

RICHARD FORDYCE
DIRECTOR

Serving, promoting and protecting the agricultural producers, processors and consumers of Missouri's food, fuel and fiber products.

BRIDGETON LANDFILL SURVEY

Date of Survey: August 17 & 18, 2015

Field Crew: Ron Heimbaugh, PLS
Scott Faenger, PLS
Tyler James, PLS
Jason Beasley, Tech. III

Horizontal Datum: Missouri State Plane Coordinate System (converted to U.S. Survey Feet)
NAD 83, East Zone
2011 Adjustment
Acquired coordinates by GPS observations utilizing Missouri Department of Transportation's Real Time Network

Vertical Datum: St. Louis County, Missouri Benchmark System
NAVD88
Benchmark = SL-137 (Standard aluminum DNR disk) – Elevation 481.50 (ft)
Elevations acquired by closed level loop method

*Elevation per GPS observation and not adjusted per closed level loop. Elevation should be considered approximate.

SCM... = Existing site control

Division of Weights, Measures & Consumer Protection
Land Survey Program
Ph. (573) 368-2300 • 1251 A Gale Drive • P.O. Box 937 • Rolla, MO 65402-0937 • FAX (573) 368-2379 • agriculture.mo.gov

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BRIDGETON LANDFILL SURVEY

Point No., Northing, Easting, Elevation, Latitude, Longitude, Description

1, 1067701.72, 836898.00, 483.30, 38°45'56.92164" N, 90°26'29.27360" W, PZ-103-SS
2, 1067873.21, 837021.11, 479.90, 38°45'58.61605" N, 90°26'27.71784" W, PZ-201A-SS
3, 1067532.41, 838151.02, 482.40, 38°45'55.23978" N, 90°26'13.45418" W, PZ-212-SS
4, 1067536.96, 838154.80, 482.31, 38°45'55.28471" N, 90°26'13.40650" W, PZ-212-SD
5, 1066537.10, 835640.72, 461.69, 38°45'45.41687" N, 90°26'45.15690" W, MO-3-SS
6, 1069469.56, 836300.82, 461.61, 38°46'14.40060" N, 90°26'36.79984" W, SCM10
7, 1069028.23, 837296.17, 490.21, 38°46'10.03173" N, 90°26'24.23527" W, SCM 4
8, 1068960.10, 837514.46, 481.50, 38°46'09.35691" N, 90°26'21.47956" W, SL 137
9, 1066938.76, 835333.19, 453.69, 38°45'49.38910" N, 90°26'49.03666" W, SCM 23
10, 1066450.61, 836018.20, 483.67, 38°45'44.55972" N, 90°26'40.39164" W, SCM 22
11, 1067132.44, 837246.71, 484.90, 38°45'51.29202" N, 90°26'24.87542" W, SCM 21
12, 1068131.18, 837053.06, 482.74, 38°46'01.16596" N, 90°26'27.31228" W, SCM 1001*
13, 1068377.36, 836094.36, 460.81, 38°46'03.60533" N, 90°26'39.41526" W, PZ-110-SS
14, 1068052.83, 836318.86, 459.92, 38°46'00.39594" N, 90°26'36.58311" W, PZ-109-SS
15, 1068072.19, 835984.08, 463.15, 38°46'00.58943" N, 90°26'40.81001" W, PZ-206-SS
16, 1067204.68, 835429.42, 464.34, 38°45'52.01724" N, 90°26'47.81975" W, PZ-107-SS
17, 1066767.34, 835574.71, 462.44, 38°45'47.69320" N, 90°26'45.98863" W, PZ-106-SS
18, 1066756.44, 835590.67, 463.15, 38°45'47.58539" N, 90°26'45.78714" W, PZ-106-SD
19, 1066451.71, 836018.53, 484.55, 38°45'44.57054" N, 90°26'40.38746" W, PZ-116-SS
20, 1066461.79, 835998.75, 485.44, 38°45'44.67028" N, 90°26'40.63713" W, MW 1204
21, 1066462.65, 836404.81, 483.17, 38°45'44.67646" N, 90°26'35.51039" W, PZ 105-SS
22, 1066703.10, 836781.88, 486.01, 38°45'47.05086" N, 90°26'30.74778" W, PZ 203-SS
23, 1066865.43, 836947.80, 486.67, 38°45'48.65471" N, 90°26'28.65163" W, PZ 210-SD
24, 1066869.82, 836951.97, 486.63, 38°45'48.69790" N, 90°26'28.59885" W, PZ 210-SS
25, 1067054.69, 837009.02, 483.27, 38°45'50.52497" N, 90°26'27.87714" W, PZ 104-SD
26, 1067069.21, 837021.74, 483.24, 38°45'50.66843" N, 90°26'27.71636" W, PZ 104-SS
27, 1067098.25, 837191.23, 487.13, 38°45'50.95444" N, 90°26'25.57621" W, PZ 211-SD
28, 1067102.23, 837195.64, 487.07, 38°45'50.99369" N, 90°26'25.52042" W, PZ 211-SS
29, 1067117.10, 837278.72, 489.23, 38°45'51.14018" N, 90°26'24.47131" W, PZ-209-SD
30, 1067113.09, 837283.04, 489.31, 38°45'51.10053" N, 90°26'24.41711" W, PZ-209-SS
31, 1067361.48, 837276.11, 480.70, 38°45'53.55587" N, 90°26'24.50233" W, PZ-202-SS
32, 1066547.32, 835637.09, 460.85, 38°45'45.51796" N, 90°26'45.20262" W, MO-3-SD
33, 1066471.32, 835699.74, 462.23, 38°45'44.76629" N, 90°26'44.41221" W, PZ-204A-SS
34, 1066471.42, 835730.93, 464.41, 38°45'44.76708" N, 90°26'44.01843" W, PZ-204-SS
35, 1066352.33, 836665.03, 493.23, 38°45'43.58427" N, 90°26'32.22583" W, MO-2-SD
36, 1066850.96, 837105.06, 487.45, 38°45'48.51047" N, 90°26'26.66611" W, MO-1-SS
37, 1066857.49, 837111.54, 487.59, 38°45'48.57499" N, 90°26'26.58425" W, MO-1-SD

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EXISTING SITE CONTROL

The following data was provided to our office from a Bridgeton Representative. **This is not the field data our office collected**. This information is for you to use as a comparison to our data and for your records.

SCM 4
Northing: 1068986.93
Easting: 517121.475
Elevation: 490.53

SCM 10
Northing: 1069428.347
Easting: 516126.027
Elevation: 461.90

SCM 21
Northing: 1067091.02
Easting: 517072.19
Elevation: 485.24

SCM 22
Northing: 1066409.01
Easting: 515843.62
Elevation: 484.04

SCM 23
Northing: 1066897.11
Easting: 515158.50
Elevation: 454.06

SCM 1001
Northing: 1068089.797
Easting: 516878.535
Elevation: 483.06

State of MO v. Republic Services, Inc. et al
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Appendix I

Bridgeton Sanitary Landfill
Leachate Analytical Results
April 9, 2015

PDC Laboratories, Inc.

PROFESSIONAL • DEPENDABLE • COMMITTED

April 29, 2015

Chris Boldt
Missouri Dept. of Natural Resources
PO Box 176
Jefferson City, MO 65102

Dear Chris Boldt:

Please find enclosed the analytical results for the sample(s) the laboratory received on **4/10/15 9:20 am** and logged in under work order **5041721**. All testing is performed according to our current TNI certifications unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories, Inc.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

PDC Laboratories, Inc. appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Vice President , John LaPayne with any feedback you have about your experience with our laboratory.

Sincerely,

Lisa Grant
Project Manager
(309) 692-9688 x1764
lgrant@pdclab.com

NELAP ACCREDITED TNI LABORATORY

PDC Laboratories, Inc.
2231 West Altorfer Drive
Peoria, IL 61615
(800) 752-6651

ANALYTICAL RESULTS

Sample: 5041721-01
Name: 152187
Matrix: Leachate - Grab

Sampled: 04/09/15 10:03
Received: 04/10/15 09:20

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Anions - PIA							
Chloride	1200	mg/L		04/21/15 11:19	04/21/15 11:19	TAS	EPA 300.0
Sulfate	270	mg/L		04/21/15 11:03	04/21/15 11:03	TAS	EPA 300.0
General Chemistry - PIA							
Alkalinity - total as CaCO3	2800	mg/L		04/14/15 12:45	04/14/15 12:45	LAZ/B	SM 2320B
COD	32000	mg/L		04/15/15 12:49	04/15/15 12:55	SJW	SM 5220D
Cyanide	< 0.0050	mg/L		04/13/15 09:47	04/14/15 11:16	lgsjf	SM 4500-CN C - EPA 335.4
Fluoride	0.398	mg/L		04/23/15 13:26	04/23/15 13:26	TCH	SM 4500-F C
pH	5.59	pH Units	H	04/20/15 11:31	04/20/15 11:31	pdcad	SM 4500-H B - EPA 150.1 - SW 9040
Solids - total dissolved solids (TDS)	18000	mg/L		04/15/15 13:47	04/15/15 14:35	TIN	SM 2540C
Total Organic Carbon (TOC)	350	mg/L		04/15/15 12:30	04/15/15 21:07	BRS	SM 5310C
Nutrients - PIA							
Ammonia-N	260	mg/L		04/15/15 07:51	04/15/15 09:30	BRS	OIA/PAI-DK03 & EPA 350.1
Nitrate/Nitrite-N	0.23	mg/L		04/15/15 15:16	04/15/15 15:16	lgsjf	EPA 353.2 - SM 4500-NO3 F - QC 10-107-04-1-C
Total Metals - PIA							
Hardness	7600	mg/L		04/13/15 11:45	04/16/15 12:38	JMW	[CALC]
Aluminum	3.4	mg/L		04/13/15 11:45	04/16/15 12:24	JMW	SW 6010
Antimony	< 60	ug/L		04/13/15 11:45	04/16/15 13:11	JMW	SW 6020
Arsenic	340	ug/L		04/13/15 11:45	04/16/15 13:11	JMW	SW 6020
Barium	1800	ug/L		04/13/15 11:45	04/16/15 13:11	JMW	SW 6020
Beryllium	< 20	ug/L		04/13/15 11:45	04/16/15 13:11	JMW	SW 6020
Boron	12000	ug/L		04/13/15 11:45	04/17/15 09:14	JMW	SW 6020
Cadmium	< 20	ug/L		04/13/15 11:45	04/16/15 16:47	JMW	SW 6020
Calcium	2600	mg/L		04/13/15 11:45	04/16/15 12:38	JMW	SW 6010
Chromium	140	ug/L		04/13/15 11:45	04/16/15 16:47	JMW	SW 6020
Cobalt	< 40	ug/L		04/13/15 11:45	04/16/15 13:11	JMW	SW 6020
Copper	< 60	ug/L		04/13/15 11:45	04/16/15 13:11	JMW	SW 6020
Iron	610	mg/L		04/13/15 11:45	04/16/15 12:39	JMW	SW 6010
Magnesium	250	mg/L		04/13/15 11:45	04/16/15 12:21	JMW	SW 6010
Manganese	33000	ug/L		04/13/15 11:45	04/16/15 16:47	JMW	SW 6020
Mercury	12	ug/L		04/13/15 11:45	04/16/15 13:11	JMW	SW 6020
Nickel	< 100	ug/L		04/13/15 11:45	04/16/15 16:47	JMW	SW 6020
Phosphorus	1600	ug/L		04/13/15 11:45	04/16/15 16:47	JMW	SW 6020*
Potassium	280	mg/L		04/13/15 11:45	04/16/15 12:21	JMW	SW 6010
Selenium	52	ug/L		04/13/15 11:45	04/17/15 11:29	JMW	SW 6020
Silver	< 100	ug/L		04/13/15 11:45	04/16/15 13:11	JMW	SW 6020
Sodium	1100	mg/L		04/13/15 11:45	04/16/15 12:21	JMW	SW 6010
Strontium	12	mg/L		04/13/15 11:45	04/16/15 12:39	JMW	SW 6010
Thallium	< 20	ug/L		04/13/15 11:45	04/16/15 16:47	JMW	SW 6020

PDC Laboratories, Inc.
2231 West Altorfer Drive
Peoria, IL 61615
(800) 752-6651

ANALYTICAL RESULTS

Sample: 5041721-01
Name: 152187
Matrix: Leachate - Grab

Sampled: 04/09/15 10:03
Received: 04/10/15 09:20

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Vanadium	< 100	ug/L		04/13/15 11:45	04/16/15 16:47	JMW	SW 6020
Zinc	6200	ug/L		04/13/15 11:45	04/16/15 16:47	JMW	SW 6020
Volatile Organics - PIA							
1,1,1,2-Tetrachloroethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,1,1-Trichloroethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,1,2,2-Tetrachloroethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,1,2-Trichloroethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,1-Dichloroethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,1-Dichloroethene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,2,4-Trichlorobenzene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,2,4-Trimethylbenzene	410	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,2-Dibromoethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,2-Dichlorobenzene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,2-Dichloroethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,3-Dichloropropene- Total	< 750	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,2-Dichloroethene- Total	< 500	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,2-Dichloropropane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,3,5-Trimethylbenzene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,3-Dichlorobenzene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
1,4-Dichlorobenzene	510	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
2-Hexanone	1700	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
4-Methyl-2-pentanone (MIBK)	2100	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Xylenes- Total	< 750	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Acetonitrile	< 5000	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Acrolein	< 2500	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Acrylonitrile	< 2500	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Benzene	910	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Bromodichloromethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Bromoform	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Bromomethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Carbon disulfide	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Carbon tetrachloride	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
cis-1,2-Dichloroethene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
cis-1,3-Dichloropropene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Chlorobenzene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Chloroethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Chloroform	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Chloromethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
DBCP	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Dibromochloromethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
trans-1,2-Dichloroethene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
trans-1,3-Dichloropropene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B

PDC Laboratories, Inc.
2231 West Altorfer Drive
Peoria, IL 61615
(800) 752-6651

ANALYTICAL RESULTS

Sample: 5041721-01
Name: 152187
Matrix: Leachate - Grab

Sampled: 04/09/15 10:03
Received: 04/10/15 09:20

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Dichlorodifluoromethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Ethylbenzene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
MTBE	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Methylene chloride	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Styrene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Tetrachloroethene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Toluene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Trichloroethene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Trichlorofluoromethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Vinyl acetate	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Vinyl chloride	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
o-Xylene	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
m,p-Xylene	< 500	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B
Dichlorofluoromethane	< 250	ug/L	Pc	04/14/15 00:00	04/14/15 13:38	JMB	SW 8260B*

Sample: 5041721-01RE1
Name: 152187
Matrix: Leachate - Grab

Sampled: 04/09/15 10:03
Received: 04/10/15 09:20

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Volatile Organics - PIA							
2-Butanone	87000	ug/L	Pc	04/15/15 00:00	04/15/15 14:32	MAB	SW 8260B
Acetone	140000	ug/L	Pc	04/15/15 00:00	04/15/15 14:32	MAB	SW 8260B
n-Butanol	< 2000000	ug/L	Pc	04/15/15 00:00	04/15/15 14:32	MAB	SW 8260B*

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2231 West Altorfer Drive
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(800) 752-6651

ANALYTICAL RESULTS

Sample: 5041721-02
Name: 152188 (Trip Blank)
Matrix: Leachate - Trip Blank

Sampled: 04/09/15 00:00
Received: 04/10/15 09:20

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Volatile Organics - PIA							
1,1,1,2-Tetrachloroethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,1,1-Trichloroethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,1,2,2-Tetrachloroethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,1,2-Trichloroethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,1-Dichloroethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,1-Dichloroethene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,2,4-Trichlorobenzene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,2,4-Trimethylbenzene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,2-Dibromoethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,2-Dichlorobenzene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,2-Dichloroethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,3-Dichloropropene- Total	< 15	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,2-Dichloroethene- Total	< 10	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,2-Dichloropropane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,3,5-Trimethylbenzene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,3-Dichlorobenzene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
1,4-Dichlorobenzene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
2-Butanone	< 10	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
2-Hexanone	< 10	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
4-Methyl-2-pentanone (MIBK)	< 10	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Xylenes- Total	< 15	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Acetone	< 10	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Acetonitrile	< 100	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Acrolein	< 50	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Acrylonitrile	< 50	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Benzene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Bromodichloromethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Bromoform	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Bromomethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Carbon disulfide	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Carbon tetrachloride	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
cis-1,2-Dichloroethene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
cis-1,3-Dichloropropene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Chlorobenzene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Chloroethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Chloroform	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Chloromethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
DBCP	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Dibromochloromethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
trans-1,2-Dichloroethene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
trans-1,3-Dichloropropene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B

PDC Laboratories, Inc.
2231 West Altorfer Drive
Peoria, IL 61615
(800) 752-6651

ANALYTICAL RESULTS

Sample: 5041721-02
Name: 152188 (Trip Blank)
Matrix: Leachate - Trip Blank

Sampled: 04/09/15 00:00
Received: 04/10/15 09:20

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Dichlorodifluoromethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Ethylbenzene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
MTBE	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Methylene chloride	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
n-Butanol	< 1000	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B*
Styrene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Tetrachloroethene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Toluene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Trichloroethene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Trichlorofluoromethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Vinyl acetate	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Vinyl chloride	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
o-Xylene	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
m,p-Xylene	< 10	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B
Dichlorofluoromethane	< 5.0	ug/L		04/14/15 00:00	04/14/15 11:41	JMB	SW 8260B*

PDC Laboratories, Inc.
2231 West Altorfer Drive
Peoria, IL 61615
(800) 752-6651

NOTES

Specific method revisions used for analysis are available upon request.

Certifications

PIA - Peoria, IL
- TNI Accreditation for Drinking Water, Wastewater, Hazardous and Solid Wastes Fields of Testing through IL EPA Lab No. 100230
- Illinois Department of Public Health Bacteriological Analysis in Drinking Water Approved Laboratory Registry No. 17553
- Missouri Department of Natural Resources Certificate of Approval for Microbiological Laboratory Service No. 870
- Drinking Water Certifications: Iowa (240); Kansas (E-10338); Missouri (870)
- Wastewater Certifications: Arkansas (88-0677); Iowa (240); Kansas (E-10338)
- Hazardous/Solid Waste Certifications: Arkansas (88-0677); Iowa (240); Kansas (E-10338); Wisconsin (998284430)

SPMO - Springfield, MO
- USEPA DMR-QA Program

STL - St. Louis, MO
- TNI Accreditation for Wastewater, Hazardous and Solid Wastes Fields of Testing through KS Lab No. E-10389
- Illinois Department of Public Health Bacteriological Analysis in Drinking Water Approved Laboratory Registry No. 171050
- Drinking Water Certifications: Missouri (1050)
- Missouri Department of Natural Resources

* Not a TNI accredited analyte

Qualifiers

H	Test performed after the expiration of the appropriate regulatory/advisory maximum allowable hold time.
Pc	Chemical preservation discrepancy noted at the time of analysis

Lisa Z Grant

Certified by: Lisa Grant, Project Manager

State of MO v. Republic Services, Inc. et al
Price - 0000672

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Price - 0000673
State of MO v. Republic Services, Inc. et al
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PDC Laboratories, Inc.
2231 W. Altorfer Dr
Peoria, IL 61615

CHAIN OF CUSTODY RECORD

State where samples were collected MO

Phone: (800) 752-6651
Fax: (309) 692-9689
www.pdclab.com

ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT)

(1) CLIENT	P.O. NUMBER	PROJECT NAME	DATE SHIPPED
Missouri Attorney General			4/9/15
ADDRESS	**PHONE**	**EMAIL**	**MEANS SHIPPED**
207 W. High St.	(573) 751-3321		UPS
CITY / **STATE** / **ZIP**	**SAMPLER (PLEASE PRINT)**		**MATRIX TYPES:**
Jefferson City / MO / 65102	Chris Radcliffe		WW - WASTE WATER DW - DRINKING WATER GW - GROUND WATER WWSL - SLUDGE NAS - SOLID LCHT - LEACHATE OTHER:
CONTACT PERSON	**SAMPLER'S SIGNATURE**		
Andrew Blackwell	CLR		

(3) ANALYSIS REQUESTED

(4) WORK ORDER (FOR LAB USE ONLY)
LOGIN #: 1041721-2
LOGGED BY:
PROJECT:
PROJ MGR:

(2) SAMPLE DESCRIPTION AS YOU WANT TO REPORT	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB	SAMPLE TYPE COMP	MATRIX TYPE	BOTTLE COUNT	pH; Total Alkalinity, TDS; Chlorides; Fluoride; Sulfate	COD; Ammonia; Nitrate/ Nitrite	TOC	Total Cyanide	Metals(Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn Hg,	Na, Sr, Tl, V, Zn);Hardness; Total Phosphorus	VOA	REMARKS
152187	4/9/15	1003	X		LCHT	8	X	X	X	X	X	X	X	
152188 Trip Blank			X		Water	2							X	

(5) TURNAROUND TIME REQUESTED (RUSH TAT IS SUBJECT TO APPROVAL AND SURCHARGE) ☑ NORMAL ☐ RUSH

DATE RESULTS NEEDED

(6) *The sample temperature will be measured upon receipt of the lab. By initialing this area, you request that we notify you before proceeding with analysis if the sample temperature is outside of the range of 0.1-6.0°C. By not initialing this area, you allow the lab to proceed with analytical testing regardless of the sample temperature.*

(7)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
RELINQUISHED BY (SIGNATURE): CLR	4/9/15	1315	Heather Calbert	4/9/15	1315
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	4/10/15	9:30

(8) COMMENTS (FOR LAB USE ONLY)

SAMPLE TEMPERATURE UPON RECEIPT: 3.0 °C

CHILL PROCESS STARTED PRIOR TO RECEIPT	Y OR N
SAMPLE(S) RECEIVED ON ICE	Y OR N
PROPER BOTTLES RECEIVED IN GOOD CONDITION	Y OR N
BOTTLES FILLED WITH ADEQUATE VOLUME	Y OR N
SAMPLES RECEIVED WITHIN HOLD TIME(S) (EXCLUDES TYPICAL FIELD PARAMETERS)	Y OR N
DATE AND TIME TAKEN FROM SAMPLE BOTTLE	

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