



May 9, 2023

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

**Subject: Contract No. 68HERH19D0018; Task Order No. 68E0719F0190
Former Clinton Engines
605 and 607 East Maple Street, Maquoketa, Jackson County, Iowa
Phase II Environmental Site Assessment**

Dear Ms. Dunning:

Toeroek Associates, Inc. (Toeroek) and our teaming subcontractor, Tetra Tech, Inc. (Tetra Tech), (hereafter "Toeroek Team") are pleased to present the Phase II Environmental Site Assessment (ESA) report regarding the Former Clinton Engines site (Site) at 605 and 607 East Maple Street in Maquoketa, Jackson County, Iowa. This deliverable has been reviewed internally as part of Tetra Tech's quality assurance program, as well as Toeroek's quality assurance program, and is consistent with Toeroek's Quality Management Plan for the Resource Conservation and Recovery Act (RCRA) Enforcement and Permitting Assistance (REPA) contract. Documentation of this review is retained in the Toeroek Team's project files.

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

Sincerely,

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Enclosure: Phase II ESA

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

**FORMER CLINTON ENGINES
605 AND 607 EAST MAPLE STREET
MAQUOKETA, JACKSON COUNTY, IOWA**



Prepared for

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

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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) tasked Toeroek Associates, Inc. (Toeroek) and its teaming subcontractor, Tetra Tech, Inc. (Tetra Tech), (hereafter “Toeroek Team”) with providing technical support to the EPA Region 7 Brownfields Program under Contract Number (No.) 68HERH19D0018, Task Order No. 68E0719F0190. EPA Region 7 requested the Toeroek Team conduct a Phase II Environmental Site Assessment (ESA) as part of a Targeted Brownfields Assessment (TBA) of the Former Clinton Engines site at 605 and 607 East Maple Street in the City of Maquoketa (the City), Jackson County, Iowa (the Site) ([Appendix A, Figure 1](#)).

The Site is comprised of three parcels (parcel ID numbers 145181938200900, 145181938200700, and 145181938200800) ([Appendix A, Figure 2](#)). The western parcel, containing three buildings, is owned by the Jackson County Historical Society. The City owns the two vacant parcels on the eastern portion of the Site. Reuse plans for the Site will depend on the results of this Phase II ESA investigation and levels of contamination observed (City of Maquoketa 2021).

The Toeroek Team did not conduct a Phase I ESA for the Site. The Toeroek Team developed this Phase II ESA based on results of the following previous investigations: (1) Missman, Stanley, & Associates P.C. (MSA) 1999 Phase I and II ESA (MSA 1999); (2) 2007 enrollment application submitted by the City for the Iowa Department of Natural Resources (IDNR) Land Recycling Program (LRP), including Forest Road Consultants’ 2006 Work Plan and TestAmerica analytical data (City of Maquoketa 2007); (3) 2013, 2014, and 2019 Impact7G, Inc. (Impact7G) site assessment plans and reports under direction from the LRP (Impact7G 2013, 2014, 2019); and (4) Superfund Technical Assessment and Response Team (START) 2021 Integrated Site Assessment (Tetra Tech 2021).

The primary purpose of this Phase II ESA was to assess potential impacts on the Site and nearby properties by hazardous substances released to soil and groundwater from sources at the Site. The scope of this Phase II ESA included collection of subsurface soil, groundwater, and soil-gas samples to determine plume dynamics and assess horizontal and vertical plume stability, which is a requirement of IDNR LRP. At least three additional quarterly groundwater sampling events are anticipated to assess plume stability.

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

1.1 PURPOSE

The primary purpose of this investigation was to assess the potential impact on the Site and on nearby properties by hazardous substances that have been released to soil and groundwater from sources at the Site. The scope of this Phase II ESA included collections of subsurface soil, groundwater, and soil-gas samples to determine plume dynamics. Further, an assessment of plume stability—horizontal and vertical—is a requirement of the IDNR LRP and was also part of this Phase II ESA.

1.2 SPECIAL TERMS AND CONDITIONS

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

2.0 BACKGROUND AND SITE HISTORY

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

2.1 SITE DESCRIPTION AND FEATURES

The Site is in Maquoketa, Jackson County, Iowa. It is a former industrial Site in a mixed-use area consisting of residential, agricultural, and commercial land. The Site is surrounded by single-family residences across South Clark Street to the west and commercial properties with some agricultural or undeveloped parcels to the north, east, and southeast. Agricultural land and several homes are south of the Site on the east side of South Clark Street. The Site encompasses three Jackson County Parcels and approximately 10.86 acres of land (Beacon 2022). Coordinates at the approximate center of the Site are 42.065375 degrees north latitude and 90.657173 degrees west longitude. It is situated in Section 19, Township 84 North, Range 3 East, as depicted on the Maquoketa, Iowa, 7.5-minute topographic map (U.S. Geological Survey [USGS] 1980).

Beginning in approximately 1945, the Site hosted industrial operations that included production of small engines. The Clinton Engines Company (Clinton Engines) acquired the property in 1950 from the Maquoketa Company and continued production of small engines. [Figure 2](#) in [Appendix A](#) shows the outline of the former manufacturing building. During the 1999 Phase I and II ESA, the machine shop, shipping and receiving, and one of the paint booths were in active use. Other portions of the facility were described as dilapidated in the Phase I ESA report, with holes in the roof and walls and standing water. Former operations included a foundry and die casting. Apparent underground storage tanks (UST), chemical storage rooms, and 55-gallon drums were noted in various areas (MSA 1999). Clinton Engines officially closed in 1999, and the property was donated to the City of Maquoketa in 2000 (IDNR 2020). In 2004, the Jackson County Historical Society purchased the western parcel from City of Maquoketa (Beacon 2022). Review of aerial photographs indicates that most facility buildings had been razed by 2004, with only a former office/administration building left standing (Historic Aerials 2023). This building has been converted into the Museum. Several buildings have since been constructed at the Site after the original manufacturing buildings were razed.

2.2 PHYSICAL SETTING

The Site lies within the Maquoketa, Iowa, city limits. It is bounded north by East Maple Street, with commercial or industrial properties beyond; east by a metal barn/residence (at a former railroad grade),

and a farm center; south by residential properties and farmland; and west by South Clark Street with residential properties beyond. Elevation of the Site is approximately 700 feet above mean sea level (amsl), with a slight slope to the north and northeast. Higher elevations are off-site to the south and southwest, with elevations reaching about 750 feet amsl.

2.2.1 Geologic Setting

The Site is in the Central Lowlands physiographic province of the United States. Jackson County is in eastern Iowa near the boundary of the Southern Iowa Drift Plain and the Iowan Surface. Locally, a moderate loess cover overlies a thin glacial drift layer (City of Maquoketa & Alliance Water, Iowa Rural Water Association 2014). The Southern Iowa Drift Plain is characterized by a steeply rolling landscape, with the eastern part dominated by tabular uplands. Surfaces of the Southern Iowa Drift Plain are cut deeply into the Pre-Illinoian glacial drift and are overlain by various thicknesses of Wisconsinian loess. The Iowan Surface is more eroded with gently sloping hills and valleys (Iowa Geological Survey [IGS] 2022a).

Soils at the former manufacturing area at the Site are characterized as urban land, which is generally flat and has been altered by buildings, parking lots, and cut and fill to make the soil unidentifiable. The lawn area surrounding the Museum to the northwest is classified as well-drained Worthen silt loam, with 2 to 5 percent slopes, that derived from silty alluvium. The railroad grade area to the east is classified as Orthents, loamy, with 1 to 5 percent slopes. Soils to the south and southwest of the Site (at higher elevations) are classified as Tama silt loams, driftless, with slopes of 5 to 14 percent, that derived from loess (U.S. Department of Agriculture [USDA] 2022).

In April 2014, Impact7G advanced two bore holes, BH-1 and BH-2, at the Site to obtain information about the geology of the Site. BH-1 was in the south-central portion of the Site, and BH-2 was in the north-central part of the Site. BH-1 was advanced to 38 feet below ground surface (bgs), at which depth the boring encountered carbonate (likely dolomite) bedrock. Materials logged in the hole were primarily silt with some clay layers. Interspersed in the silt and clay were fine and medium sands from 12 to 22, 29 to 30, and 35 to 37 feet bgs. BH-2 was advanced to 90 feet bgs. This boring also contained primarily silt with more clay from 75 to 90 feet bgs, at which depth carbonate (dolomite) bedrock was encountered. Fine to medium sands were logged from 18 to 25 and 58 to 64 feet bgs. The water table was encountered at a depth ranging from 13 to 16 feet bgs (Impact7G 2014).

The IGS 1992 Guidebook 56 *Quaternary Drainage Evolution of the Maquoketa River Valley* identifies an ancient Maquoketa River channel underlying the City. Delineation of the channel was based on bedrock

depths in the area that ranged to about 155 feet bgs. The ancient channel having depths exceeding 100 feet bgs trends north-south to about the center of the City, then trends northeast (Ludvigson, Bettis, and Hudak 1992). Alluvial deposits within the channel would be in lateral contact with shallower bedrock along the sides.

The bedrock geology map of northeast Iowa indicates that uppermost bedrock in the Maquoketa area is Silurian-aged Hopkinton and Blandings Formations consisting of a maximum of 330 feet of dolomite, fossil-moldic to vuggy, and non-cherty to cherty (IDNR 1998). During this Phase II ESA investigation, weathered, vuggy, fossiliferous dolomitic bedrock was encountered at depths ranging from 21 feet bgs at the Jackson County Fairgrounds, approximately 0.6 mile northeast of the Site, to 117 feet bgs, approximately 1,000 feet west of the Site.¹

2.2.2 Hydrogeology

Silurian carbonate rocks make up the uppermost bedrock in the vicinity of the Site. The stratigraphic log for City Well 6, approximately 0.3 mile southwest of the Site, begins at 125 feet bgs in Silurian (undifferentiated) deposits and reaches a total depth of 2,325 feet (IGS 2022b). The Ordovician Maquoketa Formation (mainly shale) was encountered from 245 to 270 feet bgs and is considered an aquitard protecting the underlying aquifers. Cambrian rocks below the St. Lawrence Formation (encountered about 1,200 feet bgs) are indicated as the aquifer supplying City Wells 4, 5, and 6 (IGS 2022b).

Porous Silurian dolomites form the uppermost bedrock aquifer. In eastern and northern Iowa, the average thickness is about 200 to 400 feet. Based on the depth of the underlying Ordovician Maquoketa Formation listed for City Well 6, wells tapping this aquifer would be less than about 245 feet deep.

The Cambrian-Ordovician aquifer has been extensively developed for municipal and industrial supplies, and yields range from 100 to 2,300 gallons per minute (gpm). Yields of 1,000 gpm can be obtained in all but the easternmost part of the aquifer area if drawdown of water levels is not a major concern (USGS 1978).

The upper part of the Cambrian-Ordovician Aquifer consists of the Ordovician St. Peter Sandstone and Prairie du Chien Formation and the Cambrian Jordan Sandstone. Wells completed in the Jordan

¹ Bedrock was encountered at 122 feet bgs about 750 feet south of the Site; however, this location is about 45 feet higher in elevation.

Sandstone typically produce at least 50 gpm, with yields up to 300 gpm; however, high yields generally depend on the thickness and degree of cementation of the Jordan Sandstone (USGS 1978).

The lower part of the Cambrian-Ordovician Aquifer consists of three Cambrian formations (Wonewoc, Eau Claire, and Mt. Simon), collectively referred to as the “Dresbach” aquifer. Yields in the Dresbach aquifer range from 280 to 2,560 gpm, and commonly yield at least 500 gpm. Yields are highest near Clinton, Iowa, decreasing westward, where water quality becomes poor. The Maquoketa area is an exception to this, as City Wells 4, 5, and 6 have high production capacities from this aquifer. Geologic data indicate this may be due to faulting within the Plum River fault zone, bringing the higher quality water in the Jordan Sandstone into juxtaposition with the Galesville Sandstone Member of the Wonewoc Formation (City of Maquoketa & Alliance Water, Iowa Rural Water Association 2014).

2.2.3 Hydrology

Most of the Site is gently sloping (north and northeast) or flat with elevations of about 700 feet amsl. Higher elevations (about 750 feet amsl) are off-site to the south and west, and lower elevations (about 680 to 680 feet amsl) are farther north and east, near the Maquoketa River (approximately 0.8 to 2 miles north of the Site) or Prairie Creek (approximately 0.8 mile east of the Site). Surface water likely flows into the stormwater sewer system or generally northeast toward Prairie Creek.

2.2.4 Meteorology

Annual average rainfall in the Davenport/Maquoketa, Iowa, area is approximately 36 inches. Average summer temperature highs are around 82 degrees Fahrenheit (°F). Average winter lows are around 17°F (National Weather Service 2023).

2.3 SITE HISTORY AND LAND USE

The Maquoketa Company initially developed the Site in 1945 for a manufacturing facility for machine gun parts to support the military (National Park Service 2006). Prior to operation by the Maquoketa Company, the Site was vacant farmland. Clinton Engines acquired the property in 1950. The production facility historically included a foundry, machine shops, cast and painting operations, and at least seven USTs. The Museum is the only Clinton Engines Company building remaining at the Site (Tetra Tech 2021). Other buildings associated with the facility were razed by about 2004. The Papke Heritage building southwest of the parking lot, and the Train Depot building to the east were constructed in

about 2014. [Figure 2](#) in [Appendix A](#) shows the footprint for the former manufacturing facility and the buildings currently at the Site.

2.4 ADJACENT PROPERTY USE

Older single-family homes of early 1900s construction are across South Clark Street west of the Site. Commercial properties, including a bulk oil storage facility, are across East Maple Street north of the Site. A former railroad grade borders the northeastern edge of the Site and is now privately owned. A metal shop/barn building that includes a residence was constructed at the railroad grade in 2005 (Beacon 2022). The southeastern portion of the railroad grade area is now part of Eberhart Farm Center. Several homes (some dating to the late 1900s) are south of the Site and east of South Clark Street. An agricultural field is east of these homes south and southeast of the Site. Historical aerial photographs indicate that portions of the area north of East Maple Street previously were used as employee parking (Historic Aerials 2023; Iowa Geographic Map Server 2023). Whether any manufacturing processes occurred at the northern property is unknown.

2.5 SUMMARY OF PREVIOUS ASSESSMENTS

Clinton Engines facility included a foundry, machine shops, cast and painting operations, and at least seven USTs. Four USTs (two 1,000-gallon gasoline, one 2,000-gallon gasoline, and one 1,000-gallon hazardous waste) that were near the north side of the former machine shop were removed in 1986 (MSA 1999). Clinton Engines facility officially closed in 1999, and the property was donated to the City in 2000 (Tetra Tech 2021). The Museum, the only building remaining from the original facility, is within a grassy area on the northwestern portion of the Site. The Museum is a 2-story brick building with entry stairs leading to the upper level at the north and a basement level partially below ground, with stairs providing access from the south. It was formerly used by Clinton Engines as offices and classrooms (MSA 1999). Manufacturing buildings were largely south and southeast of the Museum. [Table B-1](#) and [Table B-2](#) in [Appendix B](#) summarize groundwater and soil data for volatile organic compounds (VOCs) provided in the 1999 MSA Phase II ESA report. Approximate sample locations are shown on [Figure 3](#) in [Appendix A](#).

On May 23, 2005, IDNR notified the City of the transfer of the Site to the Contaminated Sites Section within IDNR (IDNR 2005a). Results from an Initial Site Screening (ISS), completed on June 2, 2005, indicated need for additional investigations at the Site (IDNR 2005b). The Site was enrolled in the Voluntary LRP in April 2008. According to the Voluntary LRP enrollment application, additional Site investigation activities occurred in 2006, including installation and sampling of eight groundwater monitoring wells (MW-10 through MW-17).

Groundwater monitoring wells were reportedly installed at the Site prior to enrollment in the Voluntary LRP program; however, Site files did not indicate who installed the wells or when they were installed (City of Maquoketa 2007). A 2006 Forest Road Consultants Work Plan and analytical data from groundwater samples from these wells were provided with the LRP application. The well diagrams indicate these borings were installed using direct-push technology (DPT), suggesting pre-packed screens may have been placed and removed after sampling (City of Maquoketa 2007). Analytical results are included in [Table B-1](#) and [Table B-2](#) in [Appendix B](#). Approximate sample locations are shown on [Figure 3](#) in [Appendix A](#).

Groundwater sampling from MW-10, southeast of the Museum, indicated presence of the following contaminants: toluene (detections as high as 3,000 micrograms per liter [$\mu\text{g/L}$]), *cis*-1,2-dichloroethene (DCE) (as high as 776 $\mu\text{g/L}$), trichloroethene (TCE) (as high as 524 $\mu\text{g/L}$), and vinyl chloride (VC) (as high as 147 $\mu\text{g/L}$). In addition, soil sampling from borings advanced east of the Museum indicated presence of the following contaminants: toluene (concentrations as high as 285,000 micrograms per kilogram [$\mu\text{g/kg}$]), TCE (as high as 8,370 $\mu\text{g/kg}$), *cis*-1,2-DCE (as high as 3,310 $\mu\text{g/kg}$), and VC (as high as 112 $\mu\text{g/kg}$). The enrollment application also included information pertaining to removal of three additional USTs (two 20,000-gallon diesel tanks and one 8,000-gallon tank of unidentified contents) from 2001 to 2002 (City of Maquoketa 2007). Based on 2006 site maps in the LRP application, three groundwater monitoring wells appear to have been installed in association with UST removals at the southwestern and southeastern parts of the Site.

Since 2006, further Site assessment activities have been sporadic, focusing primarily on delineation of the extents of on-site and off-site groundwater contamination, and on-site vapor intrusion (VI). Chlorinated solvents at the following maximum concentrations have been detected in groundwater samples from on-site groundwater monitoring wells and off-site temporary wells as far as 900 feet north-northwest of the Site:

- TCE at 9,580 $\mu\text{g/L}$, off-site temporary well;
- *cis*-1,2-DCE at 7,190 $\mu\text{g/L}$, off-site temporary well;
- *trans*-1,2-DCE at 1,044 $\mu\text{g/L}$, off-site temporary well;
- 1,1,2-Trichloroethane (TCA) at 132 $\mu\text{g/L}$, off-site temporary well;
- VC at 319 $\mu\text{g/L}$, off-site temporary well; and
- Toluene at 247,000 $\mu\text{g/L}$, on-site groundwater monitoring well (Impact7G 2019).

Additional Site investigation activities were conducted in 2013, including sampling of “existing” groundwater monitoring wells. The installation dates are unknown for the wells sampled in 2013. It is

evident that they are not renamed from wells Forest Road Consultants sampled in 2006 as MW-10 through MW-17 because they are at different locations ([Appendix A, Figure 3](#)). The report regarding the 2013 investigation references sampling groundwater monitoring wells MW-1 through MW-8 (assumed be the “previously installed” wells described in the LRP application) and 13 boreholes with mobile laboratory analysis provided by the DPT subcontractor, Below Ground Surface, Inc. (Impact7G 2013).

Numerous groundwater profiling samples have been collected at and around the Site via DPT, mainly by Impact 7G. [Figure 4](#) in [Appendix A](#) is a groundwater isoconcentration map prepared by Tetra Tech in 2021 based on available groundwater data for maximum concentrations of TCE.

A summary of information known about the existing groundwater monitoring well network is in [Table 1](#). Available groundwater and soil data are in [Table B-1](#) and [Table B-2](#) in [Appendix B](#).

TABLE 1
EXISTING GROUNDWATER MONITORING WELL NETWORK
FORMER CLINTON ENGINES SITE, MAQUOKETA, IOWA

Well ID	Total Depth (ft bgs)	Screen Depth (ft bgs)	Depth to Water (ft bgs)
MW-1	30	U	U
MW-2R	30	5-30	7
MW-3	30	U	U
MW-4	30	U	U
MW-5	30	U	U
MW-6	30	U	U
MW-7R	35	20-35	27
MW-8	30	U	U

Notes:

All values are in ft bgs.

ft bgs Feet below ground surface
ID Identification
MW Monitoring well
R Replaced
U Unknown

Given the elevated chlorinated solvent concentrations in groundwater, IDNR required indoor VI sampling at the Museum (IDNR 2014). Sub-slab samples collected at the Museum in 2014 and 2015 contained TCE concentrations as high as 930 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). In response, cracks in the Museum basement were repaired, chemicals stored in the basement were relocated, and the sump pit area was passively vented. In December 2019, follow-up indoor air sampling at the Museum documented indoor air exceedances above LRP Residential Vapor Intrusion Risk Levels. As a result, two HE1X1NH energy recovery ventilators (ERVs) were installed at the Museum in September 2020 (IDNR 2020).

These units have a typical air flow range of 925 cubic feet per minute (CFM) per unit, producing a total of 1.3 air exchanges per hour. Available VI sampling results for selected VOCs are in [Table B-3](#) in [Appendix B](#).

IDNR requested federal assistance in a letter dated February 17, 2020, regarding potential impacts of off-site groundwater contamination on nearby residential and commercial properties (IDNR 2020). IDNR also requested assistance related to VI sampling at surrounding properties near areas of known groundwater contamination to further determine potential impact (Tetra Tech 2021).

In June and July 2020, Tetra Tech START collected indoor air samples at 28 locations—23 residential and five commercial properties. Ambient air samples were collected at two residential properties. During the second mobilization in July 2020, Tetra Tech START also collected 12 DPT soil-gas samples from 8 feet bgs and six DPT subsurface soil samples from about 5 feet bgs. Both soil-gas and soil samples were collected near a sanitary sewer line leading from the Site. START also collected drinking water samples from five domestic wells and three municipal wells. In June 2020, air samples were analyzed for TCE only, with short turnaround times to quickly assess the magnitude of risk to nearby residents. Air samples collected in July 2020 were analyzed for TCE, *cis*-1,2-DCE, *trans*-1,2-DCE, VC, and toluene. Sample concentrations were compared to EPA Removal Management Levels (RMLs) for residential and workers (target hazard quotient [THQ] of 1.0 and target risk [TR] of 0.0001), and Superfund Chemical Data Matrix (SCDM) Cancer Risk Screening Levels for consideration of entry of the Site into the Superfund program. Soil samples and groundwater samples from drinking water wells were analyzed for VOCs (Tetra Tech 2021).

Results from the initial round of VI sampling in June 2020 indicated concentrations of less than 1.4 $\mu\text{g}/\text{m}^3$ of TCE in all but one sub-slab sample (3.1 $\mu\text{g}/\text{m}^3$). One indoor air sample (907 East Platt Street) was reported to have a TCE concentration of 1.9 $\mu\text{g}/\text{m}^3$ —just below the EPA RML of 2.0 $\mu\text{g}/\text{m}^3$ for TCE. No sub-slab sample was collected at that location. The residence was resampled in February 2021, and an indoor air TCE concentration of 0.38 $\mu\text{g}/\text{m}^3$ was detected; a sub-slab sample also was collected that did not contain TCE or related contaminants (Tetra Tech 2021).

Sub-slab vapor and indoor air samples collected at 15 other properties in July 2020 yielded similar low concentrations. TCE was identified in two sub-slab vapor samples (maximum concentration of 0.76 $\mu\text{g}/\text{m}^3$) and in four indoor air samples (maximum concentration of 0.64 $\mu\text{g}/\text{m}^3$). No concentrations of *cis*-1,2-DCE, *trans*-1,2 DCE, or VC were detected in any sub-slab vapor sample; however, these compounds were reported at low concentrations in four indoor air samples (maximum concentration of

0.79 $\mu\text{g}/\text{m}^3$ of *trans*-1,2 DCE). Toluene was detected in three sub-slab vapor samples (maximum concentration of 7.0 $\mu\text{g}/\text{m}^3$). In indoor air samples, elevated toluene concentrations (as high as 1,700 $\mu\text{g}/\text{m}^3$) and frequent detections (in 15 of 16 samples) were reported, suggesting indoor sources rather than VI from subsurface soil or groundwater (Tetra Tech 2021).

In February 2021, to identify possible seasonal variations in TCE concentrations, resampling occurred at seven properties where TCE had been detected in either a sub-slab vapor or indoor air sample during the June or July 2020 sampling event. In February 2021, TCE was detected at 1.0 $\mu\text{g}/\text{m}^3$ in a sub-slab vapor sample from where the concentration had been 3.1 $\mu\text{g}/\text{m}^3$ in June 2020. Toluene was reported at 16 $\mu\text{g}/\text{m}^3$ in a sub-slab sample from where the concentration had been 7.0 $\mu\text{g}/\text{m}^3$ in July 2020. In a commercial building, *trans*-1,2-DCE was detected at 0.46 $\mu\text{g}/\text{m}^3$ —below the Commercial RML and SCDM Non-Cancer Risk Screening Concentration. Toluene was detected in six of seven indoor air samples at concentrations ranging from 2.2 to 460 $\mu\text{g}/\text{m}^3$. All detected concentrations of toluene were well below the residential RML and SCDM Non-Cancer Screening Level (Tetra Tech 2021).

The 12 soil-gas samples collected off-site near the sewer line were analyzed for specific analytes via mobile laboratory by subcontractor, Below Ground Surface, Inc. The selected analytes (TCE, *cis*-1,2-DCE, *trans*-1,2-DCE, VC, and toluene) were not detected in the samples (Tetra Tech 2021). These results suggested that vapor migration from the groundwater plume to shallow soils did not pose a significant threat off site (Tetra Tech 2021).

Soil sampling near the sewer line north and west of the Site yielded detections of TCE and *cis*-1,2-DCE at three locations north of the Site. Highest TCE concentration (3,000 $\mu\text{g}/\text{kg}$) was detected within 15 to 16 feet bgs at SB-4, near the northeast corner of the intersection of South Clark and East Maple Streets. TCE was detected at 610 $\mu\text{g}/\text{kg}$ at 15-16 feet bgs in SB-6, about 250 feet farther north. These contaminants were not detected in soil samples collected within 9 to 10 feet bgs from saturated clay at these two locations, suggesting contamination may be spreading through a saturated, sandy layer documented in the stratigraphy of the area. At one boring, SB-03, concentrations of TCE at 73 $\mu\text{g}/\text{kg}$ and *cis*-1,2-DCE at 31 $\mu\text{g}/\text{kg}$ were detected in the sample collected within 9 to 10 feet bgs (Tetra Tech 2021).

Groundwater samples collected from five downgradient domestic wells and three municipal wells did not contain VOCs other than the common laboratory contaminant acetone (Tetra Tech 2021). Total depths of the domestic drinking water wells registered with IDNR in the downgradient area generally range from about 140 to 200 feet bgs (IDNR 2022a). These domestic wells produce from the Silurian bedrock aquifer. City water is derived from the Ordovician-Cambrian Aquifer at depths greater than 1,300 feet

(below the Cambrian-aged St. Lawrence Formation), and wells are generally upgradient or crossgradient of the Site.

3.0 PHASE II ENVIRONMENTAL SITE ASSESSMENT ACTIVITIES

The following subsections describe the scope, field exploration, and methods implemented during this Phase II ESA. From October 24 through November 5, 2022, Toeroek Team members Pauline Tinoco and Thomas Kaley installed monitoring wells and conducted subsurface soil and soil-gas sampling. Toeroek Team Member Jenna Mead assisted with bedrock well installations October 25 through 27, 2022. Sonic drilling, well installation, and development services were provided by Toeroek Team subcontractor Cascade Environmental, LLC (Cascade). Ms. Tinoco and Mr. Kaley conducted low-flow groundwater sampling of the newly installed wells on November 14 through 17, 2022. Toeroek Team Member Geoffrey Jay collected a water sample for investigation-derived waste (IDW) analysis on December 14, 2022. Documentation of Phase II ESA activities, including the site logbook, boring logs, well completion forms, and well development forms are in [Appendix C](#). Photographs taken to document Phase II ESA activities are in [Appendix D](#).

3.1 SCOPE OF THE ASSESSMENT

The Toeroek Team performed environmental sampling to determine if subsurface soils, groundwater, and soil gas are contaminated by historical activities at the Site. Sampling was consistent with the Quality Assurance Project Plan (QAPP) approved by EPA on July 28, 2022 (Toeroek Team 2022).

3.1.1 Sampling Plan

The proposed sampling scheme for this project incorporated a combination of biased/judgmental sampling with definitive laboratory analysis. All samples were submitted for analysis to an off-site laboratory subcontracted by the Toeroek Team. Objectives of the soil and groundwater sampling were to better delineate previously documented releases to the environment. [Figure 5](#) in [Appendix A](#) depicts the sampling locations at the Site. The following sampling activities were conducted at the Site:

- Collected 14 soil-gas samples from 5 feet bgs near monitoring wells and analyzed samples for VOCs;
- Installed 13 of 14 proposed permanent groundwater monitoring wells, six of which were collocated with existing wells but screened in deeper groundwater intervals of the unconsolidated alluvial sediments (seven other wells were for areal delineation of the groundwater plume in the alluvial aquifer);

- Installed four permanent groundwater monitoring wells screened in the uppermost groundwater in the underlying bedrock aquifer; and
- Collected and analyzed 17 groundwater samples for VOCs for the first quarterly sampling event.

3.1.2 Chemical Testing Plan

Laboratory analyses for chemical parameters were selected based on possibly present contaminants associated with historical uses of the Site. Samples were submitted to Pace Analytical Services, LLC (Pace) of Lenexa, Kansas, to be analyzed for VOCs.

3.1.3 Deviations from the QAPP

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

- Proposed monitoring well MW-5B was not installed because no water-bearing zone was encountered below sand previously screened in the collocated well MW-5.
- Soil-gas samples were proposed for collection at the locations of all 18 wells; however, only 14 samples were collected. Samples could not be collected at MW-6B and MW-12 locations due to presence of subsurface rubble that prevented advancements of the soil-gas sampling rods. Because of their proximity, only one sample (MW10-SG) was collected at the collocated MW-10A and MW-10B wells. A sample was not collected at the abandoned boring for MW-5B.
- Two soil samples were collected from well borings MW-6B and MW-8B, rather than one as specified in the QAPP. A second sample was collected from 50-57 feet bgs to provide information regarding presence of chlorinated VOCs (CVOCs) in the clay aquitard.
- Based on a field decision, permanent monitoring well pads were smaller than the 3- by 3-feet as specified in the QAPP.

These deviations did not adversely impact this investigation.

3.2 FIELD EXPLORATION AND METHODS

Phase II ESA activities at the Site occurred October through December 2022. Field staff transported samples to Pace in Lenexa, Kansas. The following sections summarize soil, groundwater, and soil-gas sample collection activities. Sampling locations are depicted on [Figure 5](#) in [Appendix A](#).

3.2.1 Soil Sampling

Subsurface soil samples were collected from each boring during Phase II ESA activities to investigate contamination from historical activities at the Site.

Samples were collected from the core extruded during sonic drilling. After an initial 7-foot core, the sonic drill crew retrieved and extruded 10- or 20-foot cores. The soil core was extruded into a polyethylene

sleeve, then laid out for lithologic inspection. Each soil core was archived until a deeper sample interval was selected, bedrock was encountered, or the boring was terminated. Depth of sample collection from each core was within the zone inducing the highest reading of VOCs from a hand-held photoionization detector (PID). If field screening did not indicate evidence of VOCs, the sample was collected in the 2 feet of unconsolidated material closest to the top of bedrock or the terminus of the boring. Soil samples were submitted for laboratory analysis for VOCs in accordance with EPA Method 5035 for analysis for VOCs via EPA Method 8260. Samples consisted of approximately 5 grams of soil placed in each of two 40-milliliter (mL) vials preserved with sodium bisulfate; one 40-mL vial preserved with methanol; and one unpreserved 40-mL vial or other appropriate container packed with soil for determination of moisture content. [Table 2](#) summarizes soil samples collected during this Phase II ESA. Boring logs are included in [Appendix C](#).

TABLE 2
SUBSURFACE SOIL SAMPLE SUMMARY
FORMER CLINTON ENGINES SITE, MAQUOKETA, IOWA

Sample Identification	Depth Interval (ft bgs)	Latitude (°N)	Longitude (°W)	Analyses Performed
MW-1B	19-21	42.065700	90.658165	Volatile organic compounds
MW-2B	55-57	42.065641	90.657845	
MW-3B	36-38	42.065353	90.658166	
MW-4B	24-26	42.064924	90.656009	
MW-5B	21-23	42.065503	90.656355	
MW-6B	18-20	42.065451	90.656849	
MW-6B	50-52			
MW-8B	14-16	42.065837	90.657810	
MW-8B	55-57			
MW-9	55-57	42.065887	90.659389	
MW-10A	39-41	42.066156	90.658485	
MW-10B	43-45	42.066156	90.658459	
MW-11	44-46	42.065043	90.655520	
MW-12	39-41	42.067338	90.659332	
MW-12	39-41-FD			
MW-13	22-24	42.067694	90.656657	
MW-14	59-61	42.069363	90.650758	
MW-101	114-116	42.066425	90.662962	
MW-102	117-119	42.062868	90.658521	
MW-103	19-21	42.070040	90.647624	
MW-104	64-66	42.070841	90.653076	

Notes:

ft bgs Feet below ground surface
FD Field duplicate

MW Monitoring well

3.2.2 Monitoring Well Drilling and Installation

The Toeroek Team subcontractor Cascade installed 17 permanent groundwater monitoring wells via sonic drilling technique. The monitoring wells were installed within the borings from which soil samples were collected.

Groundwater monitoring wells were installed in accord with *Iowa Administrative Code* (IAC) 567 Chapter 49, EPA Guidance *Handbook of Suggested Practices for the Design and Installation of Groundwater Monitoring Wells* (EPA 1991), and all relevant Toeroek Team Standard Operating Procedures (SOPs). The monitoring wells were constructed by Cascade under direct supervision of an IDNR Certified Well Contractor. Borings were 6 inches in diameter overburden or 7 inches in bedrock to permit at least 3 inches of annular space between the boring wall and the sides of the centered well screen and riser.

Six on-site monitoring wells were collocated with existing wells in the former manufacturing area of the Site (“collocated wells”). These wells were installed deeper to allow for vertical delineation of the groundwater plume and determination if a confining layer occurred below the known contamination and any underlying aquifer, as required by the LRP. These collocated wells are labeled with the same numbers as the existing wells, but with the suffix “B.” Screened intervals in these wells are between 41 and 57 feet bgs. The proposed well, MW-5B, was not installed because no water-bearing zone was encountered beneath the sandy interval previously screened in MW-5.

Seven wells were installed to better delineate the groundwater contamination in the alluvial aquifer (“delineation wells”); these wells were not collocated with existing wells. Three wells in the alluvial aquifer were previously installed at the Site. Collocated wells MW-10A and MW-10B are north of the Museum, and MW-11 is near the southeastern corner of the Site. The remaining four alluvial aquifer wells are off-site to the west, northwest, and northeast. Screened intervals for these wells are between 33 and 73 feet bgs.

Four monitoring wells were installed across the first occurrence of groundwater in the bedrock south (MW-102), west (MW-101), and northeast (MW-103 and MW-104) of the Site (“bedrock wells”). Depths to bedrock ranged from 21 feet bgs at MW-103, at the Jackson County Fairgrounds approximately 0.5 mile northeast of the Site, to 122 feet bgs at MW-102, approximately 750 feet south of the Site (MW-102 is at a higher elevation). Abundant groundwater was encountered in vuggy, fossiliferous, cherty carbonate bedrock believed to be Silurian-aged dolomites. [Table 3](#) summarizes construction information pertaining to the 17 installed monitoring wells.

TABLE 3

**GROUNDWATER MONITORING WELL CONSTRUCTION INFORMATION
FORMER CLINTON ENGINES SITE, MAQUOKETA, IOWA**

Well Name	Boring Depth (ft bgs)	Top of Bedrock (ft bgs)	Screened Interval (ft bgs)	Sand (#15) Filter Pack (ft bgs)	Bentonite Seal (3/8-inch Chips) (ft bgs)	Surface Completion Type
Collocated Wells (Deeper than Existing Well)						
MW-1B	57	Not encountered	42-52	39-53.5	38-39	Flush
MW-2B	58	Not encountered	47-57	44-58	43-44	Flush
MW-3B	58	Not encountered	47-57	44-58	43-44	Flush
MW-4B	58	Not encountered	47-57	44-58	43-44	Stick-up
MW-6B	57	55 (53 – weathered)	41-51	38-53.5	36-38	Stick-up
MW-8B	57	Not encountered	43-53	40-54	39-40	Flush
Delineation Wells						
MW-9	57	(57 – weathered)	46-56	43-57	42-43	Flush
MW-10A	58	Not encountered	47-57	44-58	43-44	Flush
MW-10B	77	75	63-73	74-60	59-60	Flush
MW-11	57	Not encountered	40-50	37-57	36-37	Stick-up
MW-12	62	Not encountered	35-45	46-32	31-32	Flush
MW-13	44	Not encountered	33-43	30-44	29-30	Flush
MW-14	61	Not encountered	50-60	47-61	46-47	Flush
Bedrock Wells						
MW-101	128	117	117-127	114-128	113-114	Flush
MW-102	137	122	125-135	122-138	121-122	Flush
MW-103	38	21	27-37	24-38	23-24	Flush
MW-104	88	71 (67 – weathered)	77-87	74-88	73-74	Flush

Notes:

3/8-inch bentonite chips were used to backfill borings to 1 foot below the screened interval.

No well was installed in the boring advance for MW-5B because a deeper groundwater zone was not encountered.

3/8-inch bentonite chips were used to separate sand filter pack from high-solids bentonite slurry grout placed above.

ft bgs Feet below ground surface

All wells were installed using factory-milled, 0.010-inch slot, 2-inch inner diameter (ID), schedule 40 polyvinyl chloride (PVC) screens, fitted with a 0.25- or 0.5-foot PVC end cap. Threaded schedule 40 PVC pipe was used for the screen and riser; no pipe joint compound or glue was used in monitoring well construction.

Red Flint Sand & Gravel Company #15 filter sand was placed between the well screen and the borehole wall and extended 12 inches below the screened interval and at least 18 inches above the top of the screened interval. The filter pack material was placed in a manner as to avoid bridging and to ensure a continuous filter pack throughout the screened interval of the well. Borings were backfilled, when necessary, to 1-foot below the interval to be screened using 3/8-inch bentonite chips. This was also used to create a separation between the filter pack sand and the high-solids bentonite slurry grout placed to the

surface. Iowa regulations do not require placement of a separate bentonite seal between the filter pack and the grout; however, this is a generally considered an appropriate practice.

Well pads were 3 inches thick, measured about 2 by 2 feet, and sloped to promote drainage away from the well. All wells were equipped with watertight, locking caps. Three wells were completed above ground (stick-up), for increased visibility in brushy areas of the Site. No protective bollards were placed around these stick-up wells. The remaining wells were completed in steel, 6-inch-diameter, flush-mount well vaults to allow for mowing or traffic. Monitoring well construction forms are in [Appendix C](#).

3.2.3 Well Development

Following installation, the monitoring wells were developed to remove sediment by use of an electric submersible pump inducing alternating surging and pumping. Temperature, pH, specific conductivity, and turbidity were monitored during pumping after the water had mostly cleared and was free of fines. Pumping continued until the parameters stabilized (no greater than 10 percent change over four consecutive readings). Well development forms are in [Appendix C](#).

3.2.4 Well Surveying

Clapsaddle-Garber Associates, Inc. of Marshalltown, Iowa, an Iowa-licensed land surveyor surveyed the location and elevation of each well. Global Positioning System (GPS) coordinates and elevations were established for monitoring well location. Elevations were determined for the top of the casing and land surface at each monitoring well. The horizontal control was to the closest 1-foot measurement, and vertical control was to the nearest 0.01-foot measurement. Elevations were referenced to mean sea level (msl). The horizontal datum was North American Datum of 1983 (NAD83) State Plane in U.S. survey feet, and the vertical datum was North American Vertical Datum of 1988 (NAVD88) in U.S. feet. GPS locations were also provided in decimal degrees. The survey data are in [Attachment 1](#). Well survey coordinates at soil sample locations also are listed in [Table 2](#).

3.2.5 Groundwater Sampling

Groundwater samples from the newly installed monitoring wells were collected about 2 weeks after well development via low-flow sampling technique. Two duplicate samples were also collected. Groundwater was encountered between 10 and 16 feet bgs. After completion of sampling at each location, each piece of sampling equipment that encountered the groundwater sample, except for the dedicated polyethylene

tubing, was decontaminated with a non-ionic detergent and tap water wash, followed by a tap water rinse. The tubing was disposed as solid waste after use.

Groundwater samples were analyzed for low-level VOCs via EPA Method 8260. Samples were collected into three 40-mL vials preserved with hydrochloric acid. [Table 4](#) summarizes groundwater samples collected during this Phase II ESA.

TABLE 4
GROUNDWATER SAMPLE SUMMARY
FORMER CLINTON ENGINES SITE, MAQUOKETA, IOWA

Sample Identification	Screened Interval (ft bgs)	Measured Depth (ft btoc)	Depth to Water (ft btoc)	Top of Casing Elevation (ft amsl)	Groundwater Elevation (ft amsl)	Analyses Performed
MW-1B	42-52	52.22	18.47	697.310	678.840	Volatile organic compounds
MW-2B	47-57	56.74	16.11	693.835	677.725	
MW-3B	47-57	56.87	21.04	699.182	678.142	
MW-4B	47-57	60.22*	28.69	702.532	673.842	
MW-6B	41-51	53.74*	21.91	700.082	678.172	
MW-6B-FD						
MW-8B	43-53	52.79	13.57	691.144	677.574	
MW-9	46-56	53.89	14.71	693.648	678.938	
MW-10A	47-57	57.06	11.81	689.654	677.844	
MW-10B	63-73	72.70	13.67	689.398	675.728	
MW-10B-FD						
MW-11	40-50	52.83*	18.16	701.474	683.314	
MW-12	35-45	44.60	6.39	684.200	677.810	
MW-13	33-43	42.51	NA	680.000	NA	
MW-14	50-60	60.34	11.69	679.283	667.593	
Bedrock Wells						
MW-101	117-127	128.15	24.38	702.415	678.035	
MW-102	125-135	136.79	63.54	744.429	680.889	
MW-103	27-37	36.96	16.04	679.851	663.811	
MW-104	77-87	85.78	17.39	684.785	667.395	

Notes:

* Monitoring wells MW-4B, MW-6B, and MW-11 have aboveground completions; remaining wells are flush-mount.

amsl Above mean sea level
bgs Below ground surface
btoc Below top of casing

FD Field duplicate
ft Feet
MW Monitoring well

3.2.6 Soil-gas Sampling

The Toeroek Team collected 14 soil-gas samples during Phase II ESA activities, collected in borings adjacent to 14 of the 18 proposed groundwater monitoring wells. No sample was collected at the abandoned location for MW-5B. Only one sample was collected at the locations of collocated wells MW-

10A and MW-10B. Locations MW-6B and MW-12 were not sampled because of equipment refusal from subsurface rubble. Because of the paved surfaces, soil-gas samples near wells in roadways were collected from the nearby easement.

At each sampling location, a 0.5-inch hollow steel probe with an expendable point was advanced to 5 feet bgs with a roto hammer, and then retracted approximately 3 inches to create void space to collect soil gas. Samples were collected through the rods with disposable polyethylene tubing to the evacuated vacuum canister on the ground surface.

A pump was used to evacuate at least three volumes of air in the tubing prior to connecting tubing to the vacuum canister. After connection of the vacuum canister to the tubing, a valve on the vacuum canister was opened to allow sample collection. The vacuum canister remained attached to the polyethylene tubing until the vacuum gauge indicates approximately 5 to 7 inches of mercury ("Hg) in the canister.

After completion of sampling at each location, each piece of sampling equipment that encountered the soil-gas sample, except for the dedicated polyethylene tubing, was decontaminated with a non-ionic detergent and tap water wash, followed by a tap water rinse. The tubing was sent for disposal as solid waste after use. Vacuum canisters were submitted to Pace for analysis for VOCs via EPA Method Toxic Organics (TO)-15. [Table 5](#) summarizes soil-gas samples collected during this Phase II ESA.

TABLE 5
SOIL-GAS SAMPLE SUMMARY
FORMER CLINTON ENGINES SITE, MAQUOKETA, IOWA

Sample Identification	Latitude (°N)	Longitude (°W)	Analyses Performed
MW1B-SG	42.065700	90.658165	Volatile organic compounds
MW2B-SG	42.065641	90.657845	
MW3B-SG	42.065353	90.658166	
MW4B-SG	42.064924	90.656009	
MW8B-SG	42.065837	90.657810	
MW9-SG	42.065887	90.659389	
MW10-SG	42.066156	90.658485	
MW11-SG	42.065043	90.655520	
MW13-SG	42.067694	90.656657	
MW14-SG	42.069363	90.650758	
MW101-SG	42.066425	90.662962	
MW102-SG	42.062868	90.658521	
MW103-SG	42.070040	90.647624	
MW104-SG	42.070841	90.653076	

Notes:

Soil-gas samples were collected adjacent to monitoring wells; coordinates are for the monitoring wells.

MW Monitoring well

SG Soil gas

3.2.7 Quality Control Sampling

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

4.0 EVALUATION AND PRESENTATION OF RESULTS

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

Analytical data were considered as usable based on data validation review. A concentration of 1,2,3-trichlorobenzene (estimated at 187 µg/kg) reported below the reporting limit in soil sample MW-1B (19 to 20 feet bgs) was revised as not detected based on presence of this contaminant in a method blank. The RPDs for TCE, total 1,2-DCE, and *cis*-1,2-DCE in the duplicate soil sample MW-12 (39 to 41 feet bgs) were not acceptable; consequently, these concentrations were J-coded by the laboratory as “estimated.”

Soil sample results from this Phase II ESA were compared to IDNR Statewide Standards (SWSs) and EPA Regional Screening Levels (RSLs) for residential and industrial land uses (IDNR 2022c, EPA 2022a). Analytical results from groundwater samples were compared to IDNR SWSs for Non-protected Groundwater, Federal Maximum Contaminant Levels (MCLs), and EPA RSLs for tap water when no MCL has been established (IDNR 2022, EPA 2022a). RSLs for soil and groundwater assumed a THQ of 0.1 and a TR of 10^{-6} . VOC results from exterior soil-gas samples were compared to EPA Vapor Intrusion Screening Levels (VISLs) with a THQ of 0.1 and a TR of 10^{-5} (EPA 2022a, b).

4.1 SOIL SAMPLES

A total of 20 subsurface soil samples were collected at 18 groundwater monitoring well locations, including MW-5B, which was not installed; the sample from MW-12 was collected as a duplicate pair. Two samples each were collected at wells MW-6B and MW-8B. Samples were submitted to Pace for analyses for VOCs. [Table 6](#) summarizes the results for VOCs detected in at least one sample. The first page of the table lists miscellaneous contaminants (such as laboratory contaminants) and CVOCs. The second page lists fuel-related contaminants.

TABLE 6

DETECTED VOC RESULTS FROM SUBSURFACE SOIL SAMPLES
FORMER CLINTON ENGINES SITE, MAQUOKETA, IOWA

Sample Location	Depth (ft bgs)	Acetone	2-Butanone (MEK)	MIBK	Carbon Disulfide	Carbon Tetrachloride	Chloroform	1,1,1-TCA	1,1-DCA	PCE	TCE	1,1-DCE	1,2-DCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl chloride
		Concentrations (µg/kg)														
EPA RSL (Residential)		7E+6	2.7E+6	3.3E+6	7.7E+4	650	320	8.1E+5	3,600	8,100	410	2.3E+4	NE	6,300	7,000	59
EPA RSL (Industrial)		1.1E+8	1.9E+7	1.4E+7	3.5E+5	2,900	1,400	3.6E+6	1.6E+4	3.9E+4	1,900	1E+5	NE	3.7E+4	3E+4	1,700
IDNR Residential SWS		6.8E+7	1.6E+7	6.1E+6	7.6E+6	4.4E+4	7.6E+5	1.5E+8	1.5E+6	1.5E+6	6.7E+4	3.8E+5	NE	1.5E+5	1.5E+6	2,100
MW-1B	19-21	ND	184 J	ND	ND	ND	371	ND	ND	ND	132 J	ND	1,970	1,970	ND	42.6 J
MW-2B	55-57	ND	ND	ND	ND	ND	1.5 J	ND	ND	ND	2,400	ND	95.1	94.6	ND	1.7 J
MW-3B	36-38	ND	ND	ND	ND	7.4	6.2	ND	ND	1.5 J	108	ND	66.1	66.1	ND	7.6
MW-4B	24-26	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,760	ND	141	131	10.3	6.5
MW-5B	21-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	90.2	ND	28.3	27.6	0.74 J	1 J
MW-6B	18-20	15.8 J	3.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	50-52	ND	ND	ND	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-8B	14-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	55-57	19.6	4.9 J	ND	ND	ND	ND	ND	ND	ND	6,090	ND	127	125	1.8 J	1.6 J
MW-9	55-57	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	1.2 J	1.2 J	ND	ND
MW-10A	39-41	33.4	5.5 J	ND	ND	ND	ND	ND	ND	0.94 J	2,770	1 J	303	300	2.9 J	16.8
MW-10B	43-45	ND	ND	3.1 J	ND	ND	ND	1 J	1.1 J	ND	2,900	2.3 J	262	259	3.4 J	20.7
MW-11	44-46	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-12	39-41	ND	ND	ND	ND	ND	ND	ND	ND	ND	49.1 J	ND	9.5 J	6.5 J	3 J	ND
	39-41-FD	ND	ND	ND	ND	ND	ND	ND	ND	ND	10 J	ND	2.6 J	1.9 J	0.73 J	ND
MW-13	22-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.7	ND	14.4	13.6	0.74 J	ND
MW-14	59-61	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	1.3 J	ND	ND
MW-101	114-116	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-102	117-119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-103	19-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-104	64-66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 6 (Continued)

DETECTED VOC RESULTS FROM SUBSURFACE SOIL SAMPLES
FORMER CLINTON ENGINES SITE, MAQUOKETA, IOWA

Sample Location	Sample Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Total Xylenes	n-Butylbenzene	Sec- Butylbenzene	Tert- Butylbenzene	Hexachloro-1,3-butadiene	Isopropylbenzene (Cumene)	p-Isopropyltoluene	Naphthalene	n-Propylbenzene	1,2,3-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene
		Concentration (µg/kg)														
		EPA RSL (Residential)	1,200	4.9E+5	5,800	5.8E+4	3.9 E+5	7.8E+5	7.8E+5	NE	1.9E+5	NE	2,000	3.8E+5	6,300	3E+4
EPA RSL (Industrial)		5,100	4.7E+6	2.5E+4	2.5E+5	5.8E+6	1.2E+7	1.2E+7	NE	9.9E+5	NE	8,600	2.5E+6	9.1E+4	1.8E+5	1.5E+5
Iowa Statewide Standard		5.6E+4	6.1E+6	7.6E+6	1.5E+7	3.8E+6	NE	NE	NE	7.6E+6	NE	1.1E+6	7.6E+6	NE	7.6E+5	7.6E+5
MW-1B	19-21	40.4 J	258 J	286	737	7,860	1,250	57.1 J	280 J	446	1,740	693	2,050	ND	8,130	4,050
MW-2B	55-57	2.6 J	0.43 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-3B	36-38	1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-4B	24-26	0.61 J	1.2 J	0.83 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-5B	21-23	0.55 J	1.3 J	1.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-6B	18-20	ND	0.68 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	50-52	ND	0.64 J	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-8B	14-16	0.85 J	144 J	22	110	ND	ND	ND	ND	1.5 J	ND	1.5 J	1.3 J	ND	8.3	1.3 J
	55-57	3.8 J	1.8 J	0.52 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-9	55-57	ND	0.45 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-10A	39-41	1.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-10B	43-45	1.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-11	44-46	0.56 J	1.6 J	1.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-12	39-41	ND	0.32 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	39-41-FD	ND	0.33 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-13	22-24	ND	0.58 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-14	59-61	ND	0.76 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-101	114-116	0.79 J	2.3 J	2.1 J	1.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-102	117-119	ND	0.95 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-103	19-21	ND	0.74 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-104	64-66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Bold font indicates the concentration exceeds the Residential RSL.
Shading indicates the concentration exceeds the Industrial RSL.

DCA Dichloroethane
DCE Dichloroethene
EPA U.S. Environmental Protection Agency
ft bgs Feet below ground surface
FD Field duplicate
IDNR Iowa Department of Natural Resources
J Estimated value

MEK Methyl ethyl ketone
µg/kg Micrograms per kilogram
MIBK Methyl isobutyl ketone
MW Monitoring well
ND Not detected
NE Not established
PCE Tetrachloroethene

RSL Regional Screening Level TR = 1E-06; THQ = 0.1 (EPA 2022a)
SWS Statewide Standard (IDNR 2022c)
THQ Total hazard quotient
TR Target Cancer Risk
TCA Trichloroethane
TCE Trichloroethene
VOC Volatile organic compound

Toluene was detected in 17 of the 21 subsurface soil samples, often at low concentrations (estimated at less than 1.0 µg/kg) where no other fuel-related VOCs were present, suggesting laboratory contamination may have occurred. High toluene concentrations (greater than 100 µg/kg) detected in samples MW-1B (19 to 21 ft bgs) and MW-8B (14 to 16 ft bgs) were found with other fuel-related VOCs. The sample collected from MW-104 (64 to 66 feet bgs) was the only soil sample where no contaminants, including toluene, were reported. Samples from MW-102 and MW-103 contained the only low levels of toluene suggestive of laboratory contamination.

TCE concentrations in five on-site soil samples exceeded EPA's RSLs for both the residential and industrial soils. No sample exceeded IDNR SWSs for soils. The concentration of chloroform in the sample from MW-1B exceeded the EPA RSL for residential soils of 320 µg/kg. No analytes in any other soil samples exceeded either RSLs or SWSs.

Detection limits for most analytes indicated as not detected were less than 1.0 µg/kg. The soil sample from MW-1B (19 to 21 feet bgs) had higher detection limits mainly due to the high concentrations of fuel-related VOCs in the sample. Consequently, some VOCs may be present at concentrations below the detection limits in the soil sample from MW-1B.

4.2 GROUNDWATER SAMPLES

Groundwater samples were collected from the 17 newly-installed monitoring wells. Two duplicate samples were collected. Static water levels (SWLs) were measured between about 6 and 29 feet bgs prior to sampling except for deep bedrock well MW-102, which is at a higher elevation. At MW-102, the SWL was measured at about 62 feet bgs. Samples were submitted to Pace for analyses for VOCs. [Table 7](#) lists VOCs detected in the groundwater samples. The contaminants are listed on the table in order of miscellaneous chemicals, Site-related CVOCs, and fuel-related VOCs. Common CVOCs are followed by their common degradation products. The gasoline additives 1,2-dichloroethane (DCA) and methyl tert-butyl ether (MTBE) were identified only in MW-14 sample and are listed right of the fuel contaminants.

TABLE 7

DETECTED VOC RESULTS FROM GROUNDWATER SAMPLES
FORMER CLINTON ENGINES SITE, MAQUOKETA, IOWA

Sample Identification	Screened Interval (ft bgs)	Methylene Chloride	Carbon Tetrachloride	Chloroform	Bromoform	Dibromochloromethane	1,1,1-Trichloroethane	1, 1, 2-Trichloroethane	1,1-Dichloroethane	Tetrachloroethene	Trichloroethene	1,1-Dichloroethene	1,2-Dichloroethene (Total)	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Chloroethane	Benzene	Toluene	Ethylbenzene	Xylene (Total)	Chlorobenzene	Sec-Butylbenzene	Isopropylbenzene (Cumene)	p-Isopropyltoluene	1,2-Dichloroethane	Methyl-Tert-Butyl-Ether (MTBE)
		Concentration (µg/L)																									
		EPA MCL or EPA RSL (TR=1E-6, THQ=0.1) Tap water																									
		5	5	80*	80*	80*	200	5	NE	5	5	7	NE	70	100	2	NE	5	1000	700	10,000	100	2,000**	450**	NE	5	14**
		IDNR SWSs for Non-Protected Groundwater																									
1,800	50	400	440	400	70,000	61	700	1,700	76	180	NE	350	700	10	14,000	64	5,000	3,500	50,000	700	NE	3,500	NE	38	1000		
MW-1B	42-52	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.2	0.22 J	199	196	3.2 J	93.9	5.3	5.0	ND	0.53 J	0.57 J	ND	0.15 J	0.22 J	ND	ND	ND
MW-2B	47-57	ND	ND	3.1 J	ND	ND	ND	ND	ND	ND	1,950	3.9 J	1,080	1,040	43.5	41.8	ND	2.7 J	ND	ND	ND	ND	ND	ND	ND	ND	
MW-3B	47-57	ND	12.2	21.9	1.1	0.57 J	ND	0.41 J	ND	4.9	375	0.64 J	460	448	11.9	22.3	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND	
MW-4B	47-57	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.9	ND	1.7	1.5	0.20 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6B	41-51	ND	ND	0.36 J	ND	0.56 J	ND	ND	ND	ND	10.2	ND	3.9	3.6	0.34 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.15 J	ND	ND
MW-6B-FD		ND	ND	0.35 J	ND	0.54 J	ND	ND	ND	ND	9.9	ND	3.8	3.5	0.30 J	ND	ND	ND	0.26 J	ND	ND	ND	ND	ND	0.14 J	ND	ND
MW-8B	43-53	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,680	9.9 J	6,520	5,740	788	154	ND	13.7 J	ND	ND	ND	ND	ND	ND	ND	ND	
Delineation Wells																											
MW-9	46-56	ND	ND	ND	ND	ND	ND	ND	ND	ND	133	ND	12.7	9.6	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-10A	47-57	ND	ND	ND	ND	ND	3.1 J	ND	ND	ND	5,730	17.5	2,160	2,140	23.4 J	103	ND	7.8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-10B	63-73	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,810	ND	1,070	1,050	17.7 J	39.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-10B-FD		ND	ND	ND	ND	ND	ND	ND	ND	ND	3,670	ND	1,010	1,000	7.6 J	36.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-11	40-50	ND	ND	ND	ND	0.50 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-12	35-45	ND	ND	ND	ND	ND	ND	ND	3.7	ND	4,420	8.2	1,280	697	583	22.5	ND	0.40 J	ND	ND	ND	1.2	ND	ND	ND	ND	ND
MW-13	33-43	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.32 J	ND	1.2	1.2	ND	2.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-14	50-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.8	0.54 J	215	184	31.2	6.5	ND	0.38 J	0.33 J	ND	ND	ND	ND	ND	ND	0.24 J	0.56
Bedrock Wells																											
MW-101	117-127	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-102	125-135	ND	ND	ND	ND	0.55 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-103	27-37	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-104	77-87	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	2.3	2.0	0.34 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

* MCL for total trihalomethanes.

** RSL for Tapwater is listed

Bold font indicates a value exceeds the MCL

Shading indicates a value exceeds the Iowa Statewide Standard for non-protected groundwater.

bgsBelow ground surface

EPAU.S. Environmental Protection Agency

FDField Duplicate

ftFeet

JEstimated Value

IDNRIowa Department of Natural Resources

MCLMaximum Contaminant Level (EPA 2022a)

µg/LMicrograms per liter

MWMonitoring well

NDNot detected

NENot established

RSLRegional Screening Level (EPA 2022a)

SWSStatewide Standard (IDNR 2022c)

THQTarget Hazard Quotient

TRTarget Cancer Risk

VOCVolatile organic compound

TCE and its common degradation products were detected in all on-site monitoring wells except MW-11, near the southeast corner of the Site. TCE exceeded the MCL in 11 of the on-site samples. In 7 of 11 samples, TCE also exceeded the SWS for a non-protected groundwater source. Typically, where TCE levels exceeded these benchmarks, concentrations of *cis*-1,2-DCE and vinyl chloride also exceeded the benchmarks. The highest CVOC concentrations were detected in samples from on-site wells MW-8B, MW-10A, and MW-10B, and from the off-site well MW-12. Slightly lower concentrations were detected in MW-10B (screened from 63 to 73 feet bgs) than in MW-10A (screened from 47 to 57 feet bgs), suggesting the separating zone has not significantly retarded downward migration. Low levels of 1,1,1-trichloroethane (TCA), 1,1,2-TCA, 1,1-DCA, and tetrachloroethene (PCE) were also detected in several on-site groundwater samples. A 4.9 µg/L PCE concentration detected in the sample from MW-3B was just below the MCL.

No VOCs were detected in samples from upgradient bedrock wells MW-101 and MW-102, west and south of the Site, respectively. MW-103 and MW-104, northeast and downgradient of the Site, each contained 1.3 µg/L of TCE. MW-104 also contained 2 µg/L of *cis*-1,2-DCE and 0.34 µg/L of *trans*-1,2-DCE. At MW-104, bedrock was encountered at 71 feet bgs, and the well was screened from 77 to 87 feet bgs. In contrast, MW-103, about 1,500 feet to the east, encountered bedrock at 21 feet bgs and was screened from 27 to 37 feet bgs. The porous shallow bedrock is likely in lateral contact with contaminated groundwater in the sandy alluvial deposits.

Fuel-related VOCs (or constituents of petroleum solvents) were detected in nine of the samples, with benzene exceeding its 5 µg/L MCL in three samples (MW-1B, MW-8B, and MW-10A). No other fuel-related VOC exceeded its MCL, and none exceeded the SWS for non-protected groundwater.

Detection limits for most analytes indicated as not detected were typically less than 1.0 µg/L. Higher detection limits were used for the groundwater samples from MW-2B, MW-8B, MW-10A, and MW-10B where high concentrations of CVOCs were detected. Consequently, some VOCs may be present at concentrations below the detection limit.

4.3 SOIL-GAS SAMPLES

The Toeroek Team collected soil-gas samples from borings adjacent to monitoring wells. Soil-gas samples were submitted to Pace for analysis for VOCs via EPA Method TO-15. Analytical data were compared to VISLs using a THQ of 0.1 and a TR of 10^{-5} (EPA 2022b).

VOCs were detected in all soil-gas samples. Detections of TCE concentrations in soil-gas samples adjacent to wells MW-2B, MW-3B, MW-8B, MW-9, MW-10A/B, and MW-11 exceeded the EPA residential VISL for TCE of $6.7 \mu\text{g}/\text{m}^3$. Except for MW9-SG and MW10-SG, the TCE concentrations also exceeded the commercial VISL of $20 \mu\text{g}/\text{m}^3$. [Table 8](#) below lists VOCs detected in at least one soil-gas sample.

Soil-gas samples near wells in roadways were collected from the nearby easement. MW9-SG was collected east of the corresponding well on the easement at the Site, likely accounting for the higher soil-gas levels detected in the sample. The western easement could not readily be sampled because of utilities and private property.

Numerous fuel-related VOCs were detected in the soil-gas samples; however, no concentrations exceeded VISL benchmarks. Detection limits for most VOC analytes indicated as not detected were less than $1.0 \mu\text{g}/\text{m}^3$. The detection limit for gasoline-range organics (GRO) was $164 \mu\text{g}/\text{m}^3$.

TABLE 8

DETECTED VOC RESULTS FROM SOIL-GAS SAMPLES
FORMER CLINTON ENGINES SITE, MAQUOKETA, IOWA

Analyte	VISL Exterior Soil Gas (Residential)	VISL Exterior Soil Gas (Worker)	MW1B-SG	MW2B-SG	MW3B-SG	MW4B-SG	MW8B-SG	MW9-SG	MW10-SG	MW11-SG	MW13-SG	MW14-SG	MW101-SG	MW102-SG	MW103-SG	MW104-SG
			Concentration (µg/m³)													
Gasoline-range Organics	NE	NE	2,160	1,570	4,380	228 J	1,120	438 J	206 J	628 J	ND	237 J	ND	1,930	1,840	425 J
Acetone	NE	NE	38.5	34.5	ND	20.2	53.7	107	27.8	38	25.7	5.01	22.6	43.5	17.5	23.6
Benzene	100	440	ND	1.49	27	0.974	0.773	0.623 J	1.25	1.35	0.616 J	2.67	0.712	0.882	9.01	7.76
Bromomethane	17.4	72	ND	ND	ND	ND	0.625 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Butadiene	6.95	29.2	ND	ND	ND	ND	ND	ND	ND	ND	0.239 J	0.569 J	ND	ND	ND	0.597 J
Carbon disulfide	2,430	10,200	ND	3.3	4.26	ND	ND	1.49	ND	ND	0.439 J	1.15	ND	2.25	ND	0.489 J
Carbon Tetrachloride	160	680	ND	ND	ND	ND	ND	ND	ND	ND	0.636 J	0.622 J	ND	ND	ND	ND
Chloroethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.517 J	ND	ND	ND	ND
Chloromethane	313	1,310	ND	0.266 J	ND	ND	0.863	0.233 J	0.38 J	0.993	1.12	1.97	0.271 J	0.618	1.09	0.351 J
Cyclohexane	3,480	14,600	ND	0.961	ND	ND	ND	0.596 J	ND	0.63 J	0.342 J	1.22	0.379 J	ND	25.9	2.75
1,4-Dichlorobenzene	85.1	372	7.7	3.1	ND	1.85	8.48	ND	4.92	2.07	ND	0.601 J	2	3.04	1.35	0.776 J
1,1-Dichloroethene	700	2,900	ND	ND	0.725 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	139	584	ND	51.1	21	ND	10.5	ND	ND	1.55	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	140	580	ND	7.41	13.9	ND	1.51	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	13.9	58.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.428 J	ND	ND	ND	ND
Ethanol	NE	NE	17.5	49	27.2	12.9	31.7	41.1	20.9	56.8	56	10.5	10.4	21.1	496	14.9
Ethylbenzene	370	1,600	2.55	2.58	1.91	1.67	2.08	0.715 J	1.81	2.4	0.423 J	1.61	1.76	2.53	26.1	7.85
Ethyl Acetate	243	1,020	ND	ND	ND	ND	ND	ND	ND	ND	0.594 J	1.14	ND	ND	ND	ND
4-Ethyltoluene	NE	NE	3.79	3.75	0.942 J	2.46	3.35	ND	2.61	2.61	ND	ND	1.63	3.31	18.8	2.56
Trichlorofluoromethane	NE	NE	ND	ND	ND	ND	ND	1.24	ND	ND	1.16	1.15	1.16	ND	1.1 J	1.07 J
Dichlorodifluoromethane	348	1,460	ND	1.98	1.08	1.6	2.08	2.12	2.24	2.15	2.39	2.41	2.06	3.93	2.18	2.18
1,1,2-Trichlorotrifluoroethane	17,400	73,000	ND	ND	ND	ND	ND	0.723 J	ND	ND	0.747 J	0.835 J	ND	0.666 J	ND	ND
n-Heptane	1,390	5,840	32	1.71	3.69	ND	ND	1.51	ND	3.14	0.487 J	1.02	1.06	ND	33	11.8
Hexachloro-1,3-butadiene	42.5	186	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND	ND
n-Hexane	2,430	10,200	9.98	3.01	7.97	1.35 J	3.01	4.34	ND	5.15	1.1 J	3.46	2.36	4.3	39.5	8.81
Isopropylbenzene (Cumene)	1,390	5,840	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.526 J	ND	ND	ND	ND
Methylene chloride	2,090	8,760	4.55	1.16	ND	1.08	ND	1.1	0.972	4.13	1.4	2.07	2.52	7.88	12.7	4.13
2-Hexanone	104	438	8.06	5.85	ND	3.3 J	92	5.69	2.8 J	4.79 J	ND	ND	1.52 J	5.69	ND	ND
2-Butanone (MEK)	17,400	73,000	34.5	41	ND	29.1	41	31.8	25.8	39.5	2.67 J	0.743 J	11.5	34.8	11.5	5.4
4-Methyl-2-pentanone (MIBK)	10,400	73,000	ND	1.6 J	ND	ND	14.4	2.54 J	0.733 J	0.565 J	0.381 J	ND	0.557 J	1.49 J	ND	ND

TABLE 8 (Continued)

DETECTED VOC RESULTS FROM SOIL-GAS SAMPLES
FORMER CLINTON ENGINES SITE, MAQUOKETA, IOWA

Analyte	VISL Exterior Soil Gas (Residential)	VISL Exterior Soil Gas (Worker)	MW1B-SG	MW2B-SG	MW3B-SG	MW4B-SG	MW8B-SG	MW9-SG	MW10-SG	MW11-SG	MW13-SG	MW14-SG	MW101-SG	MW102-SG	MW103-SG	MW104-SG
			Concentration (µg/m³)													
Naphthalene	10.4	43.8	ND	ND	ND	ND	7.12	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Propanol	695	2,920	ND	ND	ND	ND	ND	46.9	ND	ND	5.63	2.53 J	ND	ND	ND	ND
Propylene	10,400	43,800	ND	7.51	22	ND	ND	6.96	2.67	ND	ND	4.8	ND	4.06	9.07	2.81
Tetrachloroethene	140	580	1.13 J	8.35	ND	ND	3.42	4.26	ND	1.32 J	ND	1.64	ND	1.36	1.41	0.91 J
Toluene	17,000	73,000	ND	23.7	2.98	4.56	5.91	1.36 J	5.5	ND	1.57 J	14.3	5.99	ND	81	56.5
Trichloroethene	6.7	20	ND	1,800	20.7	1.17	122	8.73	11.1	298	ND	4	ND	ND	ND	1.63
1,2,4-Trimethylbenzene	209	876	4.8	4.3	2.63	3.15	4.49	0.628 J	3.16	3.01	0.54 J	1.64	1.61	3.38	12.9	1.93
1,3,5-Trimethylbenzene	209	876	1.3	1.45	1.2	0.893 J	ND	ND	0.78 J	0.982 J	ND	0.687 J	0.52 J	0.987	5.94	0.756 J
2,2,4-Trimethylpentane	NE	NE	ND	ND	180	1.55	ND	ND	2.51	1.74	0.878 J	2.72	1.07	ND	86.9	17.6
Vinyl chloride	56	930	ND	ND	7.23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m- & p-Xylenes	350	1,500	9.19	9.67	4.19	6.29	8.06	1.37 J	6.2	7.93	1.17 J	5.25	6.11	9.49	73.3	20.1
o-Xylenes	350	1,500	2.88	3.69	0.776 J	2.24	2.82	0.65 J	2.24	3	0.529 J	1.99	1.88	2.64	29	6.2

Notes:

Bold font indicates concentration exceeds the EPA Residential VISL.
Red highlight indicates concentration exceeds the EPA Worker VISL.

- EPA
- J
- µg/m³
- ND
- NE
- SG
- THQ
- TR
- VISL
- VOC
- U.S. Environmental Protection Agency
- Estimated value
- Micrograms per cubic meter
- Not detected
- Not established
- Soil gas
- Total hazard quotient
- Total cancer risk
- EPA Vapor Intrusion Screening Level (EPA 2022b)
- Volatile organic compound

4.4 QUALITY CONTROL SAMPLES

All data were determined usable based on data validation. One water trip blank was included to determine whether contamination had been introduced during transportation of containers and samples. *Cis*-1,2-DCE was reported at an estimated 0.14 µg/L in the trip blank. Presence of this contaminant in the trip blank suggests either cross-contamination during shipping or processing or instrument carry-over. Methylene chloride—a common laboratory contaminant that was not detected in any groundwater sample—also was reported in the trip blank at an estimated 0.78 µg/L. Because methylene chloride was not detected in any samples, no sample data were qualified based on this detection.

Field blanks were collected on November 18, 19, and 20, 2022, to assess contamination potentially introduced during sampling and/or laboratory procedures. No VOCs were detected in the field blanks.

4.5 INVESTIGATION-DERIVED WASTE

Based on the concentrations detected in soil samples, which were collected from the highest observed VOC zone, soil investigation-derived waste (IDW) was characterized as nonhazardous waste without additional sampling. No VOCs were detected in the IDW water sample composited from five representative drums. As a result, aqueous IDW was also characterized as nonhazardous waste.

5.0 DISCUSSION OF SIGNIFICANT FINDINGS AND CONCLUSIONS

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

5.1 SUBSURFACE SOIL

VOCs were known to be present in subsurface soils at the Site and were detected in the soil samples. TCE concentrations up to 6,090 µg/kg were detected in the soil samples collected from on-site borings. Some samples were collected from zones lower than the known contamination to evaluate CVOC concentrations in the underlying clay. Deeper samples collected within 55 to 57 feet bgs at MW-2B and MW-8B contained 2,400 µg/kg of TCE and 6,090 µg/kg of TCE, respectively. This verifies that TCE has migrated to the deeper soils and that no confining layer is present below the sandy layer screened in the older wells on-site.

No VOCs were detected in the soil sample collected from the on-site boring for MW-11 or in soil samples from the four off-site bedrock borings (MW-101, MW-102, MW-103, and MW-104). Low levels of CVOCs were detected in soil samples from off-site borings MW-9, MW-12, MW-13, and MW-14. Soil samples from MW-6B contained only acetone, 2-butanone, and carbon disulfide; no CVOCs were detected.

5.2 GROUNDWATER

CVOCs are known to have impacted groundwater at the Site and were detected in all on-site groundwater samples except at well MW-11. CVOCs were detected in off-site groundwater samples from all except upgradient bedrock wells MW-101 and MW-102. TCE and its degradation products were detected at concentrations exceeding the SWS for non-protected groundwater in on-site wells MW-1B, MW-2B, MW-3B, MW-8B, MW-10A, and MW-10B, and off-site wells MW-9 and MW-12. On-site well MW-6B and off-site well MW-14 had CVOC concentrations exceeding the MCL, but not the SWS for non-protected groundwater (protected groundwater SWS are MCLs, when established). MW-14 also contained low levels of the former gasoline additive 1,2-DCA (used in “no-knock” formulations of leaded gasoline) and MTBE (an oxygenate in unleaded gasoline).

Groundwater sampling results indicate that clay layers below the sandy layers screened in the previous monitoring wells have not acted as vertical barriers to contaminant migration. Contamination in the deeper alluvial wells such as MW-10B (screened from 63 to 73 feet bgs) and in the downgradient bedrock well MW-104 (screened from 77 to 87 feet bgs) indicate that contamination has migrated down into the deeper

alluvial sediments and laterally into the porous (vuggy and fossiliferous) bedrock along the sides of the ancient channel of the Maquoketa River that underlies most of the City. Contamination has likely migrated vertically from these alluvial deposits into the bedrock underlying the Site.

5.3 SOIL GAS

VOCs were detected in all soil-gas samples. High soil-gas concentrations generally relate to the areas where the highest soil and groundwater contamination is present. Detections of TCE concentrations in soil-gas samples adjacent to wells MW-2B, MW-3B, MW-8B, MW-9, and MW-10A/B exceeded the EPA residential VISL for TCE of $6.7 \mu\text{g}/\text{m}^3$. TCE concentrations in soil-gas samples collected near MW-2B, MW-3B, MW-8B, and MW-11 also exceeded the commercial VISL of $20 \mu\text{g}/\text{m}^3$. No VOCs were detected in the groundwater or soil sample collected at MW-11, near the southeast corner of the Site. Presence of TCE in the soil-gas samples suggests that this contamination may be impacting surficial or shallow subsurface soils.

5.4 EVALUATION OF PREVIOUSLY IDENTIFIED RECS

This section discusses and evaluates the previously identified RECs from in the 1999 Phase I ESA report (MSA 1999). Based on results of soil, groundwater, and soil-gas sampling, the Site appears to have been impacted by historical industrial activities associated with Clinton Engines, a small engine manufacturing company that operated at the Site.

5.5 CONCEPTUAL SITE MODEL

The following sections describe elements of the conceptual site model.

5.5.1 Chemical Release Scenario and Spatial Distribution

Contaminants were likely released at the Site variously via spills, leaks, and improper disposal methods such as disposal to the ground surface or into sanitary or storm sewers. Presence of high concentrations of CVOCs north of the Museum (MW-10A and MW-10B) and northwest of the former manufacturing plant (MW-12) suggest transport of contaminants along sanitary or storm sewers. Note that the past configuration of the sanitary and storm sewer lines may not match the current configuration.

Sampling results during this Phase II ESA indicated presence of CVOCs in deeper soil and groundwater than previously sampled at the Site. TCE also was detected in two bedrock aquifer wells (MW-103 and MW-104) downgradient to the northeast, verifying the bedrock aquifer is impacted by contamination;

these concentrations were still below EPA MCLs. An ancient channel of the Maquoketa River reportedly underlies the City ([Section 2.2.1](#)). The TCE in the deeper alluvial beds has likely migrated into bedrock underlying the Site. Contaminated groundwater may also have migrated laterally into bedrock along the edges of this ancient channel.

5.5.2 Current and Future Land Use and Groundwater Use

The Site consists of three parcels (ID numbers: 145181938200900, 145181938200700, and 145181938200800) ([Appendix A, Figure 2](#)). The western parcel with the buildings is owned by the Jackson County Historical Society, and the City owns the two vacant parcels to the east. Reuse plans for the Site include expansion of the Museum to include prairie lands and an interactive outdoors learning center on farming in the Midwest. An additional reuse plan under consideration is selling or leasing a portion of the Site for solar electricity generation. The City is considering redeveloping most of the City-owned property into an industrial/business park or, depending on the results of this Phase II ESA and levels of contamination detected, residential properties (City of Maquoketa 2021).

Currently, groundwater is not used for drinking water at the Site. The City's drinking water is derived from the Cambrian "Dresbach" aquifer, deeper than 1,300 feet bgs (City of Maquoketa & Alliance Water, Iowa Rural Water Association 2014). These City wells are southwest and northwest—upgradient or crossgradient of the Site.

CVOC contaminant levels detected in the two downgradient Silurian bedrock monitoring wells do not exceed MCLs or SWSs; however, the Silurian bedrock aquifer is used as a drinking water source for private wells downgradient of the City. The private drinking water wells drawing from the Silurian aquifer typically have depths of about 140 to 200 feet bgs (IDNR 2022a). In 2020, START sampled five private drinking water wells approximately 1 mile east or northeast of the Site (Tetra Tech 2021). No VOCs were detected at that time; however, contaminants could reach these private drinking water wells in the future.

[Figure 6](#) in [Appendix A](#) shows the groundwater potentiometric surface for the Silurian bedrock wells. Potentiometric surface elevations for the alluvial wells on-site are generally about 678 feet amsl and are about 2 feet higher than the Silurian groundwater elevations at the Site. [Figure 7](#) in [Appendix A](#) is a west to east cross-section showing variability of the alluvial deposits from mainly sands with thin clay layers to mainly silty clays with thin sand layers within the ancient river channel, and the range in bedrock elevations between about 585 to 660 feet amsl.

5.5.3 Land and Groundwater Use Restrictions

No known land or groundwater use restrictions exist.

5.5.4 Physical Conditions

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

5.5.5 Remedial Activities at the Site

No known remedial activities have occurred at the Site.

5.5.6 Exposure Model

Groundwater Migration Pathway and Targets

The Site is within an area that transitions from residential (west and south) to commercial or industrial (north and east). City water derives from the Ordovician-Cambrian aquifer at depths greater than 1,300 feet, and wells are generally upgradient or crossgradient of the site. Outside of City limits, private drinking water wells are present. Registered well depths for these private wells are generally about 140 to 200 feet bgs and based on this depth range would produce groundwater from the Silurian bedrock aquifer. TCE was detected in the Silurian bedrock aquifer wells MW-103 and MW-104, downgradient of the Site, confirming a release to this aquifer. Continued contamination migration could impact these downgradient wells in the future. Additional private well sampling is recommended.

Surface Water Migration Pathway and Targets

The Site does not contain any surface water features. Stormwater runoff from the Site would be to South Clark and East Maple Streets and flow into storm sewer inlets. Other runoff likely would flow to drainage ditches and eventually east toward Prairie Creek.

Threatened or endangered species known or likely to occur in Jackson County, Iowa, include the barn owl (*Tyto alba*), the Henslow's sparrow (*Ammodramus henslowii*), the red-shouldered hawk (*Buteo lineatus*), and the King rail (*Rallus elegans*) (IDNR 2022b). No critical habitats are listed on the Site (U.S. Fish and Wildlife Service [USFWS] 2023). Presence of these species at the Site area has not been verified, and the Site has not undergone a habitat assessment.

Soil Exposure and Air Migration Pathways and Targets

Soils at the former manufacturing area at the Site are characterized as urban land, which is level to nearly level and has been altered by buildings, parking lots, and cut and fill to make the soil unidentifiable. The lawn area surrounding the Museum at the northwest is classified as well-drained Worthen silt loam with 2 to 5 percent slopes that derived from silty alluvium. The manufacturing buildings have since been demolished, and rubble with fill was noted at depths to about 7 feet bgs in that area. The western portion of the Site is covered by a mixture of buildings, pavement, and grass. The eastern part is a grassy field; however, aerial photographs suggest vegetation is sparse in some areas and may be stressed. No surface soil sampling has been described in available historical sources. Based on the high concentrations of TCE in subsurface soils, soil gas, and groundwater, surface soil contamination may be present, and direct exposure to contaminated soil is possible. Employees and visitors to the Site could be exposed to contaminated surface soils. A soils investigation following a systematic (grid) sampling approach or utilizing electrical logging by use of a DPT unit equipped with a combined electrical conductivity (EC) and membrane interface probe (MIP) could identify specific source areas to target for remedial action. This would also aid identification of variations in lithology.

Subsurface Vapor Intrusion Migration Pathway and Targets

The Site currently hosts one structure that has been identified as impacted by VI. Previous VI sampling by START in 2020 and 2021 did not identify nearby buildings or residences with indoor air or sub-slab vapor concentrations that warranted removal action.

High concentrations of CVOCs present in on-site soil-gas samples generally corresponded to the areas where high soil contamination also was detected. TCE concentrations detected in soil-gas samples MW2B-SG, MW3B-G, MW8B-SG, MW9-SG, MW10-SG, and MW11-SG exceeded the EPA residential VISL for TCE of $6.7 \mu\text{g}/\text{m}^3$ for exterior soil gas. Except for MW9-SG and MW10-SG, the TCE concentrations also exceeded the worker VISL of $20 \mu\text{g}/\text{m}^3$. MW11-SG had CVOCs in the soil gas, but not in the soil sample collected. This may indicate that contamination is present in the shallow soils, but not in the deeper soil sampled. The soil-gas sample location collocated with MW-9, in the roadway west of the Site, was moved onto the Site, which may account for the higher soil-gas levels detected.

Previous VI sampling at the Site led to installation of two HE1X1NH ERVs at the Museum building. EPA sampling at nearby residences and buildings in 2020 and 2021 did not identify any structures that warranted removal actions. The area overlying the groundwater plume (treading northeast from the Site) is largely a commercial/industrial area with numerous metal slab-on-grade structures mixed with lightly developed land such as the Jackson County Fairgrounds. Some additional residential or commercial

structures northeast of the Site in the area overlying the groundwater plume could be sampled to verify previous data or extend the overall area evaluated for VI.

5.6 AFFECTED MEDIA

Sampling results during this Phase II ESA indicated presence of VOCs in deeper soil and groundwater than previously had been identified at the Site. CVOCs were also identified in the Silurian bedrock aquifer downgradient of the Site.

VOCs in groundwater are present at concentrations exceeding the MCL and the IDNR SWSs for non-protected groundwater. These exceedances indicate that releases at the Site have impacted the deeper alluvial deposits and the underlying or adjoining Silurian bedrock aquifer. An ancient channel for the Maquoketa River underlies the City, with depths to bedrock ranging from 21 feet bgs at MW-103, outside of this channel, to over 100 feet bgs, within the channel. The Silurian bedrock aquifer screened in the four bedrock wells was cherty, vuggy, fossiliferous, or fossil-moldic dolomite that is likely the Hopkinton and Blanding formation (IDNR 1998).

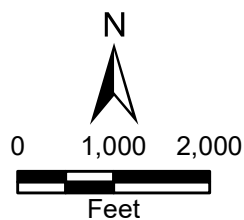
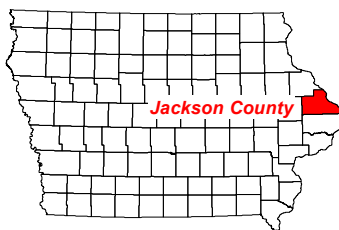
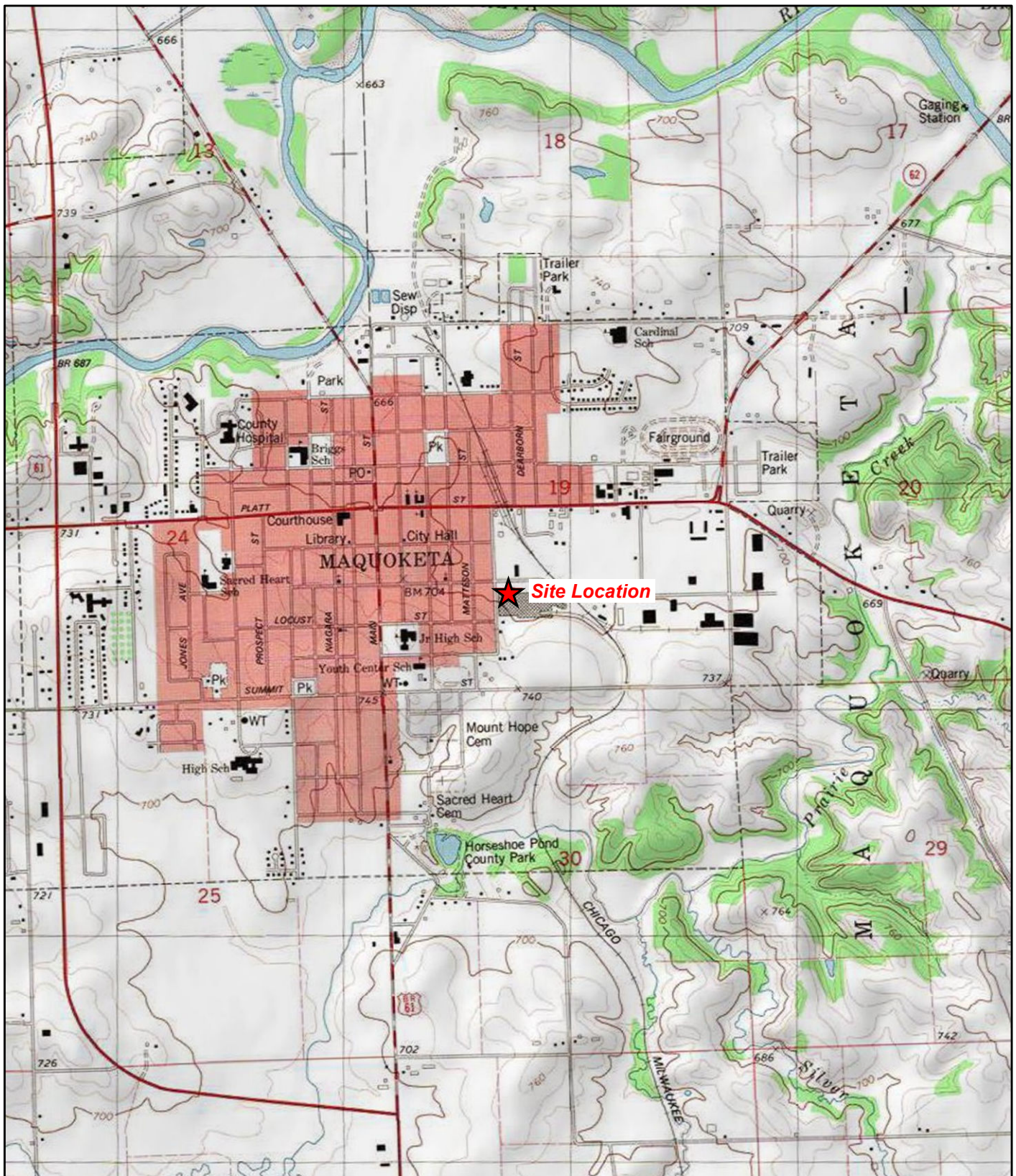
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APPENDIX A

FIGURES



Former Clinton Engines
605 and 607 East Maple Street
Maquoketa, Jackson County, Iowa

Figure 1
Site Location Map



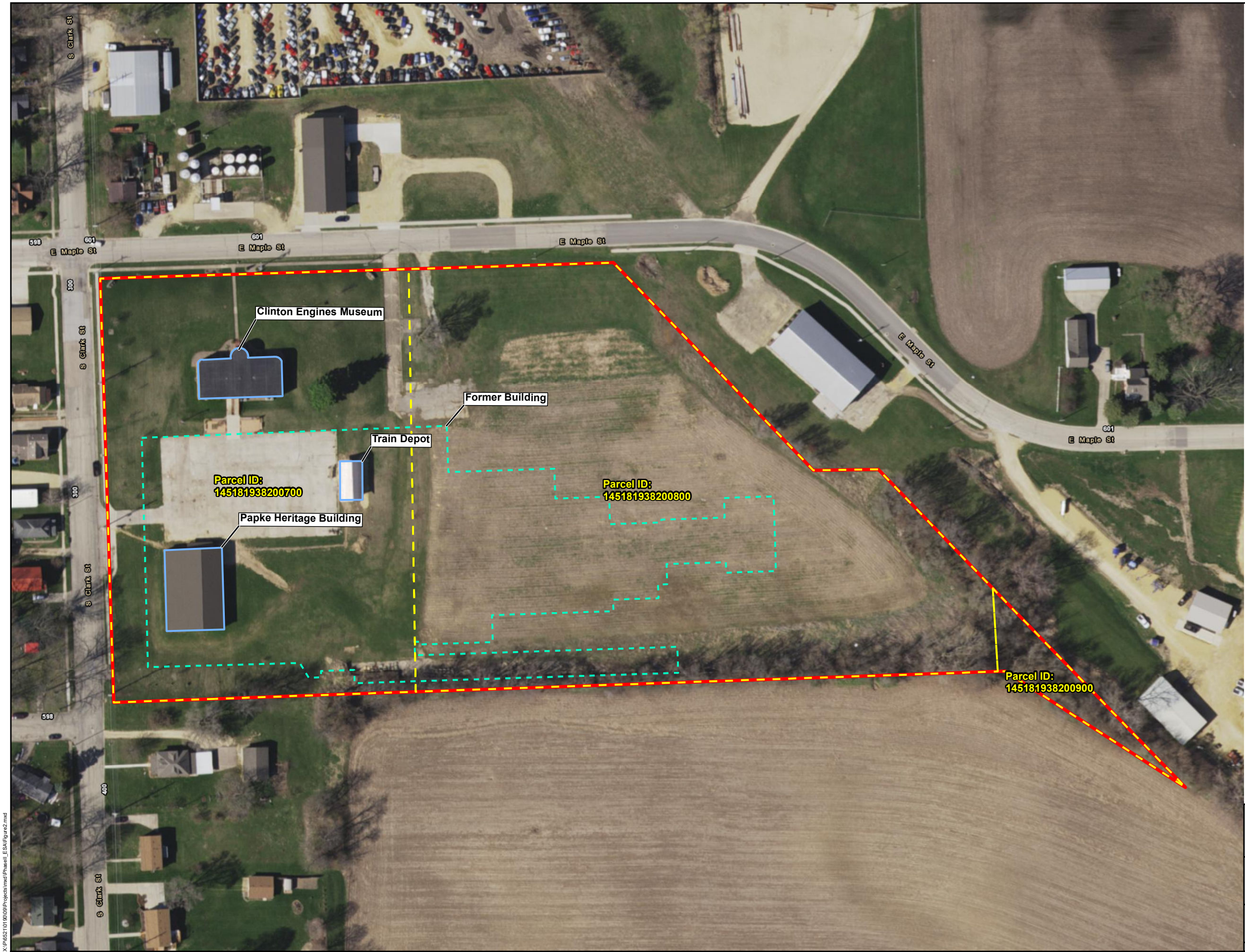
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Date: 1/12/2023

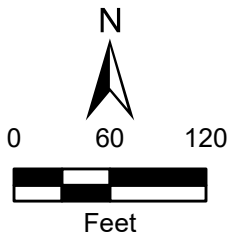
Drawn By: Nick Wiederholt

Project No: 103G6521.0190.09.03

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- Legend
- Approximate site boundary
 - Existing building
 - Former building
 - Parcel boundary

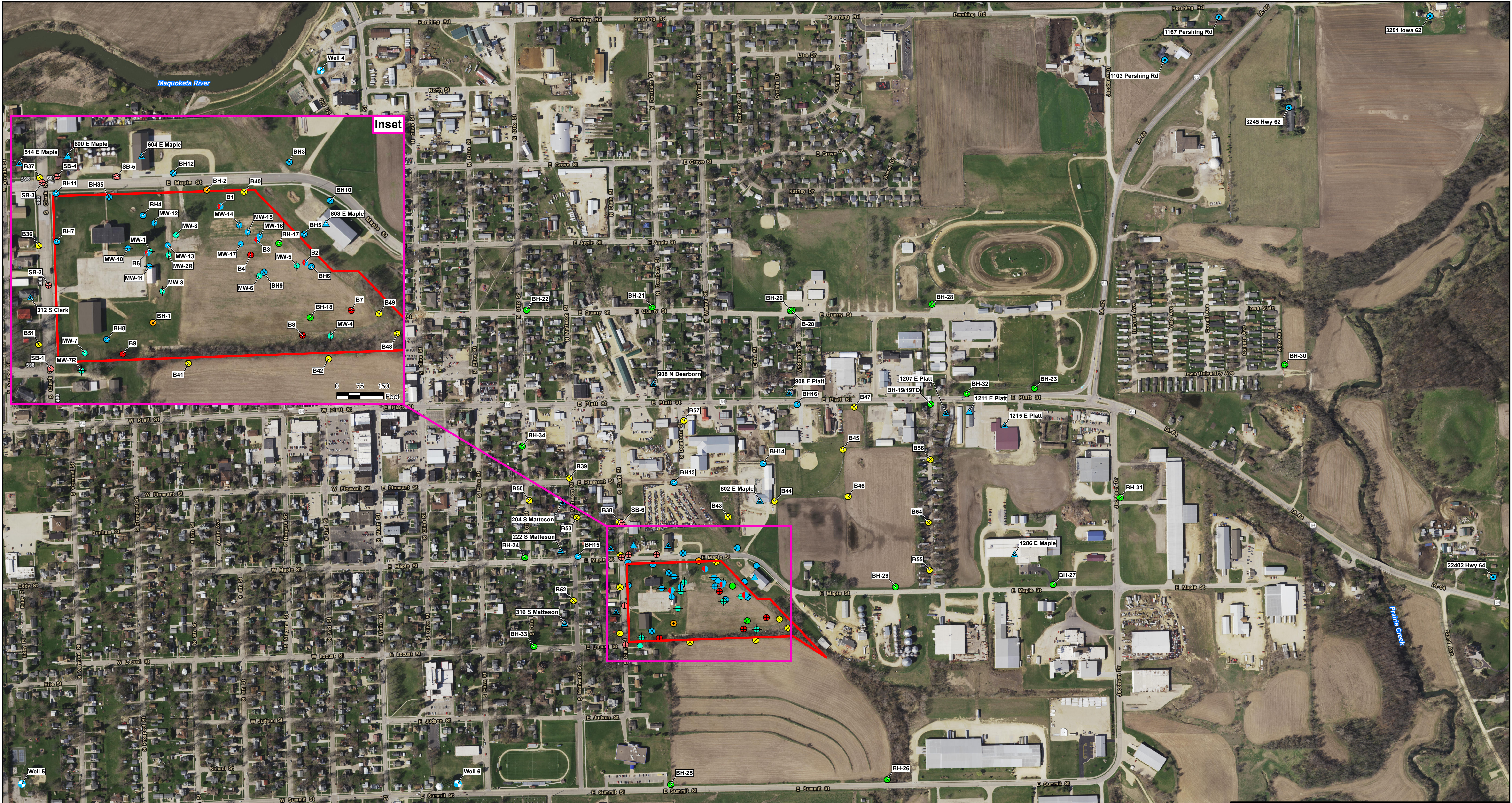


Source: FCR Consulting, Inc., Former Clinton Engines - Site Map, 2010;
Iowa GIS Data.Org, Jackson Co., IA, Parcels, 2022;
Iowa State University GIS Support and Research Facility,
Iowa Geogrphic Map Server, Aerial Imagery, 2016 - 2018

Former Clinton Engines
605 and 607 East Maple Street
Maquoketa, Jackson County, Iowa

Figure 2
Site Layout Map





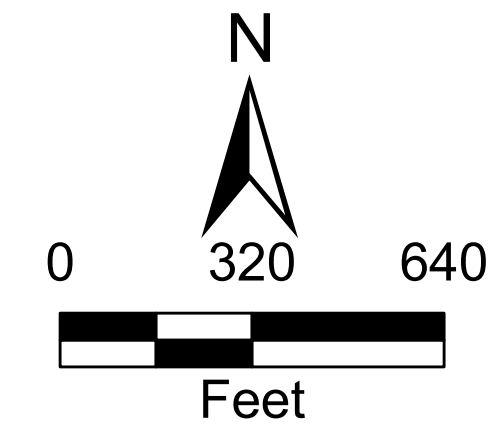
Legend

Historical sample locations

- 1999 MSA DPT soil
- 1999 MSA DPT soil and groundwater
- 2006 FRC monitoring well
- 2013 I7G DPT groundwater
- 2013 I7G Lithology boring
- 2013 I7G Monitoring well
- 2014 I7G DPT groundwater
- 2019 I7G DPT groundwater
- 2020 START private well
- 2020-2021 START DPT soil
- 2020-2021 START indoor air
- 2020-2021 START indoor air and sub-slab

- 2020 START municipal well
- Approximate site boundary

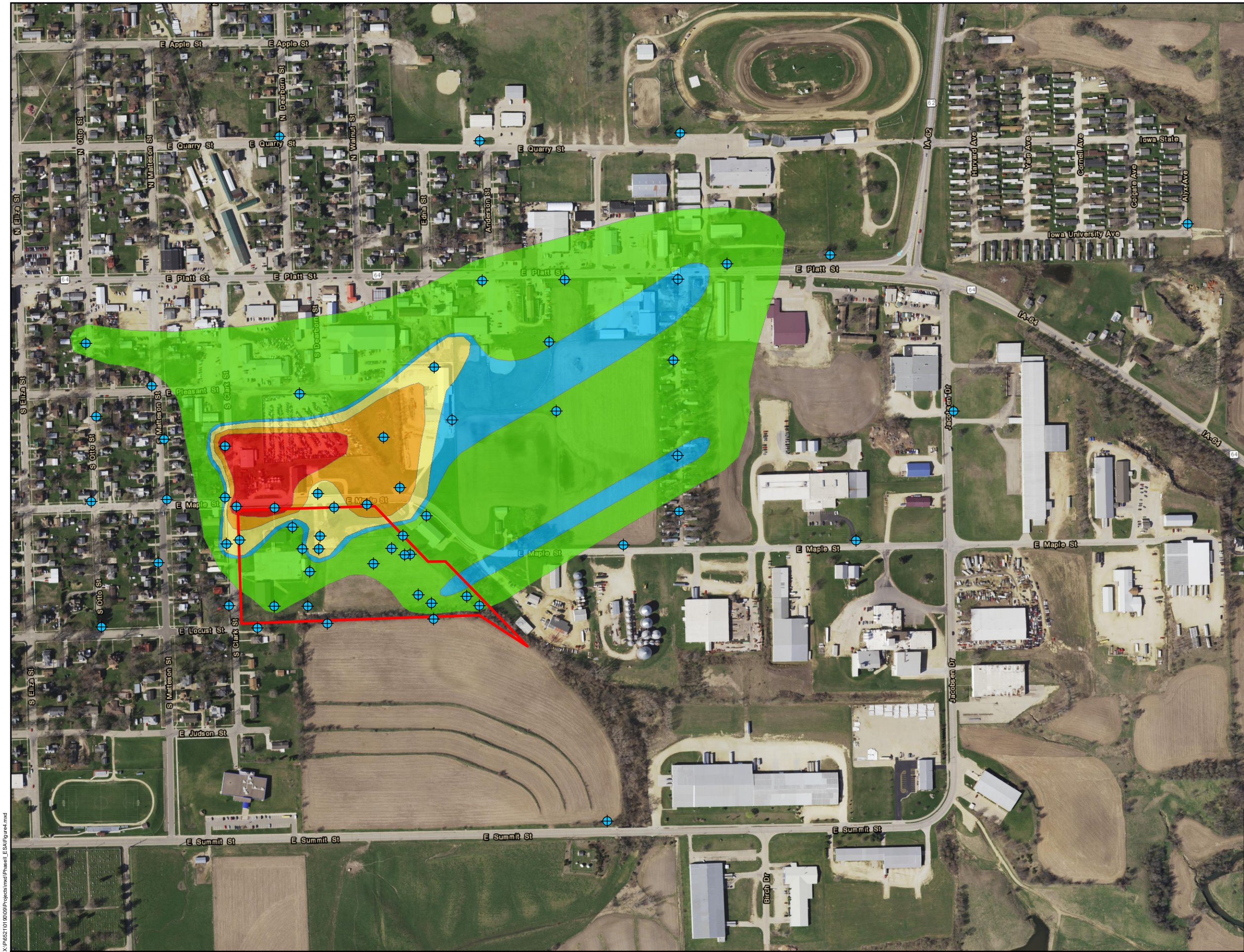
- DPT Direct-push technology
- FRC Forest Road Consultants
- I7G Impact 7G, Inc.
- MSA Missman, Stanley, & Associates P.C.
- START Superfund Technical Assessment & Response Team



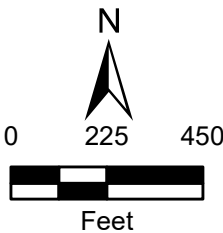
Former Clinton Engines
605 and 607 East Maple Street
Maquoketa, Jackson County, Iowa

Figure 3
Historical Sample Location Map





- Legend
- I7G Groundwater sample location
 - Approximate site boundary
 - TCE Isoconcentration
 - 10 µg/L
 - 500 µg/L
 - 2,000 µg/L
 - 4,000 µg/L
 - 8,000 µg/L
 - I7G Impact 7G, Inc.
 - TCE Trichloroethene
 - µg/L Micrograms per liter



Source: Iowa State University GIS Support and Research Facility,
Iowa Geographic Map Server, Aerial Imagery, 2016 - 2018

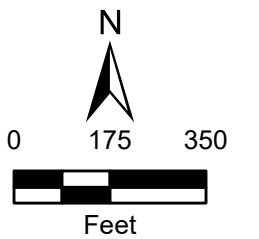
Former Clinton Engines
605 and 607 East Maple Street
Maquoketa, Jackson County, Iowa

Figure 4
2021 Groundwater Isoconcentration Map





- Legend
- Monitoring well sample location
 - Soil gas sample location
 - Approximate site boundary

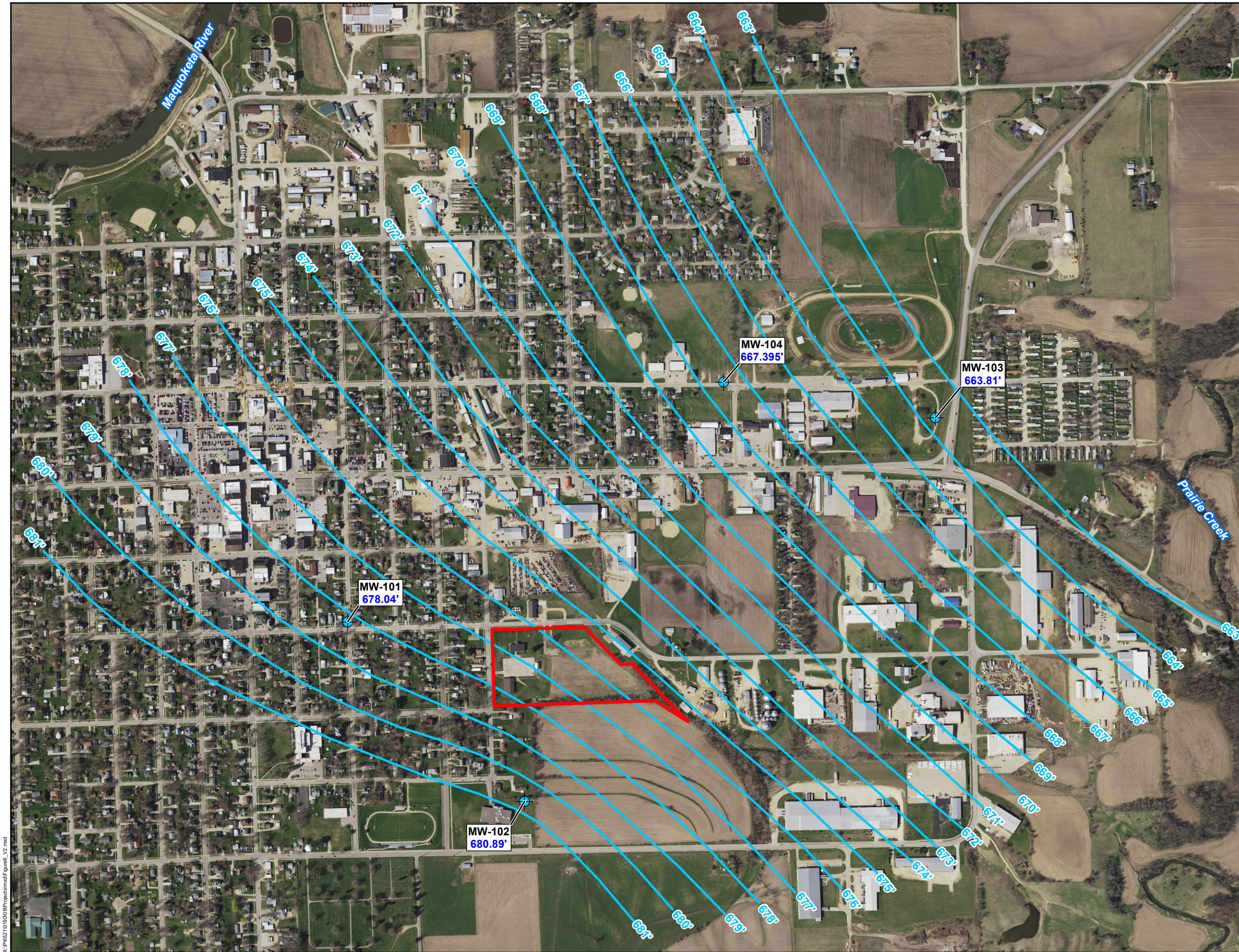


Source: Iowa State University GIS Support and Research Facility,
Iowa Geographic Map Server, Aerial Imagery, 2016 - 2018

Former Clinton Engines
605 and 607 East Maple Street
Maquoketa, Jackson County, Iowa

Figure 5
2022 Sample Location Map





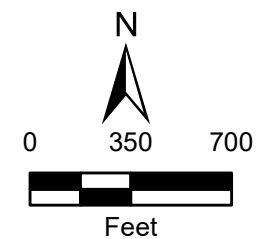
Legend

- Monitoring well location
- Approximate groundwater elevation contour (bedrock aquifer)
- Approximate site boundary

Monitoring well ID

MW-103
663.81'

Groundwater elevation
(feet above mean sea level)

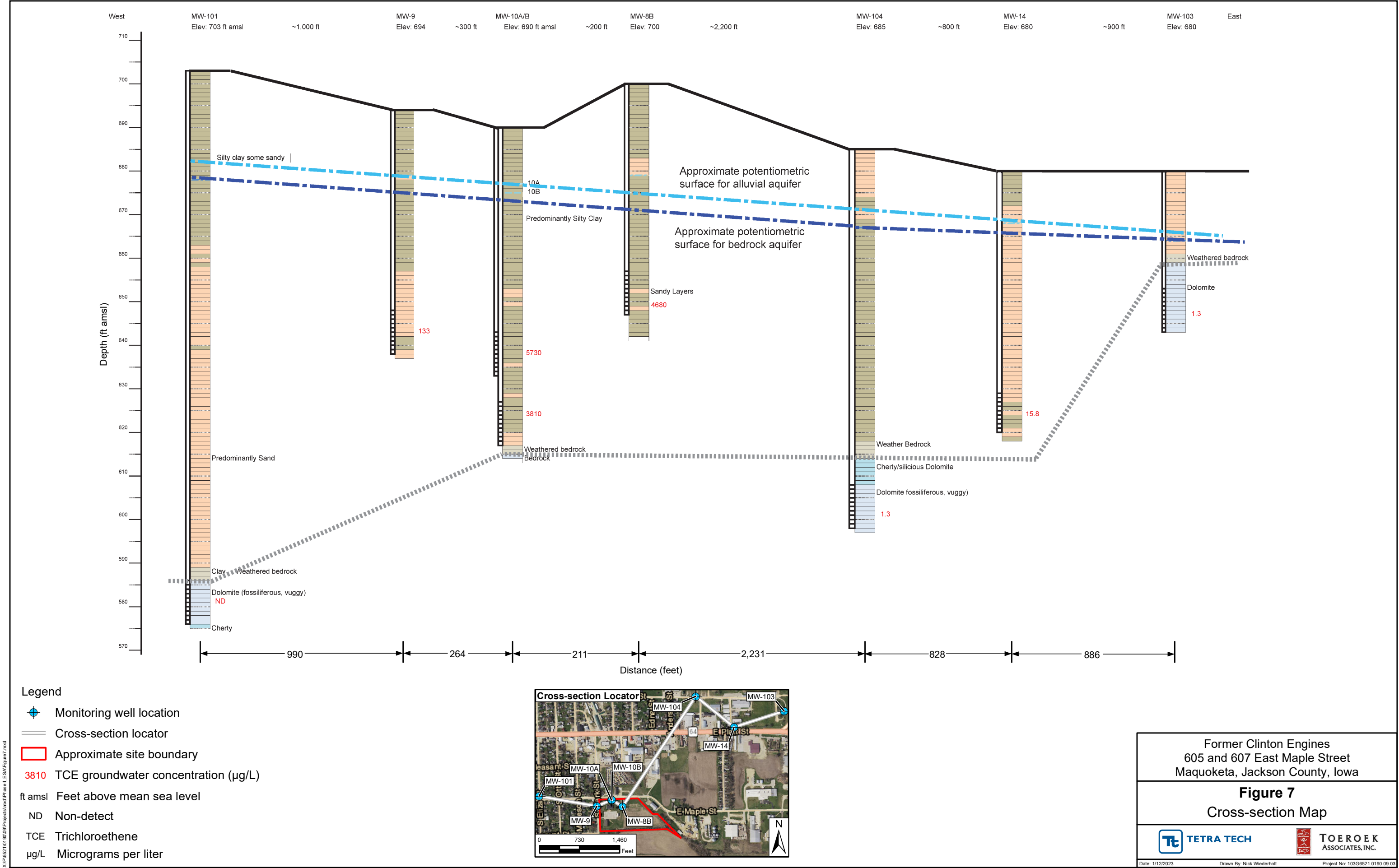


Source: Iowa State University GIS Support and Research Facility,
Iowa Geographic Map Server, Aerial Imagery, 2016 - 2018

Former Clinton Engines
605 and 607 East Maple Street
Maquoketa, Jackson County, Iowa

Figure 6
Bedrock Aquifer Potentiometric Surface Map





APPENDIX B
HISTORICAL DATA TABLES

TABLE B-1: HISTORICAL GROUNDWATER SAMPLE RESULTS

Location	Depth	Sample Date	1,1,1-TCA	1,1-DCA	1,1,2-TCA	PCE	TCE	1,1-DCE	cis -1,2-DCE	trans -1,2-DCE	VC	Chloroethane	Benzene	Toluene	Ethylbenzene	Xylenes
			Concentration (µg/L)													
Missman, Stanley & Associates - 1999 Phase II - Test America Data																
B1	5-15	9/23/1999	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<2	<2	<2	<2
B2	5-15	9/23/1999	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
B3	5-15	9/23/1999	<10	<10	<10	<10	170	14.7	1,940	14.5	494	<40	56	72.5	246	382
B6	5-15	9/24/1999	<500	<500	<500	<500	<500	<1,000	<500	<500	<500	<2,000	<200	673,000	<500	<1,500
B-9	15-25	9/24/1999	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<4	5.8	<4	<6
Forest Road Consulting 2006 - TestAmerica Data																
MW-10	~14-20	6/8/2006	ND	ND	ND	ND	524	ND	776	13.1	147	ND	95.6	3,000	94.6	249
MW-11	~12-20		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-12	~11-20	6/8/2006	ND	ND	ND	ND	15.5	ND	32.4	ND	<1	ND	3.24	368	2.26	79.7
MW-13	~20-25		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-14	~11-18	6/8/2006	ND	ND	ND	ND	79.9	ND	84.3	1.46	3.37	ND	0.56	2.57	ND	ND
MW-15	~13-20	6/8/2006	ND	ND	ND	ND	261	ND	181	4.11	5.34	ND	<0.5	1.37	ND	ND
MW-16	~12-20	6/8/2006	ND	ND	ND	ND	342	ND	52.3	1.11	<1	ND	<0.5	ND	ND	ND
MW-17	~16-20	6/8/2006	ND	ND	ND	ND	44.8	ND	6.08	ND	<1	ND	<0.5	31.1	ND	ND
Impact 7G 2013 "Existing Wells" - TestAmerica Data																
MW-1		4/25/2013	ND	ND	1.37	ND	7.5	7.38	8,380	90	673	5.34	59	112	27	ND
MW-2		4/25/2013	ND	ND	ND	ND	5,160	ND	45,900	ND	2,340	ND	231	125,000	453	1,860
MW-3		4/25/2013	ND	ND	ND	ND	6.64	ND	2.05	ND	ND	ND	ND	44.1	ND	3.36
MW-4		4/25/2013	ND	ND	ND	1.58	8,000	ND	1,090	7.58	ND	ND	0.519	ND	ND	ND
MW-5		4/25/2013	ND	ND	ND	ND	20.3	ND	37	ND	2.23	ND	ND	4.75	ND	ND
MW-6		4/25/2013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.34	ND	ND
MW-8		4/25/2013	ND	ND	ND	ND	5.12	ND	15	ND	ND	ND	ND	ND	ND	ND
Impact 7G 2019 Supplemental Phase II - TestAmerica Data																
MW-1		5/22/2019	ND	ND	ND	ND	ND	ND	2.22	ND	ND	ND	0.706	1.03	9.23	ND
MW-1FD		5/22/2019	ND	ND	ND	ND	ND	ND	1.88	ND	ND	ND	0.799	1.26	11.9	ND
MW-2R	5-30	5/22/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	247,000	ND	ND
MW-4		5/16/2019	ND	ND	ND	ND	358	ND	4,000	ND	91.2	ND	ND	ND	ND	ND
MW-5		5/16/2019	ND	ND	ND	ND	6.64	ND	3.63	ND	ND	ND	ND	ND	ND	ND
MW-6		5/16/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-7R	20-35	5/22/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-8		5/22/2019	ND	ND	ND	ND	ND	ND	41.8	ND	ND	ND	ND	135	ND	ND
Impact 7G April 2013 Direct-push Technology (DPT) Groundwater - Below Ground Surface (BGS) Mobile Laboratory Results																
BH-3	28-32	NS	NS	NS	NS	NS	4,258	NS	6,893	ND	163	NS	ND	ND	ND	ND
	40-44	NS	NS	NS	NS	NS	1,643	NS	6,357	ND	106	NS	ND	ND	ND	ND
	50-54	NS	NS	NS	NS	NS	1,439	NS	6,743	ND	113	NS	ND	ND	ND	ND
	60-64	NS	NS	NS	NS	NS	1,817	NS	6,636	ND	112	NS	ND	ND	ND	ND
	70-74	NS	NS	NS	NS	NS	3,705	NS	4,244	ND	98.9	NS	ND	ND	ND	ND
BH-4	28-32	NS	NS	NS	NS	NS	59.5	NS	46.6	ND	2.6	NS	ND	11.1	ND	ND
	40-44	NS	NS	NS	NS	NS	689	NS	949	ND	57.2	NS	ND	26.8	ND	ND
	50-54	NS	NS	NS	NS	NS	272	NS	1,090	ND	40.9	NS	ND	118	ND	ND
	60-64	NS	NS	NS	NS	NS	111	NS	850	ND	51.6	NS	18,300	291	ND	ND
BH-6	28-32	NS	NS	NS	NS	NS	ND	NS	ND	ND	ND	NS	ND	ND	ND	ND
	36-40	NS	NS	NS	NS	NS	ND	NS	ND	ND	ND	NS	ND	ND	ND	ND
BH-7	28-32	NS	NS	NS	NS	NS	3,281	NS	194	ND	ND	NS	ND	ND	ND	ND
	38-42	NS	NS	NS	NS	NS	1,900	NS	47.1	ND	ND	NS	ND	ND	ND	ND
	48-52	NS	NS	NS	NS	NS	1,009	NS	125	ND	ND	NS	ND	ND	ND	ND
	58-62	NS	NS	NS	NS	NS	1,183	NS	479	ND	ND	NS	ND	ND	ND	ND
BH-8	28-32	NS	NS	NS	NS	NS	49.2	NS	ND	ND	ND	NS	ND	ND	ND	ND
	38-42	NS	NS	NS	NS	NS	10.2	NS	ND	ND	ND	NS	ND	ND	ND	ND
	48-52	NS	NS	NS	NS	NS	9.5	NS	ND	ND	ND	NS	ND	ND	ND	ND
	58-62	NS	NS	NS	NS	NS	16.8	NS	ND	ND	ND	NS	ND	ND	ND	ND
BH-9	28-32	NS	NS	NS	NS	NS	139	NS	153	49.9	ND	NS	ND	ND	ND	ND
	36-40	NS	NS	NS	NS	NS	142	NS	117	32.5	ND	NS	ND	ND	ND	ND
BH-10	28-32	NS	NS	NS	NS	NS	63.5	NS	273	66.5	ND	NS	ND	ND	ND	ND
	38-42	NS	NS	NS	NS	NS	22.4	NS	69.2	75.9	ND	NS	ND	ND	ND	ND
	46-50	NS	NS	NS	NS	NS	15.9	NS	73.2	79.5	ND	NS	ND	ND	ND	ND

TABLE B-1: HISTORICAL GROUNDWATER SAMPLE RESULTS

Location	Depth	Sample Date	1,1,1-TCA	1,1-DCA	1,1,2-TCA	PCE	TCE	1,1-DCE	cis -1,2-DCE	trans -1,2-DCE	VC	Chloroethane	Benzene	Toluene	Ethylbenzene	Xylenes
			Concentration (µg/L)													
BH-11	28-32	NS	NS	NS	NS	NS	7,825	NS	595	94.6	19.5	NS	ND	ND	ND	ND
	38-42	NS	NS	NS	NS	NS	8,687	NS	954	ND	26.1	NS	ND	ND	ND	ND
	48-52	NS	NS	NS	NS	NS	5,278	NS	216	74.4	ND	NS	ND	ND	ND	ND
	58-62	NS	NS	NS	NS	NS	462	NS	52.7	44.2	ND	NS	ND	ND	ND	ND
BH-12	28-32	NS	NS	NS	NS	NS	288	NS	622	552	ND	NS	ND	ND	ND	ND
	38-42	NS	NS	NS	NS	NS	840	NS	1,457	1,044	14.6	NS	ND	ND	ND	ND
	48-52	NS	NS	NS	NS	NS	2,147	NS	1,221	115	23.3	NS	ND	ND	ND	ND
	58-62	NS	NS	NS	NS	NS	2,525	NS	2,487	435	34	NS	ND	ND	ND	ND
BH-13	28-32	NS	NS	NS	NS	NS	23.0	NS	255	164	10.6	NS	ND	ND	ND	ND
	38-42	NS	NS	NS	NS	NS	28.7	NS	425	216	10.8	NS	ND	ND	ND	ND
	48-52	NS	NS	NS	NS	NS	32.7	NS	755	324	18.4	NS	ND	ND	ND	ND
	58-62	NS	NS	NS	NS	NS	6.5	NS	61.6	24.4	9.1	NS	ND	ND	ND	ND
BH-14	28-32	NS	NS	NS	NS	NS	320	NS	153	17.8	ND	NS	ND	ND	ND	ND
	38-42	NS	NS	NS	NS	NS	627	NS	248	37.5	8.4	NS	ND	ND	ND	ND
	48-52	NS	NS	NS	NS	NS	791	NS	400	68.8	16.6	NS	ND	ND	ND	ND
	58-62	NS	NS	NS	NS	NS	3,694	NS	912	73.8	ND	NS	ND	ND	ND	ND
BH-15	28-32	NS	NS	NS	NS	NS	10.2	NS	10.5	8.9	ND	NS	ND	ND	ND	ND
	38-42	NS	NS	NS	NS	NS	7.4	NS	10.4	7.2	ND	NS	ND	ND	ND	ND
	48-52	NS	NS	NS	NS	NS	74.2	NS	50.2	49.8	ND	NS	ND	ND	ND	ND
	58-62	NS	NS	NS	NS	NS	158	NS	55.2	75.2	ND	NS	ND	ND	ND	ND
BH-16	28-32	NS	NS	NS	NS	NS	28.6	NS	143	83.9	ND	NS	ND	ND	ND	ND
	38-42	NS	NS	NS	NS	NS	8.7	NS	419	77.7	2.7	NS	ND	ND	ND	ND
	48-52	NS	NS	NS	NS	NS	93.8	NS	284	83.6	4.5	NS	ND	ND	ND	ND
April 2014 Impact 7G DPT Groundwater - BGS Mobile Laboratory Results																
BH-17	41.5	NS	NS	NS	NS	NS	51.1	ND	36.9	ND	ND	NS	NS	NS	NS	NS
	51.5	NS	NS	NS	NS	NS	83	ND	45.9	ND	ND	NS	NS	NS	NS	NS
	61.5	NS	NS	NS	NS	NS	104	ND	47.5	ND	ND	NS	NS	NS	NS	NS
	71.5	NS	NS	NS	NS	NS	142	ND	51.1	ND	ND	NS	NS	NS	NS	NS
BH-18	30	NS	NS	NS	NS	NS	84.3	ND	16.1	ND	ND	NS	NS	NS	NS	NS
	30FD	NS	NS	NS	NS	NS	79.8	ND	15.4	ND	ND	NS	NS	NS	NS	NS
BH-19	35	NS	NS	NS	NS	NS	835	ND	230	13.8	7.4	NS	NS	NS	NS	NS
	45	NS	NS	NS	NS	NS	16.4	ND	132	24.7	ND	NS	NS	NS	NS	NS
	55	NS	NS	NS	NS	NS	102	ND	211	63.8	5.7	NS	NS	NS	NS	NS
BH-19TD (Sampled from top down)	35	NS	NS	NS	NS	NS	897	ND	243	10.5	9.4	NS	NS	NS	NS	NS
	45	NS	NS	NS	NS	NS	15.6	ND	140	26	ND	NS	NS	NS	NS	NS
	55	NS	NS	NS	NS	NS	79.8	ND	161	42.4	6.8	NS	NS	NS	NS	NS
BH-20	20	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
BH-21	21	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
BH-24	35	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
BH-26	37	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
	47	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
BH-28	34	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
	44	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
BH-30	29	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
	39	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
BH-32	29	NS	NS	NS	NS	NS	24.3	ND	15.9	ND	ND	NS	NS	NS	NS	NS
	29FD	NS	NS	NS	NS	NS	22.5	ND	15.3	ND	ND	NS	NS	NS	NS	NS
	39	NS	NS	NS	NS	NS	108	ND	121	12.8	ND	NS	NS	NS	NS	NS
	49	NS	NS	NS	NS	NS	255	ND	300	77.1	ND	NS	NS	NS	NS	NS
	59	NS	NS	NS	NS	NS	191	ND	331	63.4	ND	NS	NS	NS	NS	NS

TABLE B-1: HISTORICAL GROUNDWATER SAMPLE RESULTS

Location	Depth	Sample Date	1,1,1-TCA	1,1-DCA	1,1,2-TCA	PCE	TCE	1,1-DCE	cis -1,2-DCE	trans -1,2-DCE	VC	Chloroethane	Benzene	Toluene	Ethylbenzene	Xylenes
			Concentration (µg/L)													
BH-34	28	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
	37	NS	NS	NS	NS	NS	11.6	4.2	ND	ND	ND	NS	NS	NS	NS	NS
	37FD	NS	NS	NS	NS	NS	11.7	4.1	ND	ND	ND	NS	NS	NS	NS	NS
Impact 7G DPT Groundwater Sampling 2019 - Eurofins/Test America Data																
B35	75-79	5/13/2019	ND	ND	ND	ND	199	ND	23.5	ND	ND	ND	ND	ND	ND	ND
	65-69	5/13/2019	ND	ND	ND	ND	1,390	ND	187	ND	ND	ND	ND	ND	ND	ND
	55-59	5/13/2019	ND	ND	ND	ND	1,330	ND	230	1.58	ND	ND	ND	ND	ND	ND
	45-49	5/13/2019	1.66	5.09	ND	ND	8,280	11.8	1,120	20.5	70	ND	3	ND	ND	ND
	35-39	5/13/2019	2.11	4.32	1.26	ND	8,970	14.9	1,580	20.2	102	ND	6.04	ND	ND	ND
	25-29	5/13/2019	1.62	11.30	ND	ND	7,760	11.3	1,010	15.4	77	ND	4.73	ND	ND	ND
	15-19	5/13/2019	7.59	ND	ND	ND	1,630	ND	45	ND	ND	ND	ND	ND	ND	ND
B36	15-19FD	5/13/2019	7.59	ND	ND	ND	2,230	ND	121	1.4	5.29	ND	0.531	ND	ND	ND
	49-53	5/13/2019	ND	ND	ND	ND	2,400	ND	163	ND	ND	ND	ND	ND	ND	ND
	39-43	5/13/2019	ND	ND	ND	ND	1,190	ND	63	ND	ND	ND	ND	ND	ND	ND
B37	29-33	5/13/2019	ND	ND	ND	ND	946	ND	63	ND	ND	ND	ND	ND	ND	ND
	70-74	5/13/2019	ND	ND	ND	ND	12.7	ND	1.08	ND	ND	ND	ND	ND	ND	ND
	60-64	5/13/2019	ND	ND	ND	ND	12.2	ND	1.19	ND	ND	ND	ND	ND	ND	ND
	50-54	5/13/2019	ND	ND	ND	ND	10.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
	40-44	5/13/2019	ND	ND	ND	ND	13.6	ND	1.69	ND	ND	ND	ND	ND	ND	ND
	30-34	5/13/2019	ND	ND	ND	ND	508	2.15	175	350	ND	ND	ND	ND	ND	ND
	20-24	5/13/2019	ND	ND	ND	ND	27.8	ND	1.41	4.37	ND	ND	ND	ND	ND	ND
B38	20-24FD	5/13/2019	ND	ND	ND	ND	32.7	ND	1.61	5.22	ND	ND	ND	ND	ND	ND
	56-60	5/14/2019	ND	7.24	ND	ND	9,580	14.5	1,590	551	43	ND	0.693	ND	ND	ND
	46-50	5/14/2019	ND	2.85	ND	ND	6,670	7.13	690	371	20.2	ND	0.785	ND	ND	ND
	36-40	5/14/2019	ND	3.66	ND	ND	7,140	8.48	800	390	23.2	ND	0.805	ND	ND	ND
	26-30	5/14/2019	ND	1.37	ND	ND	4,270	4.08	322	160	8.77	ND	ND	ND	ND	ND
	16-20	5/14/2019	ND	ND	ND	ND	861	ND	73.4	38.8	2.04	ND	ND	ND	ND	ND
B39	16-20FD	5/14/2019	ND	ND	ND	ND	870	ND	78.3	40	2.31	ND	ND	ND	ND	ND
	6-10	5/14/2019	ND	ND	ND	ND	1030	ND	102	38.8	2.14	ND	ND	ND	ND	ND
	21-25	5/14/2019	ND	ND	ND	ND	2.83	ND	2.08	1.18	ND	ND	ND	ND	ND	ND
	41-45	5/14/2019	ND	ND	ND	ND	6.3	ND	7.79	3.82	ND	ND	ND	ND	ND	ND
B40	31-35	5/14/2019	ND	ND	ND	ND	4.52	ND	4.39	2.68	ND	ND	ND	ND	ND	ND
	21-25 FD	5/14/2019	ND	ND	ND	ND	1.11	ND	ND	ND	ND	ND	ND	ND	ND	ND
	30-34	5/14/2019	ND	ND	ND	ND	4,420	10.3	4,330	734	224	ND	7.31	ND	ND	ND
	20-24	5/14/2019	ND	ND	ND	ND	1,180	2.17	841	160	46.1	ND	1.67	ND	ND	ND
B41	20-24 FD	5/14/2019	ND	ND	ND	ND	1,150	2.77	840	161	46.9	ND	1.62	ND	ND	ND
	10-14	5/14/2019	ND	ND	ND	ND	1,520	2.89	1,260	216	58.8	ND	2.18	ND	ND	ND
	30-34	5/14/2019	ND	ND	ND	ND	1.42	ND	ND	1.07	ND	ND	ND	ND	ND	ND
B42	20-24	5/14/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	20-24FD	5/14/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	36-40	5/14/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-30	5/14/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B43	26-30FD	5/14/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	16-20	5/14/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	36-40	5/15/2019	ND	ND	12.82	4.29	4,390	23.5	7,190	27.6	319	ND	9.32	ND	ND	ND
	26-30	5/15/2019	ND	ND	3.04	3.44	3,870	20.7	6,630	23.9	2.83	ND	8.56	ND	ND	ND
B44	16-20	5/15/2019	ND	ND	ND	ND	796	3.05	710	5.27	33.6	ND	0.942	ND	ND	ND
	6-10	5/15/2019	ND	ND	ND	ND	101	ND	63.1	ND	1.36	ND	ND	ND	ND	ND
	36-40	5/15/2019	ND	ND	ND	ND	132	ND	37.5	ND	ND	ND	ND	ND	ND	ND
B45	26-30	5/15/2019	ND	ND	ND	ND	345	ND	49.6	1.21	ND	ND	ND	ND	ND	ND
	16-20	5/15/2019	ND	ND	ND	ND	932	ND	1,420	14.8	47.1	ND	ND	11.2	ND	44.8
	16-20FD	5/15/2019	ND	ND	ND	ND	850	4.06	1,290	15.7	57.1	ND	ND	ND	ND	ND
	6-10	5/15/2019	ND	ND	ND	ND	476	2.15	952	7.62	34.2	ND	1.63	ND	ND	ND
B45	36-40	5/15/2019	ND	ND	ND	ND	139	ND	15.5	ND	ND	ND	ND	ND	ND	ND
	26-30	5/15/2019	ND	ND	ND	ND	90.2	ND	12.2	ND	ND	ND	ND	ND	ND	ND
	16-20	5/15/2019	ND	ND	ND	ND	37.4	ND	3.92	ND	ND	ND	ND	ND	ND	ND
	16-20FD	5/15/2019	ND	ND	ND	ND	35.5	ND	3.83	ND	ND	ND	ND	ND	ND	ND

TABLE B-1: HISTORICAL GROUNDWATER SAMPLE RESULTS

Location	Depth	Sample Date	1,1,1-TCA	1,1-DCA	1,1,2-TCA	PCE	TCE	1,1-DCE	cis -1,2-DCE	trans -1,2-DCE	VC	Chloroethane	Benzene	Toluene	Ethylbenzene	Xylenes
			Concentration (µg/L)													
B46	55-59	5/15/2019	ND	ND	ND	ND	264	ND	37.3	1.34	ND	ND	ND	ND	ND	ND
	45-49	5/15/2019	ND	ND	ND	ND	281	ND	40.9	1.14	ND	ND	ND	ND	ND	ND
	35-39	5/15/2019	ND	ND	ND	ND	310	ND	156	1.3	ND	ND	ND	ND	ND	ND
	25-29	5/15/2019	ND	ND	ND	ND	118	ND	49.8	ND	ND	ND	ND	ND	ND	ND
	25-29FD	5/15/2019	ND	ND	ND	ND	92.1	ND	27.5	ND	ND	ND	ND	ND	ND	ND
B47	54-58	5/15/2019	ND	ND	ND	ND	191	ND	291	59.5	7.17	ND	0.535	ND	ND	ND
	44-48	5/15/2019	ND	ND	ND	ND	72.4	ND	167	25.5	5.14	ND	0.535	ND	ND	ND
	34-38	5/15/2019	ND	ND	ND	ND	93.9	ND	80.9	8.98	1.61	ND	ND	ND	ND	ND
	34-38FD	5/15/2019	ND	ND	ND	ND	77.8	ND	81.1	10.3	1.34	ND	ND	ND	ND	ND
	24-28	5/15/2019	ND	ND	ND	ND	29.5	ND	25.9	2.71	ND	ND	ND	ND	ND	ND
B-48	NA	5/22/2019	ND	ND	ND	ND	23.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-49	NA	5/22/2019	ND	ND	ND	ND	3.94	ND	ND	ND	ND	ND	ND	ND	ND	ND
B50	46-50	6/18/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B51	46-50	6/18/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B52	27-31	6/18/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B53	64-68	6/18/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B54	50-54	6/19/2019	ND	ND	ND	ND	1.1	ND	2.17	ND	ND	ND	ND	ND	ND	ND
B56	37-41	6/18/2019	ND	ND	ND	ND	355	ND	29	1.25	ND	ND	ND	ND	ND	ND
B57	25-29	6/20/2019	ND	ND	ND	ND	5.92	ND	1.29	ND	ND	ND	ND	7.61	ND	ND
MW-2R/SB	49-53	6/20/2019	ND	ND	ND	1.46	1.070	ND	350	54.7	9.12	ND	0.965	27.1	ND	ND

Notes:

B = Boring
BH = Borehole
DCA = Dichloroethane
DCE = Dichloroethene
FD = Field duplicate
ft bgs = Feet below ground surface
µg/L = Micrograms per kilogram
MW = Monitorig well
NA = Not available

ND = Not detected
NS = Analyte not selected for analysis
PCE = Tetrachloroethene
TCA = Trichloroethane
TCE = Trichloroethene
R = Replacement
SB = Soil boring
VC = Vinyl chloride

TABLE B-2: HISTORICAL VOLATILE ORGANIC COMPOUNDS IN SOILS

Sample Location	Depth (ft bgs)	Sample Date	1,1,2-TCA	PCE	TCE	1,1-DCE	cis -1,2-DCE	trans -1,2-DCE	VC	Chloroethane	Benzene	Toluene	Ethylbenzene	Xylenes
			Concentration (µg/kg)											
Missman, Stanley & Associates 1999 Phase I - Test America Data														
B-6-3	3	9/24/1999	<120	<120	<120	<120	<120	<120	<360	<480	<120	604,000	786	2,690
Seneca Environmental 2002 Test America soils results for closure of three underground stoarage tanks are not listed (CVOCs not analyzed)														
Three monitoring wells were installed around Tank2 (southeast) and Tank3 (southwest)														
Forest Road Group 2006 - Test America Data														
MW-10	16	6/1/2006	ND	ND	ND	ND	256	ND	29.4	ND	10.2	109	115	228
MW-10	20	6/1/2006	ND	ND	6.22	ND	ND	ND	112	ND	21.5	22.7	ND	ND
MW-11	11	6/2/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-11	20	6/2/2006	ND	ND	6.9	ND	ND	ND	ND	ND	ND	7.07	ND	ND
MW-12	18	6/2/2006	ND	ND	ND	ND	ND	ND	ND	ND	13.33	36,900	107	438
MW-12	20	6/2/2006	ND	ND	25.6	ND	50.4	ND	ND	ND	ND	6.66	ND	ND
MW-13	23	6/1/2006	9.04	4.07	8,370	ND	3,310	ND	85.2	ND	151	285,000	367	5,010
MW-13	27	6/1/2006	ND	ND	48.1	ND	204	ND	26.4	ND	ND	12.7	ND	ND
MW-14	12	6/7/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-14	18	6/7/2006	ND	ND	54.6	ND	28.6	ND	ND	ND	ND	6.71	ND	ND
MW-15	11	6/7/2006	ND	ND	11	ND	4.7	ND	ND	ND	ND	ND	ND	ND
MW-15	19	6/7/2006	ND	ND	94.3	ND	64.5	ND	ND	ND	ND	5.77	ND	ND
MW-16	12	6/7/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-16	20	6/7/2006	ND	ND	29.9	ND	4.83	ND	ND	ND	ND	ND	ND	ND
MW-17	11	6/7/2006	ND	ND	13.4	ND	ND	ND	ND	ND	ND	6.26	ND	ND
MW-17	20	6/7/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.58	ND	ND
Impact 7G 2014 - TestAmerica Data														
BH-17	15	4/21/2014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH-18	7	7/21/2014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Impact 7G 2019 Supplemental Phase II - TestAmerica Data														
MW-2R	16-17	5/16/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,450,000	2,740	10,800
MW-2R	16-17FD	5/16/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	211,000	2,520	11,800
MW-2R	20-21	5/16/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	522,000	884	ND
MW-2R	25-26	5/16/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	54.9	ND	ND
MW-7R	25-26	5/16/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EPA START 2020 - EPA Region 7 Laboratory Data														
SB-1	9-10	7/22/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15-16	7/22/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-2	9-10	7/22/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15-16	7/22/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-3	9-10	7/22/2020	ND	ND	73	ND	31	ND	ND	ND	ND	ND	ND	ND
	9-10FD	7/22/2020	ND	ND	61	ND	23	ND	ND	ND	ND	ND	ND	ND
	15-16	7/22/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-4	9-10	7/22/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15-16	7/22/2020	ND	ND	3,000	ND	180	ND	ND	ND	ND	ND	ND	ND
SB-5	9-10	7/22/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15-16	7/22/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-6	8-9	7/22/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15-16	7/22/2020	ND	ND	610	ND	13	ND	ND	ND	ND	ND	ND	ND

TABLE B-2: HISTORICAL VOLATILE ORGANIC COMPOUNDS IN SOILS

Notes:

B = Boring
BH = Borehole
CVOC = Chlorinated volatile organic compounds
DCE = Dichloroethene
EPA = U.S. Environmental Protection Agency
ft bgs = Feet below ground surface
FD = Field duplicate
µg/kg = Micrograms per kilogram

MW = Monitoring well
ND = Not detected
PCE = Tetrachloroethene
R = Replacement
START = Superfund Technical Assessment Response Team
TCA = Trichloroethane
TCE = Trichloroethene
VC = Vinyl chloride

TABLE B-3: AVAILABLE VAPOR INTRUSION SAMPLE RESULTS FOR SELECTED VOLATILE ORGANIC COMPOUNDS

Sample Location	Sample Type	Date	PCE	TCE	cis -1,2-DCE	trans -1,2-DCE	Toluene	Xylenes
Impact 7G 2014-2020 Site Assessment VI Samples - TestAmerica Data								
Museum Sub-slab- Sample 1	Sub-slab	4/21/2014		930	850	47		8.5
Museum Sub-slab- Sample 2	Sub-slab	7/31/2014		730	450	33		
Museum Sub-slab- Sample 3	Sub-slab	10/29/2014		230	64	7.1		
Museum Sub-slab- Sample 4	Sub-slab	1/27/2015		540	560	22		
Vapor Pin (Sub-slab)	Sub-slab	3/22/2018		19	ND	ND	2.1	1.8
Outdoor Ambient Air	Ambient Air	3/22/2018		ND	ND	ND	0.85	ND
	Ambient Air	5/14/2019		ND	ND	ND	3.1	ND
	Ambient Air	12/10/2019		ND	ND	ND	ND	ND
	Ambient Air	9/23/2020		ND	ND	ND	ND	ND
Indoor Air - Basement	Indoor Air	3/22/2018		22	2.6	7	1.9	1.1
Indoor Air - Basement	Indoor Air	3/22/2018		23	2.7	7.5	2.2	1.3
Indoor Air - Main Level	Indoor Air	3/22/2018		19	2.2	5.7	2	1.2
Basement - Community Room	Indoor Air	4/24/2019		7.6	0.95	26	12	8.8
	Indoor Air	12/10/2019		12	1.1	1.5	1	102
	Indoor Air	9/23/2020	14.8	ND	ND	1.4		
Basement - Media Room	Indoor Air	4/24/2019		9	1.1	26	15	11
	Indoor Air	12/10/2019		12	1.4	3.2	143	2.1
	Indoor Air	12/20/2019		7.8/8.3	ND/ND	2.6/2.8	3.6/3.8	76/89
	Indoor Air	9/23/2020	36.8/29	ND/ND	ND/ND	1.2/2.1	ND/ND	14.3/14.4
First Level - Museum	Indoor Air	4/24/2019		2	ND	5.5	3.7	1.2
	Indoor Air	12/10/2019		6.4	ND	1	1.2	57
	Indoor Air	9/23/2020	ND	ND	ND	ND	1.4	2
First Level - Office	Indoor Air	4/24/2019		2.5	ND	7.7	4.6	5.5
	Indoor Air	12/10/2019		6.3	0.88	1.5	1.7	63
	Indoor Air	9/23/2020	ND	ND	ND	ND	ND	1.8
Depot	Indoor Air	12/10/2019		ND	ND	ND	ND	ND
Warehouse Building	Indoor Air	12/10/2019		ND	ND	ND	6.7	7.4

TABLE B-3: AVAILABLE VAPOR INTRUSION SAMPLE RESULTS FOR SELECTED VOLATILE ORGANIC COMPOUNDS

Address	Property and SampleType	Sample Number	Location	TCE	cis-1,2-DCE	trans-1,2-DCE	VC	Toluene
START 2020-2021 Sub-slab Vapor Samples								
EPA START June 2020 Sample Locations - EPA Region 7 Laboratory Data								
501 E. Maple St.	Residential- Sub-slab	8537-19	Basement, center of right wall	1.4 U	NA	NA	NA	NA
209 S. Otto St.	Residential -Sub-slab	8537-21	Basement, center of far wall	1.4 U	NA	NA	NA	NA
807 E. Platt St.	Residential -Sub-slab	8537-22	Basement, back right corner	1.4 U	NA	NA	NA	NA
214 S. Matteson St.	Residential -Sub-slab	8537-24	Basement, by stairs under rug	1.4 U	NA	NA	NA	NA
215 S. Matteson St.	Residential -Sub-slab	8537-18	Basement, main room far wall	1.4 U	NA	NA	NA	NA
216 S. Matteson St.	Residential -Sub-slab	8537-20	Basement, center between rooms	1.4 U	NA	NA	NA	NA
219 S. Matteson St.	Residential -Sub-slab	8537-25	Basement, right side back corner	3.1	NA	NA	NA	NA
307 S. Matteson St.	Residential -Sub-slab	8537-17	Basement, left room by dryer	1.4 U	NA	NA	NA	NA
308 S. Clark St.	Residential -Sub-slab	8537-16	NA	1.4 U	NA	NA	NA	NA
311 S. Matteson St.	Residential -Sub-slab	8537-23	Basement, back right corner (dryer)	1.4 U	NA	NA	NA	NA
EPA START July 2020 Sample Locations - EPA Region 7 Laboratory Data								
104 N. Dearborn St.	Residential -Sub-slab	8612-16	Basement Port	0.14 U	0.20 U	0.20 U	0.13 UJ	0.76 U
514 E. Maple St.	Residential -Sub-slab	8612-22	Basement Port	0.14 U	0.20 U	0.20 U	0.13 UJ	0.76 U
604 E. Maple St.	Commercial - Sub-slab	8612-18	West Shop Port	0.14 U	0.20 U	0.20 U	0.13 UJ	7
802 E. Maple St.	Commercial - Sub-slab	8612-19	Furnace Closet Port	0.32	0.20 U	0.20 U	0.13 UJ	0.94
1286 E. Maple St.	Commercial - Sub-slab	8612-28	Shop Port	0.14 U	0.20 U	0.20 U	0.13 UJ	0.76 U
204 S. Matteson St.	Residential -Sub-slab	8612-26	Basement Port (back room)	0.14 U	0.20 U	0.20 U	0.13 UJ	0.76 U
222 S. Matteson St.	Residential -Sub-slab	8612-21	Basement Port	0.14 U	0.20 U	0.20 U	0.13 UJ	0.76 U
316 S. Matteson St.	Residential -Sub-slab	8612-20	Basement Port	0.14 U	0.20 U	0.20 U	0.13 UJ	0.76 U
312 S. Clark St.	Residential -Sub-slab	8612-24	Basement Port	0.14 U	0.20 U	0.20 U	0.13 UJ	0.76 U
908 E. Platt St.	Residential -Sub-slab	8612-25	Basement Port	0.76	0.20 U	0.20 U	0.13 UJ	0.76 U
1207 E. Platt St.	Residential -Sub-slab	8612-27	Basement Port	0.14 U	0.20 U	0.20 U	0.13 UJ	0.76 U
1215 E. Platt St.	Commercial -Sub-slab	8612-17	Basement Port	0.14 U	0.20 U	0.20 U	0.13 UJ	2.9
EPA START February 2021 Sample Locations - EPA Region 7 Laboratory Data								
604 E. Maple St.	Commercial - Sub-slab	8778-3	West Shop Port	0.14 U	0.20 U	0.20 U	0.13 U	16
802 E. Maple St.	Commercial - Sub-slab	8778-5	Furnace Closet Port	0.14 U	0.20 U	0.20 U	0.13 U	0.76 U
907 E. Platt St.	Residential -Sub-slab	8778-8	Basement	0.14 U	0.20 U	0.20 U	0.13 U	0.76 U
219 S. Matteson St.	Residential -Sub-slab	8778-11	Basement, right side back corner	1	0.20 U	0.20 U	0.13 U	0.76 U
START 2021-2021 - Indoor and Ambient Air Samples								
EPA START June 2020 Sample Locations - EPA Region 7 Laboratory Data								
214 S. Matteson St.	Residential - Indoor air	8537-9	Main Floor, Living Room	1.4 U	NA	NA	NA	NA
215 S. Matteson St.	Residential - Indoor air	8537-5	Main Floor, Kitchen	1.4 U	NA	NA	NA	NA
216 S. Matteson St.	Residential - Indoor air	8537-10	Main Floor, Living Room	1.4 U	NA	NA	NA	NA
219 S. Matteson St.	Residential - Indoor air	8537-1	Main Floor, Dining Room	1.4 U	NA	NA	NA	NA
307 S. Matteson St.	Residential - Indoor air	8537-3	Main Floor, Dining Room	1.4 U	NA	NA	NA	NA
311 S. Matteson St.	Residential - Indoor air	8537-15	Main Floor, Dining Room	1.4 U	NA	NA	NA	NA
308 S. Clark St.	Residential - Indoor air	8537-2	Main Floor, Living Room	1.4 U	NA	NA	NA	NA
314 S. Clark St.	Residential - Indoor air	8537-7	Main Floor, Living Room	1.4 U	NA	NA	NA	NA
501 E. Maple St.	Residential - Indoor air	8537-8	Main Floor, Main Area	1.4 U	NA	NA	NA	NA
209 S. Otto St.	Residential - Indoor air	8537-11	Main Floor, Dining Room	1.4 U	NA	NA	NA	NA
109 S. Otto St.	Residential - Indoor air	853712	Main Floor, Kitchen	1.4 U	NA	NA	NA	NA
907 E. Platt St.	Residential - Indoor air	8537-13	Main Floor, Kitchen	1.9	NA	NA	NA	NA
807 E. Platt St.	Residential - Indoor air	8537-14	Main Floor – Kitchen	1.4 U	NA	NA	NA	NA

TABLE B-3: AVAILABLE VAPOR INTRUSION SAMPLE RESULTS FOR SELECTED VOLATILE ORGANIC COMPOUNDS

Address	Property and SampleType	Sample Number	Location	TCE	cis-1,2-DCE	trans-1,2-DCE	VC	Toluene
EPA START July 2020 Sample Locations - EPA Region 7 Laboratory Data								
514 E. Maple St.	Residential - Indoor air	8612-10	Main Floor, Living Room	0.14 U	0.20 U	0.20 U	0.13 U	3.8
600 E. Maple St.	Residential - Indoor air	8612-7	Main Floor, Main Room	0.14 U	0.20 U	0.20 U	0.13 U	11
604 E. Maple St.	Commercial - Indoor air	8612-4	Left Building Shop (west)	0.35	0.28	0.79	0.13 U	1,700 J
		8612-5	Right Building Office (east)	0.14 U	0.20 U	0.20 U	0.13 U	300
803 E. Maple St.	Residential - Indoor air	8612-1	Main Floor, Living Room	0.2	0.20 U	0.51	0.13 U	680
802 E. Maple St.	Commercial - Indoor air	8612-6	Room with Furnace Closet	0.64	0.33	0.20 U	0.13 U	14
1286 E. Maple St.	Commercial - Indoor air	8612-23	Main Office Area	0.14 U	0.20 U	0.20 U	0.13 UJ	34
204 S. Matteson St.	Residential - Indoor air	8612-14	Main Floor, Living Room	0.14 U	0.20 U	0.20 U	0.13 U	3.3
316 S. Matteson St.	Residential - Indoor air	8612-8	Main Floor, Living Room	0.14 U	0.20 U	0.20 U	0.13 U	14
222 S. Matteson St.	Residential - Indoor air	8612-9	Main Floor, Office Room	0.14 U	0.20 U	0.20 U	0.13 U	10
312 S. Clark St.	Residential - Indoor air	8612-11	Main Floor – Kitchen	0.14 U	0.20 U	0.20 U	0.13 U	2.9
104 N. Dearborn St.	Residential - Indoor air	8612-2	Main Floor, Living Room	0.21	0.20 U	0.20 U	0.24	1.7
908 E. Platt St.	Residential - Indoor air	8612-13	Main Floor, Living Room	0.14 U	0.20 U	0.20 U	0.13 U	2.2
1207 E. Platt St.	Residential - Indoor air	8612-15	Main Floor, Living Room	0.14 U	0.20 U	0.20 U	0.13 UJ	0.76 U
1211 E. Platt St.	Commercial - Indoor air	8612-12	Main Floor, Front Desk	0.14 U	0.20 U	0.20 U	0.13 U	6.6
1215 E. Platt St.	Commercial - Indoor air	8612-3	Auditorium	0.14 U	0.20 U	0.20 U	0.13 U	13
EPA START February 2021 Sample Locations - EPA Region 7 Laboratory Data								
604 E Maple St.	Commercial - Indoor air	8778-2	Left Building Shop (west)	0.14 U	0.20 U	0.46	0.13 U	460
802 E. Maple St.	Commercial - Indoor air	8778-4	Room with Furnace Closet	0.14 U	0.20 U	0.20 U	0.13 U	5.5
803 E. Maple St.	Residential - Indoor air	8778-9	Main Floor, Living Room	0.38	0.20 U	0.20 U	0.13 U	220
104 N. Dearborn St.	Residential - Indoor air	8778-6	Main Floor, Living Room	0.14 U	0.20 U	0.20 U	0.13 U	2.2
219 S. Matteson St.	Residential - Indoor air	8778-10	Main Floor, Dining Room	0.14 U	0.20 U	0.20 U	0.13 U	0.76 U
907 E. Platt St.	Residential - Indoor air	8778-7	Main Floor, Kitchen	0.38	0.20 U	0.20 U	0.13 U	8.8
908 E. Platt St.	Residential - Indoor air	8778-1	Main Floor, Living Room	0.14 U	0.20 U	0.20 U	0.13 U	2.9
Ambient Air June 2020 and February 2021								
217 S. Matteson St.	Ambient Air	8537-4	Backdoor Steps	0.14 U	NA	NA	NA	NA
314 S. Clark St.	Ambient Air	8537-6	Backdoor Steps	0.14 U	NA	NA	NA	NA
607 E Maple St.	Ambient Air	8778-12	Museum Parking Lot	0.14 U	0.20 U	0.20 U	0.13 U	0.76 U

Notes:

DCE = Dichloroethene
EPA = U.S. Environmental Protection Agency
J = Estimated value
NA = Not available
ND = Not detected

PCE = Tetrachloroethene
START = Superfund Technical Assessment Response Team
TCE = Trichloroethene
U = Undetected at detection limit to left
VC = Vinyl chloride

APPENDIX C
LOGBOOK AND FIELD FORMS

² 10/24/22 Clinton Engines

1000 Paulina Tinoco (PT) and Thomas Kaley (TK) with Tetra Tech (TT) arrive at Kansas City office and pack vehicles. Will mobilize to Maquoketa, IA today.

1200 PT and TK depart Kansas City office.

1830 Arrive in Maquoketa. End of day.

PT

Clinton Engines 10/25/22³

0700 PT and TK arrive at site at 605 E Maple Street, Scott Parks, Ethan Orange, Paul Dickenson, and Cory Tomko with Cascade Drilling onsite. Scope of work today will be setting up staging area and reviewing well location. Will drill if time and weather permits. Weather currently overcast and 45°F. Chance of rain.

0800 PT and TK meet with employees at museum to inform them of work.

0900 TT and Cascade personnel to look at well locations.

1100 Call Josh Volte to discuss MW-102 location. Suggested talking to farmland property owner or moving well to YMCA property west of original proposed location. Property owned by city.

1130 Cascade talking to Fairgrounds employees to clear utilities.

1230 TT break for lunch.

1330 Meet Cascade at YMCA to meet with Scott, director at the YMCA. Scott suggested installing well

Rite in the Rain.

4 10/25/22

Clinton Engines

behind solar panels on north east corner of property.

1345 Water for property will be supplied near wastewater treatment plant. Maquoketa has a hydrant they have requested we use. Quantity will be tracked at the hydrant.

1415 Rolloff for soil cuttings will be arriving today. 55-gallon drums for water will be used.

1515 Municipal waste will be disposed of at public works dumpster.

1530 Cascade setting up rig at MW-103.

1645 Rig set up and overclear complete. Will start drilling tomorrow. Mobilize back to site. Jenna Mead (JM) with Tetra Tech onsite.

1700 Rolloff has arrived. Cascade and TT depart site. End of day

Clinton Engines

10/26/22

0700 PT, TK, JM, and Cascade onsite at MW-103. Drillers start fueling and setup. Weather clear 39°F.

0730 Safety meeting with Cascade.

0750 Cascade doing safety checks. TT sets up work station.

0800 Start boring at MW-103

0900 Stop at 27ft below ground surface (bgs)

0905 Sample will be collected at 19-21ft interval. Bedrock at 21ft bgs. Go down to 38ft to look for water.

Sample: MW103-(19-21). Rig is down for maintenance. Hydraulic leak.

1015 Drill rig back online. Will drill down to 38ft bgs.

1025 Drilling complete, well screen set at 27-37ft bgs. in water bearing bedrock.

1030 Drillers depart to gather supplies.

1055 Drillers return.

1100 Start building well.

1230 Break for lunch.

1330 Back from lunch. Well has been set.

Drillers will move to MW-104. PT will set up soil gas sample at MW-103.

Rite in the Rain.

PT

6 10/26/22

Clinton Engines

1450 MW103-SG set up complete

1455 Purge sample line

1504 Purge complete, start sample

MW103-SG Can ID = A11513

Start P = -25"Hg Reg ID =

1509 Stop P = -5"Hg

1510 PT to MW-104. Drillers have started drilling. JM and TK already onsite.

1700 Sample MW104 - (64-66) Last foot of flight was weathered bedrock.

Hit bedrock at 71ft bgs. Drilling done for the day. Will pull one more flight tomorrow to ensure bedrock is water bearing. End of day.

(PT)

Clinton Engines

10/27/22

0800 PT, TK, and JM onsite.

0830 Set up soil gas at MW-104. Cascade onsite. Cory taking Ethan to airport.

0840 Begin purging line at MW104-SG

0847 Start P: -35"Hg Can ID: FCO949

0858 Stop P: -5"Hg Reg ID: 1085

0920 Drill at MW-104.

1020 Drilling complete at MW-104. Total depth at 88ft. Screen set at 77ft bgs.

1030 Drillers getting equipment, JM departs.

1100 Drillers back onsite. Start building monitoring well.

1230 Cory back onsite. Cascade to laydown to decon equipment.

1330 Cascade tears down equipment. PT to MW-101 to check utility locate.

1400 James Van Conant with Cascade has informed TT that location has been cleared.

1500 Cascade onsite at MW-101. Set up rig and hand clear.

1630 Clearing complete PT and TK inform adjacent properties of drilling.

1700 End of day — (PT)

Rite in the Rain

8 10/28/22

Clinton Engines

- 0700 Tetra Tech onsite at MW-101.
 Drillers drop equipment off and drive to public works for water.
- 0740 Drillers back onsite. Continue setting up equipment.
- 0800 Drillers need to go back to site for more equipment.
- 0820 Drillers back onsite. Setting up rig. Need to perform maintenance on rig.
- 0920 Start drilling at MW-101.
- 1230 Done drilling at MW-101. Total depth is 128 ft bgs. Will set screen at 117-127 ft bgs in water bearing bedrock. Break for lunch.
- 1330 Back from lunch. Drillers depart for water. Sample MW101-(114-116)
- 1400 Drillers back. Start building well.
- 1630 Well built with the exception of the flush mount. Will complete tomorrow. Drillers break down equipment.
- 1700 End of day.

(PT)

Clinton Engines

10/29/22

9

- 0800 PT and TK arrive onsite. Cascade gathering supplies. Will meet at MW-101.
- 0830 Drillers at MW-101. Start on flush mount finish.
- 0900 PT and TK start setting up soil gas at MW-101.
- 0930 Soil gas set up. Begin purging.
- 0940 Purge complete. Start sample. MW101-SG.
- 0946 Stop MW101-SG
 Start P = -26 "Hg (Can ID: 4052)
 Stop P = -S "Hg Reg II: FC0930
- 1045 Flush mount install at MW101 complete. Cascade packs up equipment. Will mobilize to MW-102.
- 1150 Box truck and rig onsite at MW102. Take lunch.
- 1300 Start drilling at MW-102. Adjacent residents have been notified.
- 1630 Stop drilling for the day. Currently at 117 ft bgs. Will sample and hit bedrock on last flight but will pull it tomorrow. Cascade packs up.
- 1700 End of day.

(PT) *Rite in the Rain.*

10 10/30/22 Clinton Engines

0900 PT and TK onsite at MW-102.
Drillers need to grab supplies and water.

1000 Cascade onsite and ready to drill.

1027 Sample MW-102-(117-119). Will do another flight to find water bearing bedrock.

1100 Drill is stuck. Cascade will drill with 7 inch pipe to release 6 in pipe.

1240 MW-102 Total Depth = 138 ft bgs
Screen at 125-135 ft bgs. Cascade to pull 7 inch pipe then set well.

1445 Set up soil gas at MW-102.

1505 Soil gas set up. Start purging.

1510 Purge complete.

Sample MW102-SG

1513 Start P = -25" Hg Reg ID: FC339.9

1526 Stop P = -5" Hg Can ID: 1381

1545 Well is set Cascade will move to lay down area

1600 Back in laydown area. Cascade will break down equipment.

1700 End of day

(PT)

Clinton Engines 10/31/22¹¹

0700 Arrive at laydown area. Cascade warming up equipment and gathering supplies. PT and TK onsite.

0815 PT takes walk with Cascade to show locations of existing wells.

0845 Wells located. PT and TK in laydown area for meeting.

0915 Meeting adjourned. Meet Cascade at proposed location for MW-11.

0930 Start setup at MW-11.

0945 Start drilling at MW-11.

1030 Drilling complete to 57 ft bgs.
Set screen at 40-50 ft bgs.

1040 Sample MW11-(44-46). Highest PID reading in sampled interval was 0.3 ppm. Confining layer apparent at approximately 51 ft bgs. Cascade builds well.

1200 Well complete take a lunch after moving rig to MW-4B.

1230 Back onsite. Set up at MW-4B.

1245 Start drilling.

1340 Drilling complete. Total depth 57 ft bgs.
Will set screen at 47 ft - 57 ft bgs.

1400 Depart site to get ice.
Sample MW4B-(24-26).

Rite in the Rain

12 10/31/22

Clinton Engines

1430 Back onsite. Cascade building well.

1530 Cascade moving to MW-5B.

1540 PT depart site to ship samples.

1550 Began drilling MW-5B

1635 Finished drilling to 57' BGS.

1645 Intervals likely won't produce water.

Driller will perform "Fallen Head" test and will know tomorrow if well will produce water.

1700 Collected sample MW-5B-(21-23)

1715 Finished at the site for the day. TK leaving site.

10/31/22

Clinton Engines

11/1/22 13

0700 PT and TK onsite. Cascade onsite and starting up equipment. Will wait for feedback from Kaitlyn and EPA before proceeding with work. Cascade needs water. Going offsite.

0830 MW-5B will be plugged. Moving to MW-6B.

0950 Setting up at MW-6B.

1015 Start drilling

1100 Sample MW6B-(18-20)

1115 PID malfunctioning

1130 Sample MW6B-(50-52)1155 ~~Cascade will~~ (P) Total depth at soil boring MW6B = 57ft bgs. Total depth of well = 51ft bgs. Screen interval at 41ft to 51ft bgs. Weathered bedrock at 53ft. Cascade will grout from 57-52ft bgs. to plug bedrock. Break for lunch

1230 Back onsite. PT and TK to collect soil gas sample.

1315 Tried several times to advance rod at MW-11 to no avail. Will need to drill through asphalt at approximately 1ft bgs. Cascade done setting MW-6B. Move to MW-2B.

Rite in the Rain.

14 11/1/22

Clinton Engines

1355 Setup complete. Start drilling at MW-2B

1432 Sample MW2B-(55-57)

1535 Drilling complete at MW-2B. Screen interval set at 47-57 ft bgs. Total depth = 58 ft bgs.

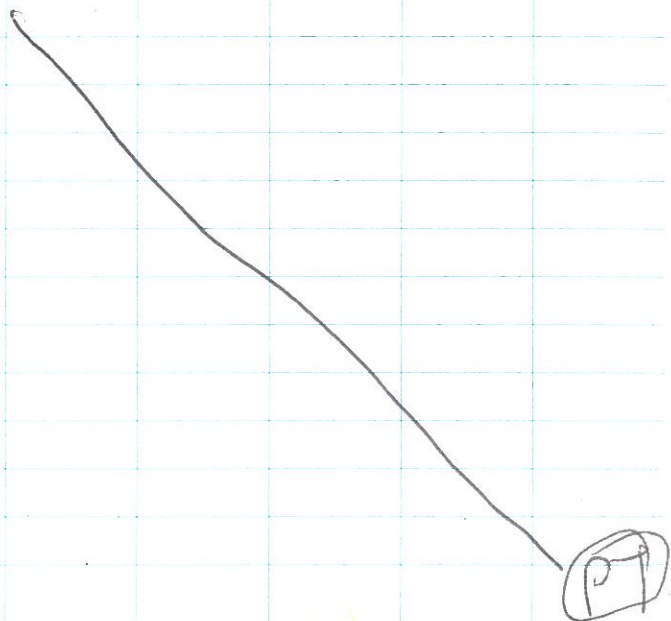
1530 Well set. Move to MW-1B

1600 Rig set up at MW-1B. Start drilling

1630 Sample MW1B-(19-21)

1640 Drilling complete. Total depth = 58 ft bgs. screen set from ~~42~~ 42-52 ft bgs. Start building well.

1730 Well complete. End of day.



Clinton Engines 11/2/22 15

0700 PT and TK onsite. Cascade warming up equipment and gathering supplies. Will start at MW-8B.

0830 PT and TK set up at MW-8B.

0900 Start drilling at MW-8B.

0920 Drilling complete.

0930 Sample MW8B-(14-16)

0945 Sample MW8B-(55-57)

1030 Drillers get wells. Move to to MW-10

1105 Starting drilling MW10B.

1200 Drilling complete. Total depth = 77 ft. Bedrock at 75 ft. Screen interval will be placed at 63-73 ft bgs. Bedrock will be plugged.

1220 Sample MW10B-(43-45)

1230 Break for lunch.

1300 Back onsite. Cascade install MW-10B. PT and TK to try soil gas.

1315 Can't find good location at MW-2B. Refusal at 3 ft. Move to MW-8B. Cascade moving to MW-10A.

1345 Rod in near MW-8B. Set up and purge.

1405 Start purge.

Rite in the Rain

16 11/2/22

Clinton Engines

1410 Sample MW3B-SG.

Start P = -26 Can ID: 2425

Stop P = -5 Reg ID: FC1106

1415 Sample collected, Go to MW-10A.

1430 Start drilling MW-10A.

1515 Sample MW10A-(3941) Drilling complete. Total depth = 58 ft. Screen interval from 47-57 ft bgs.

1520 Move to MWB to collect soil gas.

1538 Rod in place at MW-1B. Start purging.

1543 Start sample ~~MW1B~~ MW1B-SG PT

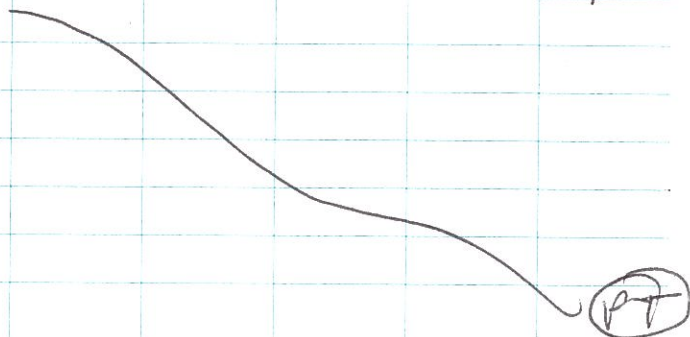
Start P = 27" Hg Can ID: 3106

Stop P = -5" Hg Reg ID: FC1066

1606 Cascade moving to MW-3B. Will drill tomorrow.

1615 PT and TK depart for Clinton for supplies.

1800 Back in Maquoketa. End of day.



Clinton Engines

11/3/22 17

0700 PT and TK arrive onsite. Cascade warming equipment up.

0800 Start drilling MW-3B.

0835 Sample MW3B-(36-38)

0840 Well total depth = 58 ft bgs.

Screen interval at 47-57 ft bgs.

1000 Well set. Cascade packs up equipment.

1020 Mobilize to MW-14.

1040 Set up at MW-14.

1130 Start drilling MW-14.

1205 Done drilling MW-14. Total depth = 61 ft. Screen interval will be set at 50-60 ft bgs.

1220 Sample MW14-(59-64)

1240 Break for lunch. Will set well after.

1300 PT and TK taking soil gas samples while Cascade install wells.

1315 Sampling at MW11. Will move further back to try and get past asphalt.

1350 Rod in the ground. Set up purge.

1405 Purge complete

1410 Sample MW11-SG

1410 Start P = -27" Hg Can ID = 21116

1413 Stop P = -5" Hg Reg ID = 010305

Rite in the Rain.

1425 Move to MW-4B.

1428 Set up soil gas rod.

1430 Rod in the ground. Set up purge.

1447 Start purge

1453 Sample MW4B-SG

Start P = -30" Hg Can ID: 5584

1458 Stop P = -5" Hg Reg ID: 21405

1505 Move to MW-13

1525 Start Drilling MW-13.

1600 Done drilling at MW-13. Total depth = 44 ft bgs. Screen interval from 33-43 ft bgs.

1605 Sample MW13-(22-24)

1615 PT and TK depart while Casrade sets well.

1620 ~~1630~~ Set up soil gas at MW-5B

1625 Unsuccessfully advanced rod to depth 3 times. Hitting refusal at approximately 3 ft bgs. Move to MW-6B.

1630 Set up at MW-6B

1635 Hitting refusal at same depth than MW-5B. Move to MW-2B.

1645 Soil gas rub set up successful. Begin purge

1655 Start P = -28" Hg
(PT) Can ID: 10246
Reg ID: 12061

1700 Stop P = -5 Hg MW2B-SG

1705 Move to MW-10. Will take 1 sample for location.

1718 Soil gas rod installed start to purge.

1723 Sample MW10-SG

1727 Start P = -30" Hg Can ID: 21971

↑ Stop P = -5" Hg Reg ID: 7867

1735 Drive to get supplies. Cascade finished building well and offsite.

1740 Set up at MW-3B.

1747 Set up complete. Start purge

1752 Sample MW3B-SG

Start P = -30" Hg Can ID: 22122

1801 Stop P = -7" Hg Reg ID: 12584

1810 Setup soil gas at MW-14.

1812 Set up complete. Start purge
Sample MW14-SG

1817 Start P = -27" Hg Can ID: 7640

1827 Stop P = -7" Hg Reg ID: 006725

1835 Move to MW-13.

1844 Set up complete start purge

1849 Sample MW13-SG

Start P = -28" Hg Reg ID: 012045

1902 Stop P = -7" Hg Can ID: 22105

1905 End of day (PT)

Rite in the Rain

20 11/4/22

Clinton Engines

- 0700 Arrive at site. Cascade starts warming up equipment. Will move rig to MW-12.
- 0800 Rig moved and set up at MW-12.
- 0820 Start hand clearing.
- 0835 Hand clear complete. Prepare soil gas sampling.
- 0840 Start drilling MW-12. Hitting refusal in all three locations for soil gas. Try again later.
- 0920 Drilling complete. Total depth = 62 ft _{bgs.}
Screen interval from 35-45. Tight clays below.
- 0930 Sample MW12-(39-41). Cascade starts building well.
- 0955 Cascade packing up equipment to move to MW-9.
- 1030 Cascade at MW-9. PT and TK set up soil gas across the street.
- 1035 Soil gas set up. Start purge. Sample MW9-SG.
- 1040 Start P = -27" Hg Can ID: 22245
- 1045 Stop P = -5" Hg Reg ID: 7808
- 1100 Start drilling MW-9.
- 1130 Drilling complete. Total depth h = 57 ft.
Screen interval from 46-56 ft bgs.

Clinton Engines

11/4/22 21

- 1200 Sample Rinsate
- 1215 Sample MW9-(55-57). Break for lunch. PT and TK take samples back to be refrigerated.
- 1300 Cascade still working on well. There a lightning delay and a 30 min delay enacted.
- 1400 Cascade has finished well. Will cone off and return equipment to lay down area.
- 1430 PT and TK depart for the day.

PT

Rite in the Rain.

22 11/5/22

Clinton Engines

0800 PT and TK arrive at laydown area to take photos.

0820 Photos taken. Depart Maquoketa, IA and mobilize to office.

1400 Arrive at office. Unload vehicles. Need to drop truck off at airport.

1530 Vehicle dropped off. Head back to office.

1600 Arrive at office.

Note: Field duplicate collected at MW42. Sample MW42-(39-41)-F01.
End of day.

PT

Clinton Engines

11/14/22²³

0900 PT and TK arrive at Kansas City office. Pack vehicle. Scope of work for this mobilization, develop all wells and sample groundwater for first monitoring event.

1100 Depart Kansas City.

1700 Arrive at hotel. End of day.

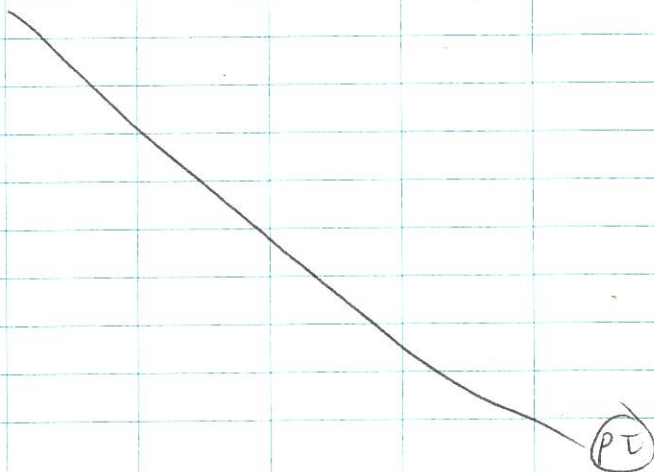
PT

Rite in the Rain

24 11/15/22

Clinton Engines

- 0700 Arrive in Maquoketa, IA. Cascade already onsite. Currently snowing. Cascade will finish well completions today. Paul Dickman and Bill are drillers.
- 0800 Completing wells in fairgrounds area.
- 0900 Move to field onsite on wells in front of building.
- 1145 Break for lunch.
- 1200 Cascade completed well at YMCA.
- 1200 Will move to flush mount wells on Clark.
- 1345 MW-12 complete. Move to MW-9.
- 1600 MW-9 complete.
- 1630 TK and PT depart. Cascade will retrieve drums. End of day



Clinton Engines

11/16/22²⁵

- 0700 Arrive at Maquoketa, IA. Will start developing today.
- 0730 Move to MW-11.
- 0800 Total depth (TD) = 52.85 ft bgs.
Depth to water (DTW) = 18.16 ft bgs.
One well volume = $0.0216 \text{ ft}^3 \times 34.69 \text{ ft}$
= 0.75 ft^3
= 5.61 gal
- 0810 ~~0830~~ Setup purge pump.
- 0819 Start purge. Flow rate ~ 1 gal/min.
- 0847 Start water quality readings.
- 0855 Stop purge. Well developed. Purged approximately 36.0 gal. Move to MW-4B. PT and TK to meet Daniel Matzinger, surveyor, with Clapsaddle-Garber Associates.
- 0925 Daniel arrives. Provide map.
- 0930 PT and TK back to MW-4B.
DTW = ~~60.22 ft~~ (PT) 17.63 ft
TD = 60.22 ft
One well volume = 0.0216×42.59
= 0.92 ft^3
= 6.88 gal
- 0940 Start purge.
- 0957 Stop purge. Well dry. Too turbid to collect parameters. *Rite in the Rain.*

26 11/16/22

Clinton Engines

1000 Move to MW-6B. Will return to MW-4B later. Purged approximately 17.0 gal.

1007 MW-6B DTW = 21.91 ft

TD = 53.74 ft

Well volume (Vol) = 0.0216×31.83
 $= 0.688 \text{ ft}^3$
 $= 5.14 \text{ gal}$

1011 Start purge.

1037 Start collecting parameters.

1050 Stop purge. Well development complete. Purged approximately 39 gal. ~~Mon~~ (PT)

1056 Move to MW-2B.

1102 DTW = 16.11 ft

TD = 56.74 ft

Well vol = 0.0216×40.63
 $= 0.878 \text{ ft}^3$
 $= 6.56 \text{ gal}$

1111 Start purging.

1135 Start collecting parameters.

1151 Stop purge. Well development complete. Purged approximately 40 gal.

1200 Break for lunch.

1230 Move to MW-8B.

Clinton Engines

11/16/22²⁷

1235 DTW = 13.63 ft

TD = 52.80 ft

Well vol = 0.0216×39.17
 $= 0.846 \text{ ft}^3$

(PT) Start pur 6.33 gal

1242 Start purge.

1255 Stop purge. Well went dry. Purge approximately 13.0 gal. Water quality parameters not collected, water too turbid. Will continue development later. Move to MW-1B.

1305 MW-1B DTW = 18.47 ft

TD = 52.22 ft

Well vol = 0.0216×33.75
 $= 0.729 \text{ ft}^3$
 $= 5.45 \text{ gal}$

1313 Start purging.

1336 Start collecting water quality parameter.

1343 Stop purge. Well development done. Purged approximately 30 gal.

1350 Move to ~~MW-10A/B~~ (PT) MW-3B.

1405 DTW = 21.04 ft

TD = 56.87 ft

1420 Start purge. Well vol = 0.0216×35.83
 $= 0.77 \text{ ft}^3$
 $= 5.8 \text{ gal}$ *Rite in the Rain*

28

11/16/22

Clinton Engines

1443 Start collecting water quality parameters.

1453 Stop purge. Well development complete. Purged approximately 33 gal.

1456 Move to MW-10A/B.

1510 Start with MW-10A.

$$DTW = 11.81 \text{ ft}$$

$$TD = 57.06 \text{ ft}$$

$$\text{Well vol} = 0.0216 \times (45.25)$$

$$= 0.977 \text{ ft}^3$$

$$= 7.31 \text{ gal}$$

1519 Start purge

¹⁵³⁹ ~~1550~~ Start collecting water quality parameters.

1550 Stop purge. Well development complete. Purged approximately 3 gal. Move to MW-10B.

1552 MW-10B DTW = 13.67 ft

$$TD = 72.70 \text{ ft}$$

$$\text{Well vol} = 0.0216 \times (72.7 - 13.67)$$

$$= 1.28 \text{ ft}^3$$

$$= 9.55 \text{ gal}$$

1600 Start purge

1629 Start collecting water quality parameters.

1636 Stop purge. Well development complete.

Purged ~ 36 gal.

1645. PT and TK depart site. End of day. (PT)

Clinton Engines

11/17/22 29

0700 PT and TK arrive at site. Cascade onsite. Mobilize to MW-14.

0722 MW-14 DTW = 11.37 ft bgs

$$TD = 60.34 \text{ ft bgs}$$

$$\text{Well vol} = 0.0216 \times (60.34 - 11.37)$$

$$= 1.06 \text{ ft}^3$$

$$= 7.91 \text{ gal}$$

0731 Start purge

0754 Start collecting water quality parameters.

0801 Stop purge. Well development complete. Purged approximately 30 gal. Move to MW-103. Water quality meter malfunctioning. Call Field Environment.

0825 MW-103 DTW = 16.04 ft

$$TD = 36.96 \text{ ft}$$

$$\text{Well vol} = 0.0216 \times (36.96 - 16.04)$$

$$= 0.45 \text{ ft}^3$$

$$= 3.38 \text{ gal}$$

0850 Start purge

0905 Start collecting water quality parameters. pH probe is still slightly jumpy.

0911 Stop purge. Well development complete. Purge approximately 21 gal. Move to MW-104

Rite in the Rain.

30 11/17/22

Clinton Engines

MW-104 DTW=19.29

TD=85.78

Well vol = $0.0216 \times (85.78 - 19.29)$ = 1.44 ft³

= 10.74 gal

0936 Start purge

1017 Start collecting water quality parameters

1059 Stop purge. Well development complete

Purged approximately 83 gal.

1100 Move to MW-13

1110 MW-13 DTW=6.69

TD = 42.51

Well vol = $0.0216 \times (42.51 - 6.69)$ = 0.77 ft³

= 5.79 gal

1119 Start purge. Flow ~ 0.5 gal/minute (gpm)

1146 Start collecting water quality parameters.
Water still murky.1205 Stop purge. Water parameters have
stabilized. Turbidity still overrange.
Break for lunch. Purged about 23.0 gal.

1235 Meet at MW-12

DTW=6.39 ft

TD = 44.6 ft

Well vol = $0.0216 \times (44.6 - 6.39) = 0.83 \text{ ft}^3$
= 6.17 gal

Clinton Engines

11/17/22 31

1257 Start purge. Flow ~ 0.5 gpm

1338 Start collecting water quality
parameters.1411 Stop purge. Development complete.
Purged approximately 37 gallons. Move to
MW-9, Daniel offsite.

1445 MW-9 DTW=14.71

TD = 53.89

Well vol = $0.0216 \times (53.89 - 14.71)$ = 0.85 ft³

= 6.36 gal

1450 Start purge. Flow ~ 0.75 gpm.

1528 Start collecting water quality parameters

1559 Stop purge. Well development complete.
Purged approximately 51.75 gal.

1605 Move to MW-4B.

1610 DTW=28.69 ft

TD=60.2 ft

Will purge about 5 more gallons and
collect parameters.

1615 Start purge

1622 Pump not working

1628 Pump back online.

1632 Pump not working. Going to try another

1645 pump tomorrow. PT and TK depart. (PT)
End of day.*Rite in the Rain*

32 11/18/22

Clinton Engines

- 0700 PT and TK arrive onsite, Meet Paul and Bill with Cascade at MW-101.
 MW-101 DTW = 24.4 ft
 TD = 128.15 ft
 Well Vol = $0.0216 \times (128.15 - 24.4)$
 $= 2.24 \text{ ft}^3$
 $= 16.76 \text{ gal}$
- 0757 Start pumping. Flow is ~1.5 gpm.
 0832 Collect water quality parameters.
 0841 Stop purging. Development complete. Purged approximately 66 gal. Move to MW-102.
 0900 MW-102 DTW = 63.23 ft
 TD = 136.79 ft
 Well vol = $0.0216 \times (136.79 - 63.23)$
 $= 1.59 \text{ ft}^3$
 $= 11.88 \text{ gal}$
- 0924 Start purging. Flow ~1.5 gpm
 0930 Pump stopped. Tubing likely popped off.
 0937 Purging resumes.
 0955 Collect water quality parameters.
 1002 Stop purge. Development complete. Purged approximately 46.5 gal. Move to MW-8B.

Clinton Engines

11/18/22 33

1029 MW-8B DTW = 13.56 ft
 TD = 52.79 ft

Will pump ~6 more gallon and try to collect parameters before well runs dry.

1045 Start purge. Flow ~ ~~0.6 gpm~~ ^(PT) 0.6 gpm

1056 Start collecting parameters.

1137 Stop purge. Development complete. Well ran dry. Purged approximately 31 gal for a total of 44 gal.

1145 Move to MW-4B.

1156 Start purging. Flow rate ~0.8 gpm. Collect water quality parameters.

1206 Stop purging. Well ran dry. Development complete but turbidity still high. Purged approximately 8 gal for a total of 25 gal.

1216 Break for lunch and prep for samplings

1240 Pick up supplies

1330 Set up sample train at MW-103.

1400 DTW = 16.04 ft without pump

1435 Sample MW-103.

1437 Break down equipment.

1447 Move to MW-14. ^(PT) MW-14.

1517 Setup complete. DTW = 11.69 ft with pump. Start purging

Rite in the Rain

34 11/18/22

Clinton Engines

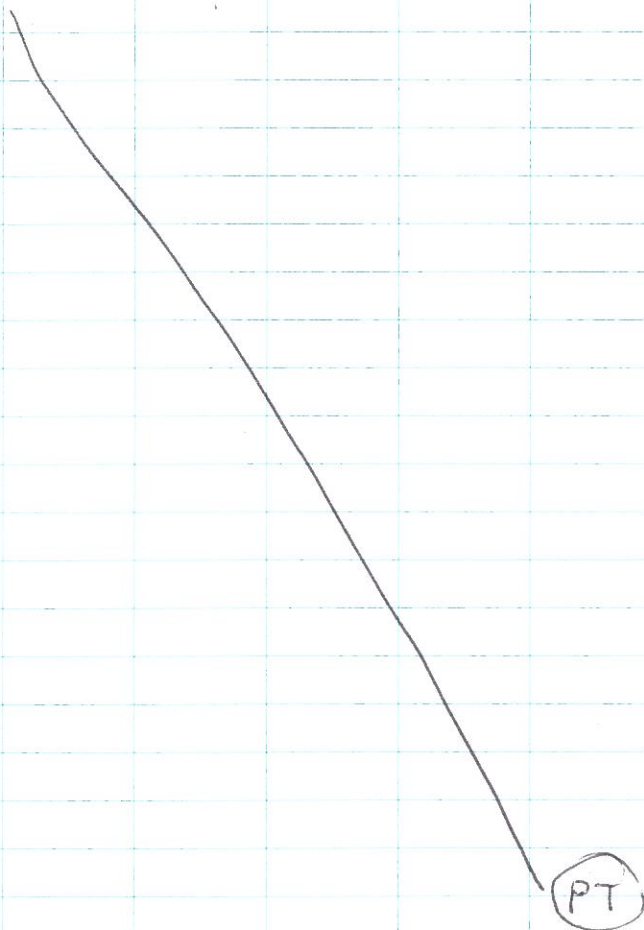
1526 Sample MW-14

1535 Move to MW-104. Setup.

1557 Setup complete. Start purging.

1615 Sample MW-104 + FB-111E2022

1630 Equipment broken down. Depart Maquoketa. End of day.



PT

Clinton Engines

11/19/22 35

0800 PT and TK arrive at site. Cascade took equipment offsite last night. All that remains is ~~waste~~ PT investigate derived waste (IDW). Mobilize to MW-102.

0805 Setup low flow.

0845 Setup complete. Start purging.

0900 Increase pressure using throttle knob. Water is not coming up.

0910 Water is purging.

0930 Sample MW-102

0940 Move to MW-101

0945 Setup low flow.

1004 Start purging.

1040 Sample MW-101.

1050 Move to MW-13 and setup.

1120 Start purging.

1145 Sample MW-13.

1200 Move to MW-12 and setup.

1240 Start purging.

1300 Sample MW-12

1310 Move to MW-9

1330 Start purging.

1352 Sample MW-9.

1400 Move to MW-11. Setup.

1430 Lines are freezing.

Rite in the Rain

36 11/19/22

Clinton Engines

- 1450 Line unfrozen. Purging.
 1505 Sample MW-11. Move to MW-4B
 1510 Setup at MW-4B
 1535 Start purging
 1555 Sample MW-4B.
 1600 Move to MW-6B and setup
 1610 Start purging
 1640 Sample MW-6B
 1650 Sample MW-6B-FD
 1700 Depart site. Stop to get supplies.
 1730 ~~End of day~~ (P) Sample FB-11192022.
 End of day.

(PT)

Clinton Engines

11/20/22 37

- 0700 PT and TK arrive at site. Set up low flow at MW-8B.
 0722 Start purging
 0740 Sample MW-8B
 0758 Move to MW-2B and set up.
 0815 Start purge.
 0850 Sample MW-2B
 0858 Move to MW-10A/B. Setup
 0915 Start purge at MW-10B
 0935 Sample MW-10B
 0940 Sample MW-10B-FD
 1000 Setup at MW-10A.
 1005 Equipment malfunction. Need to troubleshoot.
 1025 Break in line fixed. Purging.
 1045 Sample MW-10A
 1055 Move to MW-3B and setup
 1110 Start purge
 1125 Sample MW-3B.
 1135 Move to MW-1B and setup
 1150 Start purging
 1220 Sample MW-1B.
 1230 Samples complete. ~~Depart site.~~ (P)
 Sample FB-11202022 Depart site.
 1830 Arrive at office. End of day.

(PT) *Rite in the Rain*

12-14-22 Clinton Engineering

1545 - G. Jay & Tetra Tech on site

To collect sample from drums

1620 composited samples from
drums - MW-2B

MW-1B

MW-101

MW-11

MW-102

1630 - checked vol of soil
dumpster & photographed

- has

1635 - off-site

(62)

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-1B

Date Drilled (Start/Finish): 11/01/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 697.643

Total Depth: 58'

Coordinates: 42.065700, -90.658165

Depth to Water: 45'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-7'	16.3		Brown	1 foot of top soil; then brown, slightly silty clay. Becomes slightly soft near 7 feet.
	3.6		Brown	
	3	5	Brown	
	5.7		Brown	
7'-17'	1.2		Brown	Brown, soft, silty clay to 8 feet; then light brown, very soft, moist sandy clay to 15 feet; then black, medium grained sand with a pungent odor.
		10	Light Brown	
	14.5		Light Brown	
			Brown	
17'-37'		15		Light brown, soft, sandy clay at 17 feet.
	326.3		Brown	
			Light Brown	Very soft, moist, light brown with grey, medium grained sand with slight clay content; then pure, grey, medium grained sand with pungent odor to 23 feet; then very soft, very sandy clay to 27 feet.
			Light Brown w/ Grey	
	16.6			
	263.5	20	Light Brown w/ Grey	
	632.5		Grey	
			Grey	
	64.2		Grey	
	29.5	25		
	22		Grey	
	10.6			
	2.7		Light Brown	
	2.5	30	Light Brown	At 27 feet, light brown, slightly soft, silty clay. Slightly soft, silty clay becomes grey at 34 feet to 37 feet.

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-1B

Date Drilled (Start/Finish): 11/01/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 697.643

Total Depth: 57'

Coordinates: 42.065700, -90.658165

Depth to Water: 45'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	2		Light Brown	Described on previous page.
	1.6		Grey	
		35	Grey	
	1.4		Grey	
	0.8		Light Brown	
37'-57'	0.3	40	Light Brown	<p>Very sandy, very soft, moist clay, light brown in color.</p> <p>Section of wet, fine grained sand at 41 feet.</p> <p>Very sandy, very soft, wet clay to 47 feet with areas of pure sand, fine to medium grained.</p> <p>Wet, light brown with grey clay, very soft from 50 feet to 57 feet.</p> <p>Screen set from 52 feet to 42 feet.</p>
	0.8		Light Brown	
	0.4			
	1		Light Brown	
	0.4	45		
			Light Brown	
	1.6			
			Light Brown	
	0.9		Light Brown w/ Grey	
	0.6	50		
	0.4		Light Brown w/ Grey	
	1.3	55	Light Brown w/ Grey	
		60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-2B

Date Drilled (Start/Finish): 11/01/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 694.216

Total Depth: 58'

Coordinates: 42.065641, -90.657845

Depth to Water: 45'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-7'	0		Light Brown	1 foot of top soil; then light brown sand, soft, fine grained to 6 feet, then soft silty clay.
	0			
	0		Light Brown	
	0			
	0	5	Light Brown	
7'-17'	0		Brown	Light brown, soft, silty clay with grey and red streaks throughout.
	0			
	0		Light Brown w/ grey & Red	
	0	10		
	0		Light Brown w/ grey & Red	
17'-37'	0			Becomes very soft, sandy clay at 14 feet to 17 feet. Then a zone of very dark, medium grained sand near 17 feet.
	0			
	0		Light Brown w/ grey & Red	
	0	15		
	0			
	0		Light Brown	
	0.1		Dark Brown & Black	
		20	Dark Brown & Black	
	0.3		Light Brown	
		25	Light Brown	At 21 feet, light brown, fine grained sand to 25 feet, then slightly soft, light brown, silty clay to 34 feet.
			Light Brown	
			Light Brown	
		30	Light Brown	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-2B

Date Drilled (Start/Finish): 11/01/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 694.216

Total Depth: 58'

Coordinates: 42.065641, -90.657845

Depth to Water: 45'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	0.2		Light Brown	At 34 feet, soft, brown, silty clay becoming very light brown to grey near 37 feet.
			Light Brown	
		35	Brown	
	1.2		Brown	
37'-57'	0.1		Light Brown	Light brown, soft, silty clay to 39 feet. Then very soft, light brown sand, fine grained to 41 feet. Then sandy, very soft, light brown clay, moist to 45 feet where fine grained sandy layer is located. At 55 feet, very fine grained, greyish, light brown sand layer. Moist. Soft, silty clay at 57 feet. Screen set from 57 feet to 47 feet.
	1.3	40	Light Brown	
	1.1		Light Brown	
	3.5		Light Brown	
		45		
	3.9		Light Brown	
	4.4		Light Brown	
	8.8	50	Light Brown w/ Grey	
	6.7		Light Brown w/ Grey	
		55	Light Brown w/ Grey	
	18.3			
		60		
				Drilled to 58 feet; not logged.

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-3B

Date Drilled (Start/Finish): 11/03/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 699.182

Total Depth: 58'

Coordinates: 42.065353, -90.658166

Geologist: Thomas Kaley

Depth to Water: 17'

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-17'				Approximately 0'-11' No recovery
		5		
			Brown	
		10		
			Brown	
		15	Brown	
17'-37'	0		Brown	At 11 feet, brown, slightly hard, silty clay; appearing lighter brown near 17 feet.
	0		Light Brown	
	0.8	20	Light Brown	
	0		Light Brown	Light brown, wet, very sandy, very soft clay. Becoming fine grained and lightly compacted to 22 feet.
	0		Light Brown	
	0		Light Brown	
	0		Light Brown	Then, soft, slightly sandy clay to 25 feet.
	0	25	Light Brown	
	0.2		Light Brown	
	0.2		Grey w/ Light Brown	At 25 feet, two separate fine grained sand layers, then soft, silty clay to 27 feet.
	0.2	30		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-3B

Date Drilled (Start/Finish): 11/03/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 699.182

Total Depth: 58'

Coordinates: 42.065353, 90.658166

Depth to Water: 17'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	0.6		Grey w/ Light Brown	Soft silty, light brown and grey clay from 27 feet to 33 feet where prominent sand layer is seen, fine grained in appearance. Clay becomes sandy from 33 feet to 35 feet. A small, hard layer of silty clay, then becoming very soft to 37 feet.
	2			
	2.6	35	Grey w/ Light Brown	
	2.2			
	0.2		Light Brown	
37'-57'	0.6	40	Light Brown	<p>Soft, light brown, silty clay becoming sandy, very soft clay, remaining sandy to 44 feet then becoming soft, silty clay to 47 feet.</p> <p>At 50 feet, very soft, fine grained sand with slight clay content to 57 feet.</p> <p>At 57 feet, medium to coarse grained sand with small cobbles.</p> <p>Screen set from 57' to 47'</p>
	0.4		Light Brown	
	0			
	0.1		Light Brown	
	1	45		
	0.2		Light Brown	
	0.2		Light Brown	
	0.1	50	Light Brown	
	0.2		Light Brown	
	1.4		Light Brown	
		55		
	0		Light Brown	
		60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-4B

Date Drilled (Start/Finish): 10/31/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 702.532

Total Depth: 58'

Coordinates: 42.064924, -90.656009

Depth to Water: 17'; 48'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather:

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-7'	0		Dark Brown	Dark brown top soil with fill debris (nails, glass) to 2 feet. Then light brown, silty, soft clay to 7 feet.
	0			
	0		Light Brown	
	0			
	0	5	Light Brown	
7'-17'	0			Light brown, very soft, silty clay becoming sandy clay at 10 feet and interbedded sand clay layers to 12 feet. Then, light brown, soft, med grained sand to 15 feet becoming light brown, soft clay to 17 feet.
	0.2		Light Brown	
	0		Light Brown w/ Grey	
	0			
	0	10		
	0		Light Brown w/ Grey	
	0			
	0.8			
	0.6		Light Brown	
	0.9	15		
17'-37'	3.3		Light Brown	Light brown, soft sandy clay, becoming med to coarse grained sand from 19-22 feet. Then becoming grey with light brown, sandy clay, soft with interbedded silty layers that are hard from 22 feet to 29 feet. Clay is wet. Then becoming medium grained sand to 32 feet.
	2			
	0.3		Light Brown	
	1.9		Grey w/ Light Brown	
	4.9	20		
	2.7			
	6		Grey w/ Light Brown	
	8.2			
	6			
	0	25	Grey w/ Light Brown	
	0			
	0		Grey	
	0			
	0		Grey	
	0	30		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-4B

Date Drilled (Start/Finish): 11/03/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 699.182

Total Depth: 58'

Coordinates: 42.065353, -90.658166

Depth to Water: 17'; 48'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	0		Grey	Grey interbedded sandy and silty layers from 32 feet to 37 feet.
	0			
	0		Grey	
	0			
	0	35	Grey	
	0			
	0		Grey	
	0			
	0		Grey	
	0	40		
37'-57'	0		Grey	Grey, slightly soft, silty clay with cobbles imbedded within. Dry to 48 feet. Then medium to coarse grained, grey sand, wet to approximately 51 feet.
	0			
	0		Grey	
	0			
	0		Grey	
	0	45		
	0		Grey	Dry, slightly hard, grey, silty clay from 51 feet to 57 feet. Small cobbles imbedded within.
	0			
	0		Grey	
	0			
	0		Grey	
	0	50		
	0		Grey	Screen set from 57'-47'
	0			
	0		Grey	
	0			
	0		Grey	
	0	55		
	0		Grey	Drilled to 58 feet; not logged.
	0			
	0			
	0			
		60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-5B (Abandoned)

Date Drilled (Start/Finish): 10/31/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation:

Total Depth: 58'

Coordinates: 42.06550, -90.656355

Depth to Water: (no deeper water)

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather:

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-7'			Light Brown	1 foot of top soil, then 1 foot of asphalt fill debris with glass and metal. Below fill, fine grained, light brown sand to 7 feet. Non-compacted.
			Dark Brown	
		5	Dark Brown Light Brown	
			Brown	
7'-17'		10	Brown	Little to no recovery, very soft, very wet, brown, sandy clay.
			Brown	
		15	Brown	
			Brown	
17'-37'	0.1		Brown Light Brown	Light brown, fine to medium grained sand, non-compacted. Small cobbles in areas to 22 feet.
		20	Light Brown	
	2		Light Brown	Soft, silty, light brown clay becoming slightly soft at 25 feet, then becoming fully grey in color near 37 feet.
		25	Light Brown w/ Grey	
	0.1 0 0		Grey	Clay also becomes slightly hard at 28 feet to 30 feet.
		30		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-5B (Abandoned)

Date Drilled (Start/Finish): 10/31/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation:

Total Depth: 58'

Coordinates: 42.06550, -90.656355

Depth to Water: (no deeper water)

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather:

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	0		Grey	Small cobbles within the clay to 37 feet. Clay is dry to 37 feet.
	0			
	0		Grey	
	0			
	0	35	Grey	
	0			
	0		Grey	
	0		Brown	
	0			
	0	40	Brown	
37'-57'	0		Brown	Brown, slightly compacted, silty clay. Slightly hard to hard. Small cobbles imbedded within.
	0			
	0		Brown	
	0			
	0		Brown	
	0	45		
	0		Light Brown	Becomes light brown in color near 50 feet and becomes very hard to 54 feet, then hard to 57 feet. Small cobbles present.
	0			
	0		Light Brown	
	0			
	0	50	Light Brown	
	0			
	0		Light Brown	No water bearing zone found at desired depth. Well boring plugged and abandoned.
	0			
	0		Light Brown	
	0			
	0	55		
	0		Light Brown	
	0			
	0			
	0			
	0	60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-6B

Date Drilled (Start/Finish): 11/01/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 700.454

Total Depth: 57'

Coordinates: 42.065451, -90.656849

Depth to Water: 46'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-7'	0.3		Light Brown	1.5 feet top soil, light brown, silty clay becoming brown fill material; then dark brown clay mixed with fill.
	0.3			
	0.3		Light Brown	
	0.3		Brown	
	0.3	5		
7'-17'			Dark Brown	Brown, silty clay, slightly soft becoming soft at 10 feet. Very soft from 10 to 14 feet with sand content increasing in clay at 14 feet. 14 to 17 feet - very sandy clay, very soft, light brown fine grained sand. Pure sand at bottom, approximately 0.5 feet.
	2.4			
	1.1		Brown	
	1.8			
	2.1	10	Light Brown	
	1			
	1		Light Brown	
	1			
	2.3		Light Brown	
	1.1	15		
17'-37'	1.6		Light Brown	Light brown, very soft, very sandy clay becoming pure sand at 22 feet to 23 feet where it abruptly becomes soft, light brown, silty clay with small cobbles within. Hardening to slightly soft from 23 to 30 feet.
	1.3			
	4.6		Light Brown	
	5.5			
		20	Light Brown	
	9.1			
			Light Brown	
	6.8			
			Light Brown	
	3.8	25		
			Light Brown	
	0.1		Light Brown	
	0			
	0	30	Light Brown	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-6B

Date Drilled (Start/Finish): 11/01/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 700.454

Total Depth: 57'

Coordinates: 42.065451, -90.656849

Depth to Water: 46'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	4.3		Light Brown	Light brown, silty clay becomes slightly hard at 32 feet to 35 feet; then hard to the bottom. Small cobbles remain throughout.
			Light Brown	
		35	Light Brown	
			Light Brown	
			Brown	
			Light Brown	
		40	Brown	
			Light Brown w/ Grey	
			Light Brown w/ Grey	
		45		
37'-57'			Light Brown w/ Grey	Becomes grey in color at 49 feet. Hard, silty clay with small cobbles to approximately 53 feet.
		50	Light Brown w/ Grey	Weathered bedrock at 53 feet to 55, then tan bedrock to 57 feet.
			Tan	Hole plugged back and screen set from 51 feet to 41 feet
		55	Tan	
			Tan	
		60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-8B

Date Drilled (Start/Finish): 11/02/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 691.73

Total Depth: 57'

Coordinates: 42.065837, -90.657810

Depth to Water: 39'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-7'	0		Brown	Top soil becoming brown, dry, silty clay, crumbly to 4 feet, then becoming soft. At six feet, light brown, slightly hard clay, silty.
	0			
	0		Brown	
	0			
	0	5	Brown	
7'-17'	0		Dark Brown	Light brown, wet, silty clay becoming grey moist, slightly sandy clay at 8 feet.
	0.6		Light Brown	
	0.7		Light Brown w/ Grey	
	2.1	10		
	5.7		Light Brown w/ Grey	
17'-37'	198.4	15	Light Brown w/ Grey	Clay becomes fine grained sand, with coarser and finer lenses to 17 feet. Clay lenses can be seen periodically.
	61.7			
	3.4		Brown	Brown, medium grained sand, wet to 21 feet, then soft, light brown, silty clay with lenses of sand within.
	2.4	20	Brown	
			Light Brown	
	0.5		Light Brown	
	4			
	0.6	25	Light Brown w/ Grey	Clay becomes slightly soft at 25 feet, small cobbles within. Clay begins to show grey streaks at 25 feet.
	1.3			
			Light Brown	
	2.7			
	3.7	30	Light Brown	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-8B

Date Drilled (Start/Finish): 11/02/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 691.73

Total Depth: 57'

Coordinates: 42.065837, -90.657810

Depth to Water: 39'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	6.2		Brown w/ Grey	Brown, silty clay, soft becoming fully grey at 34 feet and very soft.
	9.5		Brown w/ Grey	
	5.7	35	Grey	
	28.5		Light Brown w/ Grey	
	15.8	40	Light Brown w/ Grey	Very soft, moist, light brown with grey, sandy clay. Remaining to 47 feet. Some zones with very sandy clay. Very wet zone at 39 feet.
	13.3		Light Brown w/ Grey	
	16.4		Light Brown w/ Grey	
	9.5	45	Grey w/ Light Brown	
	5.4		Grey w/ Light Brown	
	5.3		Grey w/ Light Brown	
37'-57'	4.8	50	Grey w/ Light Brown	Sandy clay continues to 53 feet where it becomes more grey and becomes slightly less sandy and soft.
	21.5		Grey w/ Light Brown	Sandy clay becomes fully grey at 55 feet and remains slightly sandy and is slightly hard at 57 feet.
	12.6		Grey	
	32.2	55	Grey	Screen set from 53 feet to 43 feet.
			Grey	
			Grey	
		60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-09

Date Drilled (Start/Finish): 11/04/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 694.122

Total Depth: 57'

Coordinates: 42.065887, -90.659389

Depth to Water: 39'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Overcast with rain

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-5'			Light Brown	Hand cleared to 5 feet, 6 inches of pavement. Soil removed was light brown, silty clay with a slight sand content.
			Light Brown	
		5	Light Brown	
5'-17'	0		Light Brown	Light brown, slightly sandy clay becoming sandy clay at 9 feet remaining soft to 17 feet. At 14 feet, very sandy clay becoming fine grained sand from 15 feet to 16 feet then very sandy clay at 17 feet.
	0		Light Brown	
	0		Light Brown	
	0		Light Brown	
	0	10	Light Brown	
	0		Light Brown	
	0		Light Brown	
	0		Light Brown	
	0	15	Light Brown	
	0		Light Brown	
	0		Light Brown	
	0	20	Light Brown	
17'-37'	0		Light Brown	Light brown, sandy clay from 17 feet to 18 feet, then light brown, fine to medium grained sand, slightly moist to 21 feet. Then light brown, slightly soft, silty clay with slight sand content in some places. Clay becomes soft near 27 feet. Clay becomes grey near 30 feet with a small sandy zone, slightly tan in color.
	0		Light Brown	
	0		Light Brown	
	0	25	Light Brown	
	0		Light Brown	
	0		Light Brown	
	0		Light Brown	
	0		Light Brown	
	0		Light Brown	
	0	30	Light Brown	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-09

Date Drilled (Start/Finish): 11/04/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 694.122

Total Depth: 57'

Coordinates: 42.065887, -90.659389

Depth to Water: 39'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Overcast with rain

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	0		Light Brown	At 31 feet, light brown, sandy clay becoming grey, silty clay near 32 feet. Then becoming very sandy clay and pure, light brown sand to 35 feet before becoming soft, light brown sandy clay to 37 feet.
	0		Grey	
	0			
	0		Grey	
	0	35	Light Brown	
	0			
	0		Light Brown	
	0			
	0		Light Brown	
	0			
37'-57'	0	40		Medium to coarse grained, sand with cobbles becoming very sandy, reddish clay. At 39 feet, reddish brown sand, medium to coarse grained with cobbles.
	0		Reddish Brown	Small six inch section of grey, sandy clay, slightly silty, wet; then large section of reddish brown sand, coarse grained with cobbles. Several feet lost during extraction of sand layer. Sand layer approximately from 40 feet to 51 feet bgs.
	0		Grey	
	0		Reddish Brown	
	0	45		
	0		Reddish Brown	
	0			
	0		Reddish Brown	
	0			
	0	50		
	0		Reddish Brown	
	0		Grey	At 52 feet, grey, hard, slightly sandy, silty clay. Remaining to 55 feet and brown in color. Then 55 to 57 feet bgs, tan extremely fine grained, soft sand or silt with large cobbles of weathered bedrock at 57 feet.
	0		Grey	
	0		Brown	
	0	55		
	0		Tan	
	0		Tan	
				Screen set from 56 feet to 46 feet.
		60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-10A

Date Drilled (Start/Finish): 11/02/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 689.911

Total Depth: 58'

Coordinates: 42.066156, -90.658485

Depth to Water: 54'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-17'	0		Brown	See MW-10B log for description
	0			
	0		Brown	
	0.1			
	0	5	Brown	
	0		Light Brown w/ Grey	
	0			
	0		Light Brown w/ Grey	
	0	10		
	1.2		Light Brown w/ Grey	
17'-37'		15	Light Brown w/ Grey	See MW-10B log for description
	2.4			
	0.2		Light Brown	
	0.2			
	0.2	20	Light Brown	
	0.3			
			Light Brown Grey	
	0.2	25	Grey	
			Light Brown	
	0.7		Light Brown	
	0	30	Light Brown	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-10A

Date Drilled (Start/Finish): 11/02/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 689.911

Total Depth: 58'

Coordinates: 42.066156, -90.658485

Depth to Water: 54'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	0		Light Brown	See MW-10B log for description
	0			
	0		Light Brown	
	0			
	0	35	Light Brown	
	0			
	0		Light Brown	
	0		Grey	
	0			
	0	40	Grey	
37'-57'	0		Light Brown	<p>See MW-10B log for description</p> <p>Screened from 57 feet to 47 feet.</p>
	0			
	0		Light Brown	
	0			
	0		Light Brown	
	0			
	0	45	Light Brown	
	0			
	0		Light Brown	
	0			
	0		Light Brown	
	0			
	0	50		
	0			
	0		Very Light Brown	
	0			
	0			
	0			
	0	55	Very Light Brown	
	0			Drilled to 58 feet; not logged.
		60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-10B

Date Drilled (Start/Finish): 11/02/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 689.962

Total Depth: 78'

Coordinates: 42.066156, -90.658459

Depth to Water: 54'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-7'	0		Brown	Brown topsoil becoming brown, slightly hard, silt clay. Then, becoming light brown, silty clay with grey at 5 feet to 7 feet. Clay is slightly soft at 7 feet.
	0			
	0		Brown	
	0			
	0	5	Brown	
7'-17'	0		Light Brown w/ Grey	Soft, light brown, silty clay becoming light brown with grey, sandy clay at 9 feet. Clay is moist and becomes very soft at 12 feet. Sand content increases until 16 feet where pure, light brown, medium to fine grained sand layer before sandy clay resumes at 17 feet.
	0			
	0		Light Brown w/ Grey	
	0	10		
	2.3		Light Brown w/ Grey	
	3.2			
	2	15	Light Brown w/ Grey	
	1.4			
	0.5		Light Brown	
	2	20	Light Brown	
17'-37'	5.4		Light Brown Grey	Light brown, soft, sandy clay becoming non-compacted, light brown, medium grained sand. Moist.
	1.6			
		25	Grey	Then becoming grey, soft, silty clay hardening to slightly hard at 27 feet.
	2		Light Brown	
	1.6			Remaining silty to 31 feet then becoming soft, sandy, light brown clay.
			Light Brown	
	0.9			
	0.8	30	Light Brown	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-10B

Date Drilled (Start/Finish): 11/02/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 689.962

Total Depth: 78'

Coordinates: 42.066156, -90.658459

Depth to Water: 54'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	0.7		Light Brown	Soft, light brown clay. Sandy becoming silt clay at 35 feet and then light brown, fine grained sand at 37 feet.
	1.6		Light Brown	
	1.3	35	Light Brown	
	0.3		Light Brown	Light brown sand becoming light brown, sandy clay, soft then small layer of dry, slightly hard, silty clay at 39 feet.
	2.4		Grey	
	5.5	40	Grey	
37'-57'	1.4		Light Brown	From 40 feet, med to fine grained sand with large cobbles to 41 feet, then soft, sandy clay, moist to 46 feet, then slightly soft, silty clay.
	0.4		Light Brown	
	10.5	45	Light Brown	
	25.6		Light Brown	Light brown, soft, silty clay to 50 feet, then very light brown, slightly sandy, silty clay, very soft in some areas to 54 feet.
	3.1		Light Brown	
	8.1	50	Very Light Brown	
57'-77'	2.6		Very Light Brown	At 54 feet, layer of wet fine grained sand becoming very sandy clay to 57 feet.
	3.2			
	2.5	55		
	12.7			Light brown, very soft, wet, very sandy clay to 61 feet.
	1.6			
	3.3	60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-10B

Date Drilled (Start/Finish): 11/02/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 689.962

Total Depth: 77'

Coordinates: 42.066156, -90.658459

Depth to Water:

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
57'-77'	4.1		Light Brown	At 61 feet, very soft, wet, light brown, sandy clay with two separate coarse grained sand layers at 61 feet to 62 feet then wet, very sandy clay, very soft to 70 feet.
	1.6		Light Brown	
	2.3	65	Light Brown	
	2.1		Light Brown	
	1.9		Light Brown	
	0.5	70	Light Brown	A 70 feet, fine to medium grained sand with small cobbles, non-compacted to 73 then sand with weathered bedrock.
	0.4		Light Brown	
		75	Tan	At 75 feet, bedrock. Hole plugged back and screen set from 73 feet to 63 feet.
			Tan	
		80		
		85		
		90		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-11

Date Drilled (Start/Finish): 10/31/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 699.307

Total Depth: 57'

Coordinates: 42.065043, -90.655520

Depth to Water: 37'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-17'	4.1		Brown	Fill and debris material just below surface with glass mixed within loose clay.
			Brown	
		5	Brown	
			Brown	
			Brown	
	10		Light Brown	Becoming light brown, slightly hard, silty clay at 10 feet becoming sandy clay to 17 feet.
			Light Brown	
			Light Brown	
		15	Light Brown	
			Light Brown	
17'-37'	0.2		Light Brown	Light brown, soft, silty clay with small cobbles within becoming slightly hard at 19 feet and increased sand content to 24 feet, then grey, slightly soft, silty clay with small cobbles to 27 feet.
		20	Light Brown	
	0.3		Light Brown	
			Light Brown	
	0.4		Grey	
			Grey	
	0.5	25	Grey	
			Grey	
	0.6		Grey	
			Grey	
	0.1		Grey	Slightly soft, grey, silty clay with small cobbles within.
		30	Grey	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-11

Date Drilled (Start/Finish): 10/31/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 699.307

Total Depth: 57'

Coordinates: 42.065043, -90.655520

Depth to Water: 37'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	0.2		Grey	Becomes slightly hard near 33 feet, cobbles remain to 37 feet. Last 0.5 feet has wet zone, previous sections dry.
	0.2		Grey	
	0.2	35	Grey	
	0.2		Grey Grey	
37'-57'		40	Grey	Grey, silty clay, slightly hard with small cobbles becoming sandy clay at 39 feet.
	0.2		Grey	
	0.2		Grey w/ Light Brown	
	0.2		Grey w/ Light Brown	
	0.2	45	Grey w/ Light Brown	Alternating layers of sandy clay and silty clay to 43 feet, then medium grained sand, grey and soft, wet to 46 feet with silty clay, hard cap before final 0.5 feet of cap becomes medium grained sand.
	0.3		Grey w/ Light Brown	
	0.3		Grey w/ Light Brown	
	0.2		Grey w/ Light Brown	
	0		Grey w/ Light Brown	Slight clay content in sand to 48 feet. Then silty, slightly hard to hard clay with larger cobbles throughout small section of hard, compacted, medium grained sand at 52 feet, then previously described grey clay to 57 feet.
	0	50	Grey	
	0		Grey	
	0		Grey	
	0		Grey	Screened from 40' to 50 feet.
	0	55	Grey	
	0		Grey	
	0		Grey	
		60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-12

Date Drilled (Start/Finish): 11/04/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 684.776

Total Depth: 62'

Coordinates: 42.067338, -90.659332

Depth to Water: 17'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-7'			Light Brown	Hand cleared to 5 feet. Pavement was 6 inches, small layer of fine grained sand, then dark brown, moist, silty clay.
			Light Brown	
		5	Dark Brown	
	0.3		Dark Brown	
7'-17'	0.1		Dark Brown	Dark brown silty clay, soft.
	0.2	10	Brown	
	2.8		Light Brown	
		15	Light Brown	
17'-37'	0.2		Light Brown	Slightly hard, light brown, silty clay to 17 feet.
	0		Light Brown	
	0	20	Light Brown	Light brown, slightly hard, silty clay to 22 feet, then wet, light brown, very sandy clay becoming fine grained sand at 23 feet becoming tan, medium grained sand to 26 feet with small cobbles within.
	0		Light Brown	
	0.3		Light Brown	
	0.6		Light Brown	
		25	Light Brown	At 27 feet, grey, tightly packed, slightly soft, silty clay. Grey, slightly soft clay remains to 35 feet.
	0.7		Tan	
	1.5		Grey	
	0.2	30	Grey	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-12

Date Drilled (Start/Finish): 11/04/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 684.776

Total Depth: 62'

Coordinates: 42.067338, -90.659332

Depth to Water: 17'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	0		Grey	At 35 feet, small zone of light brown sand, fine grained and very sandy clay, then becoming soft, grey, silty clay to 37 feet.
	0			
	0		Grey	
	0			
	0	35	Light Brown w/ Grey	
	0			
	0.2			
	1.2		Grey	
	2.9	40	Grey	
	4.8			
37'-62'			Grey Tan	Grey hard, silty clay with small cobbles seen periodically. At 40 feet, sandy, soft, grey clay.
	0.5	45	Tan	At 41 feet, grey and tan, fine grained, slightly moist sand to 45 feet.
	0.7		Tan Grey	
	1.4	50	Grey	At 45 feet, slightly hard, grey, tightly packed, silty clay with small cobbles periodically.
			Grey	
			Grey	This clay continues to 62 feet, with harder zones throughout.
	2.2	55	Grey	
	0.7		Grey	Hole plugged back and screen set from 45 feet - 35 feet.
			Grey	
	0.2			
	0.3	62	Grey	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-13

Date Drilled (Start/Finish): 11/03/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 680.659

Total Depth: 44'

Coordinates: 42.067694, -90.656657

Depth to Water: 10'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Cloudy

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-7'			Light Brown	Hand cleared to 7 feet. Brown and light brown, sandy clay, moist with small amounts of soft, silty clay.
			Light Brown	
		5	Dark Brown	
			Dark Brown	
7'-17'	0		Dark Brown	Light brown, sandy clay, very soft to 10 feet
	0		Dark Brown	
	0	10	Brown	
	0		Light Brown	
17'-41'	0		Light Brown	Wet fine to medium grained sand with cobbles in areas.
	0		Light Brown	
	0	15	Light Brown	
	0		Light Brown	
	0		Light Brown	Becomes coarse grained near 17 feet.
	0		Light Brown	
	0	20	Light Brown	
	0		Light Brown	
	0.1		Light Brown	Light brown, medium to fine grained, sand, wet with small cobbles periodically to 24 feet.
	0.3	25	Light Brown	
	0.1		Tan	
	1.5		Grey	
	0.2	30	Grey	Soft, grey, silty clay becoming slightly hard at 35 feet

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-13

Date Drilled (Start/Finish): 11/03/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 680.659

Total Depth: 44'

Coordinates: 42.067694, -90.656657

Depth to Water: 10'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Cloudy

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-41'	0		Grey	Tightly packed, grey clay, slightly hard from 35 feet to 37 feet.
	0			
	0		Grey	
	0			
	0	35	Grey	
	0			
	0		Grey	
	0			
	0		Grey	
	0	40		
41'-44'	0		Grey	At 41 feet, small zone of wet, fine grained sand.
	0			Wet, grey, fined grained sand with very sandy clay layers.
	0		Grey	
	0			Screen set from 33'-43'
	0			
		45		
		50		
		55		
		60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-14

Date Drilled (Start/Finish): 11/03/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 679.566

Total Depth: 61'

Coordinates: 42.069363, -90.650758

Depth to Water: 8'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Partly Cloudy

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-17'	0		Dark Brown	Dark brown topsoil becoming slightly soft, silty clay at 3 feet becomes slightly hard, light brown, silty clay. At 5 feet, clay becomes slightly soft, fine grained, sandy clay.
	0		Brown	
	0			
	0		Brown	
	0	5	Light Brown	
	0			At 8 feet, soft, wet, fine to medium grained sand to 17 feet, slightly darkening near 17 feet.
	0		Light Brown	
	0			
	0	10	Light Brown	
	0		Light Brown	
17'-37'	0			Wet, coarse grained sand with large cobbles within becoming very soft, wet, medium to fine grained, very sandy clay to 22 feet.
	0		Light Brown	
	0		Light Brown	
	0	15	Light Brown	
	0		Light Brown	
	0		Light Brown	At 22 feet, wet, medium to fine grained sand with small cobbles in areas becoming fine grained at 30 feet.
	0	20	Light Brown	
	0		Light Brown	
	0		Light Brown	
	0	25	Light Brown	
	0		Light Brown	
	0		Light Brown	
	0		Light Brown	
	0	30		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-14

Date Drilled (Start/Finish): 11/03/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 679.566

Total Depth: 61'

Coordinates: 42.069363, -90.650758

Depth to Water: 8'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Partly Cloudy

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
17'-37'	0		Light Brown	At 31 feet, grey colored, medium grained sand becoming light brown again and fine grained sand to 37 feet with slight clay content.
	0			
	0		Grey	
	0		Light Brown	
	0	35		
	0		Light Brown	
	0			
	0		Light Brown	
	0		Grey	
	0	40		
37'-39'	0			Sluff into barrel, medium to fine grained sand.
	0			
	0			
	0			
	0			
	0			
	0			
	0			
	0			
	0			
39'-61'	0		Grey	Grey, wet, medium grained sand, slight clay content. Becoming very sandy clay at 40 feet, soft, wet, remaining to 47 feet. At 47 feet, wet, medium grained to fine grained, grey sand to 53 feet. Then soft, sandy clay to 55 feet where small layer of medium grained sand is seen then sandy clay for 1 foot then another sand layer at 59 feet with silty clay, slightly hard at 61 feet. Screen set from 50'-60'
	0			
	0.1		Grey	
	0.1			
	0.2	45	Grey	
	0			
	0		Grey	
	0			
	0		Grey	
	0	50		
	0		Grey	
	0			
	0		Grey	
	0			
	0	55	Grey	
	0			
	0		Grey	
	0			
	0		Grey	
	0	61		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-101

Date Drilled (Start/Finish): 10/27/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 702.894

Total Depth: 128'

Coordinates: 42.066425, -90.662962

Depth to Water: 117'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-5'			Dark Brown	Hand cleared to 5 feet, 1 foot of pavement. Dark brown fill dirt. Slightly moist, silty clay. Becoming light brown, silty clay at 5 feet.
			Dark Brown	
5'-7'		5	Light Brown	Light brown, silty clay
			Light Brown	
7'-17'		10	Light Brown	Moist, very soft, light brown, silty clay
			Light Brown	
17'-27'		15	Light Brown	Light brown, soft moist, silty clay to 21 feet, then becoming medium grained, moist, sandy clay.
			Light Brown	
27'-37'		20	Light Brown	Reddish clay with grey sand, soft with small cobbles, slightly moist.
			Light Brown	
		25	Light Brown	
			Red Streaks w/ Grey	
		30	Red Streaks w/ Grey	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-101

Date Drilled (Start/Finish): 10/27/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 702.894

Total Depth: 128'

Coordinates: 42.066425, -90.662962

Depth to Water: 117'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
27'-37'			Light Brown	Light brown, silty clay, soft, slightly moist. Slight orange tint, small cobbles within becoming brown at 35 feet with large cobbles within the sand.
			Light Brown	
		35	Light Brown	
			Brown	
37'-47'			Brown	Brown, sandy clay, moist to 40 feet.
		40	Reddish Brown	
			Reddish Brown	
		45	Light Brown	
47'-57'			Light Brown	Reddish brown coarse to medium grained sand with small cobbles to 42 feet then clay with sand and silt to 45 feet with light brown medium grained sand to 47 feet.
			Light Brown	
		50	Light Brown	
			Light Brown	
57'-67'			Light Brown	Light brown, coarse to medium grained sand with small cobbles to 51 feet, slightly moist
			Light Brown	
		55	Light Brown	
			Light Brown w/ Grey	
57'-67'			Light Brown w/ Grey	Becoming silty, light brown clay with grey streaks, soft sand content to 57 feet.
		60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-101

Date Drilled (Start/Finish): 10/27/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 702.894

Total Depth: 128'

Coordinates: 42.066425, -90.662962

Depth to Water: 117'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
57'-67'			Brown	Sandy, brown, very soft clay with medium sized cobbles within becoming light brown, silty clay, soft, somewhat dry becoming slightly soft, silty clay near 65 feet with zones of grey within.
			Light Brown	
		65	Light Brown	
67'-77'			Light Brown w/ Grey	Light brown, medium grained sand, moist with red streaks. Zones with finer grained sand, soft becoming more dry near 77 feet.
			Light Brown w/ Red Streaks	
		70		
			Light Brown w/ Red Streaks	
77'-87'		75	Light Brown w/ Red Streaks	Light brown reddish, medium grained sand, soft, slightly moist to 87 feet then becoming very fine grained with slight clay content.
			Reddish Light Brown	
		80		
			Reddish Light Brown	
87'-97'		85	Reddish Light Brown	
			Reddish Light Brown	
		90	Reddish Light Brown	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-101

Date Drilled (Start/Finish): 10/27/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 702.894

Total Depth: 128'

Coordinates: 42.066425, -90.662962

Depth to Water: 117'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
87'-97'			Light Brown	Medium to coarse grained sand, moist, soft, non-compacted. Light brown with reddish hue near 87 feet becoming light brown after. Coarse near 95 feet becoming finer at 97.
			Light Brown	
		95	Light Brown	
			Light Brown	
97'-107'			Tan	Light brown, medium to coarse grained sand. Slightly moist. Low compaction zone of tan sand near 99 feet.
		100		
			Light Brown	
			Light Brown	
		105	Light Brown	
			Light Brown	
			Light Brown	
			Light Brown	
107'-117'		110	Light Brown	Coarse grained sand, brown, little to no compaction, moist. Becomes fine grained with clay at 114 feet then large cobbles. Possible weathered bedrock present within brown, silty clay.
			Light Brown	
			Light Brown	
		115	Brown w/ Grey	
117'-127'			Brown w/ Grey	
			Brown w/ Grey	
		120		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-101

Date Drilled (Start/Finish): 10/27/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 702.894

Total Depth: 128'

Coordinates: 42.066425, -90.662962

Depth to Water: 117'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
117'-127'			Grey and Tan	Grey and tan fossiliferous dolomite, water bearing. Chert veins within. Very cherty, siliceous at 127 to 128 feet.
			Grey and Tan	
		125	Grey and Tan	
			Grey and Tan	
		130		
		135		
		140		
		145		
		150		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-102

Date Drilled (Start/Finish): 10/29/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 744.677

Total Depth: 137'

Coordinates: 42.062868, -90.658521

Depth to Water: 127'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-7'			Brown	Topsoil 1 foot, brown soil. Light brown, silty clay, soft, dry.
			Light Brown	
			Light Brown	
		5	Light Brown	
7'-17'			Light Brown	Light brown, silty clay. Slightly soft, very dry from 10 feet to 17 feet.
			Light Brown	
		10	Light Brown	
			Light Brown	
17'-27'			Light Brown	Same as previous interval, dry throughout.
			Light Brown	
		15	Light Brown	
			Light Brown	
27'-37'			Light Brown	
		20	Light Brown	
			Light Brown	
		25	Light Brown	
			Light Brown	
		30	Light Brown	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-102

Date Drilled (Start/Finish): 10/29/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 744.677

Total Depth: 137'

Coordinates: 42.062868, -90.658521

Depth to Water: 127'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
27'-37'			Light Brown	Light brown, silty clay. Soft and dry to 36 feet. At 36 feet, reddish brown sand, fine grained, not well compacted. Small rounded cobbles within.
			Light Brown	
		35	Light Brown	
37'-47'			Red Brown	Light brown, fine grained sand. Small cobbles within. Zones with higher compaction and large areas with no compaction. Areas with high compaction have more cobbles cemented within. Higher silt in those zones.
			Light Brown	
		40	Light Brown	
			Light Brown	
		45	Light Brown	
			Light Brown	
47'-57'		50	Grey	Compacted, fine grained sand becoming grey to tan, sandy clay becoming slightly hard to 53 feet then light brown sand, not well compacted.
			Grey Light Brown	
		55	Light Brown	
57'-67'			Light Brown	
		60	Light Brown	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-102

Date Drilled (Start/Finish): 10/29/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 744.677

Total Depth: 137'

Coordinates: 42.062868, -90.658521

Depth to Water: 127'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
57'-67'			Light brown w/ Grey	Sandy clay, slightly hard, light brown with grey streaks becoming softer near 60 feet. At 60 feet, soft, tan, medium grained sand to 63 feet, then hard, grey clay, silty, dry then tan sand at 67 feet.
			Tan	
		65	Tan	
			Grey Tan	
67'-77'			Light Brown w/ Grey	Tan sand, medium grained becoming silty clay at 68 feet. Slightly hard with sand varve at 69 feet becoming slightly sandy clay with non-compacted sand, medium grained, tan at 70 feet. Then light brown, silty clay, slightly soft to slightly hard, becoming grey in color to 76 feet becoming sandy clay, light brown at 77 feet.
		70	Tan Light Brown	
			Grey	
		75	Grey	
77'-87'			Light Brown w/ Grey	Grey, silty clay, slightly soft becoming brown with streaks of red to 80 feet then reddish brown, medium grained sand transitioning into brown, slightly coarse sand with rounded pebbles within to 81 feet then slightly sandy clay transitioning into light brown, silty clay, dry, slightly hard with small cobbles within becoming light brown, slightly soft clay for final 2 feet to 87 feet.
		80	Brown	
			Red Brown Brown	
		85	Light Brown	
87'-97'			Light Brown	
		90	Light Brown	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-102

Date Drilled (Start/Finish): 10/29/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 744.677

Total Depth: 137'

Coordinates: 42.062868, -90.658521

Depth to Water: 127'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
87'-97'			Light Brown	Light brown, sandy clay, slightly hard becoming coarse grained, brown sand with large cobbles within at 89 feet transitioning into light brown, medium grained sand to 92 feet. Becoming light brown, sandy clay, slightly soft with grey streaks. Slightly moist with more sand content near 97 feet.
			Brown	
			Light Brown	
		95	Light Brown	
97'-107'			Light Brown w/ Grey Streaks	Very sandy clay for first foot. Light brown, soft, becoming medium grained, light brown sand. Somewhat compacted. Moist. Becoming coarse grained, light brown with tan sand at 101 feet to 107 feet with large cobbles within. Moist and not well compacted.
			Light Brown	
		100	Light Brown	
			Light Brown	
			Light Brown	
		105	Light Brown	
107'-117'			Light Brown	Light brown, medium grained sand with cobbles within becoming large abundant cobbles to 117 feet. Sand is moist to 110 feet. Zones of coarser sand to 117 feet becoming brown with tan at 110 feet.
			Light Brown	
		110	Light Brown	
			Brown and Tan	
		115	Brown and Tan	
117'-127'			Brown and Tan	
		120	Brown and Tan	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-102

Date Drilled (Start/Finish): 10/29/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 744.677

Total Depth: 137'

Coordinates: 42.062868, -90.658521

Depth to Water: 127'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
117'-127'			Light Brown	Light brown, silty clay. Soft to 119 feet then weathered bedrock with clay.
			Light Brown	
		125	Light Brown	122', bedrock was encountered. Slightly fossiliferous, not very vuggy.
			Light Brown	
127'-137'			Light Brown	
		130	Tan	Very vuggy, fossiliferous, water-bearing bedrock from 127 feet to 135 feet, light brown and tan in color.
			Tan	
			Tan	Screen set from 125 feet to 135 feet.
		135	Tan	
		140		
		145		
		150		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-103

Date Drilled (Start/Finish): 10/25/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 680.185

Total Depth: 38'

Coordinates: 42.070040, -90.647624

Depth to Water: 27'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-7'			Brown	Brown, sandy topsoil Brown sand, medium grained Brown sand, medium grained Light brown sand, medium grained Light brown sand, medium grained Light brown sand, medium grained, slightly wet
			Brown	
			Light Brown	
		5	Light Brown	
			Light Brown	
7'-17'			Light Brown	Brown sand, medium grained, wet. Increasing clay content, rocks cobbles throughout, soft Fine sandy clay, soft, wet
			Light Brown	
		10	Brown	
			Brown	
			Brown	
17'-27'		15	Light Brown	Brown sand, medium grained becoming fine grained at 19 feet, cobbles, slight clay content, slightly wet.
			Light Brown	
			Brown	
		20	Light Brown	
			Tan	
27'-37'			Tan	Top of bedrock at 21 feet, vuggy dolomite with sand, slight carbonate fizz with acid.
		25	Tan	
			Tan	
			Tan	Large fossiliferous rock, tan dolomite, water-bearing, porous, cherty.
		30	Tan	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-103

Date Drilled (Start/Finish): 10/25/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 680.185

Total Depth: 38'

Coordinates: 42.070040, -90.647624

Depth to Water: 27'

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
27'-37'			Tan	Large fossiliferous rock, tan dolomite, water-bearing, porous, cherty.
			Tan	
		35	Tan	
			Tan	
		40		Drilled to 38 feet; not logged.
		45		
		50		
		55		
		60		

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-104

Date Drilled (Start/Finish): 10/26/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 685.012

Total Depth: 88'

Coordinates: 42.070841, -90.653076

Depth to Water:

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
0'-5'			Light Brown	Light Brown, medium grained sand, slightly coarse.
			Light Brown	
		5	Light Brown	
5'-17'			Brown	Brown sand, medium to coarse grained, cobbles.
			Brown	
		10	Brown	
			Brown	Brown, soft clay, slightly sandy, moist.
			Brown	
		15	Brown	
17'-27'			Brown	Brown sand, brown clay layered, high plasticity from 16-17 feet, silty clay at 17 feet.
			Brown	
		20	Brown	
			Brown	
		25	Grey	
27'-37'			Grey	Brown, slightly sandy clay; zones varying between having more sand or more silt.
			Grey	
		30	Grey	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-104

Date Drilled (Start/Finish): 10/26/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 685.012

Total Depth: 88'

Coordinates: 42.070841, -90.653076

Depth to Water:

Geologist: Thomas Kaley

Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
27'-37'			Grey	Grey, slightly hard, silty clay, rock imbedding within throughout. Wood found in layer near 37 feet.
			Grey	
		35	Grey	
			Grey	
37'-47'			Grey	Grey, silty clay, hard, high plasticity. Small rocks throughout, slight green tint, black streaks in areas.
		40	Grey	
			Grey	
		45	Grey	
47'-57'			Grey	Grey to dark brown, slightly hard silty clay. Becomes brown near 50 feet. Small rock fragments throughout.
		50	Brown	
			Brown	
		55	Brown	
57'-67'			Brown	
		60	Brown	

Boring Log Form

Site Name: Clinton Engines Site

Boring Number: MW-104

Date Drilled (Start/Finish): 10/26/2022

Drilling Method: Sonic

Drilling Company: Cascade

Elevation: 685.012

Total Depth: 88'

Coordinates: 42.070841, -90.653076

Depth to Water:

Geologist: Thomas Kaley

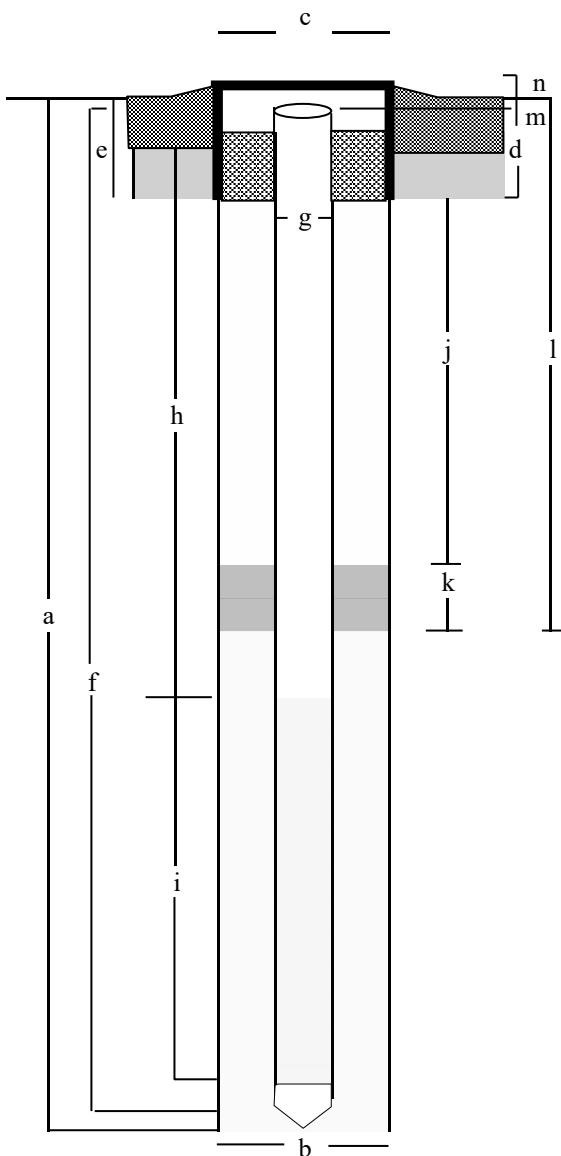
Project Number: 103G65210190.009.03

Weather: Clear

Interval	PID Reading (ppm or ppb)	Depth (Feet)	Color (Munsell or Rock)	Description and Remarks
57'-67'			Grey	Grey, silty, slightly hard clay to 62 feet. Brown to light brown, saturated clay and sand varves, tan and reddish sections, medium grained. Weathered bedrock at 67 feet.
			Grey	
			Black/Dark Grey	
		65	Brown	
67'-77'			Grey	Weathered bedrock to 71 feet then cherty, siliceous dolomite, slightly vuggy near 77 feet.
			Tan	
		70	Tan	
			Tan	
77'-87'			Tan	Cherty, fossiliferous, vuggy, water-bearing dolomitic bedrock. Slightly more tan than previous section. Highly weathered.
			Tan	
		75	Tan	
			Tan	
			Tan	Drilled to 88 feet; not logged.
		80	Tan	
			Tan	
		85	Tan	
	90			

Tetra Tech Monitoring Well Construction Log

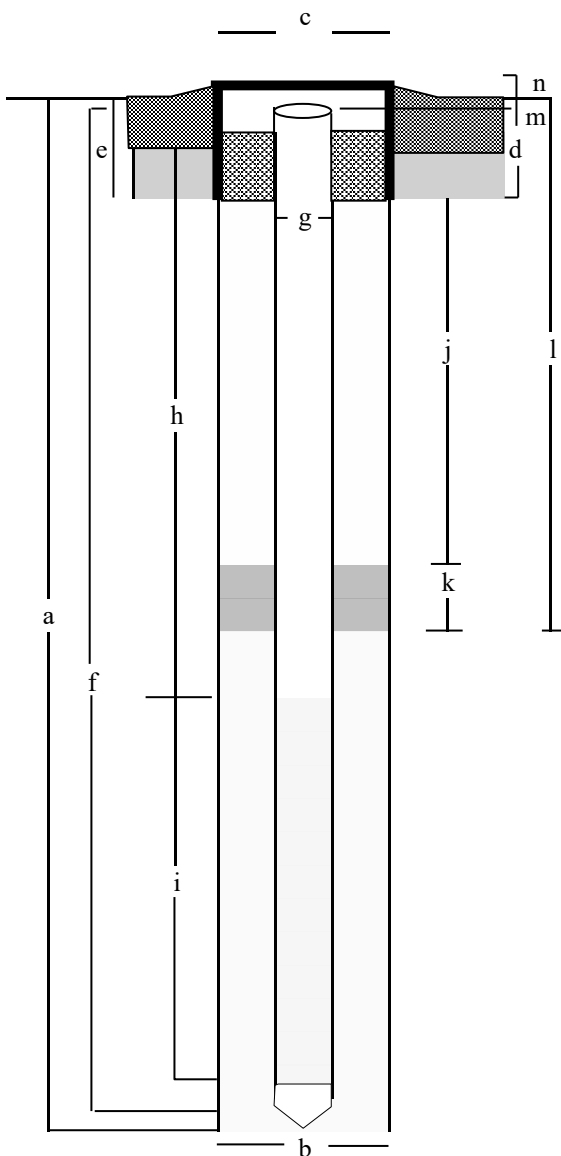
Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-1B</u>	Date: <u>11/1/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	57 ft
b. Boring Diameter:	6 in
c. Diameter of Protective Casing:	6 in
d. Length of Protective Casing:	Flush Mount
e. Appx. Top of Annular Seal:	high solids bentonite
Surface Casing Length/Diameter:	
Type of Surface Casing:	
Secondary Casing Length/Diam.:	
Depth of Centralizer(s) if any:	
Type of Centralizer(s):	
f. Total Riser Casing Length:	0.5 - 52.5 ft
Length of Sediment Sump:	0.5 ft
Casing Type:	Schedule 40 PVC
g. Inner Diameter:	2 in
h. Depth to Screen:	42 ft
i. Screen Length:	10 ft
Screen Interval:	42 - 52 ft
Screen/Slot Type:	10 slot
j. Top of Bentonite Seal:	38 ft
k. Thickness of Seal:	1 ft
Type of Seal Material:	3/8 in. hole plug
l. Depth to Top of Filter Pack:	39 ft
Type of Filter Pack:	Red Flint #15 Sand
m. Elevation of T/PVC Casing:	697.31 ft
n. Surface Elevation:	697.643
Other:	53.5 - 57 ft hole plug

Tetra Tech Monitoring Well Construction Log

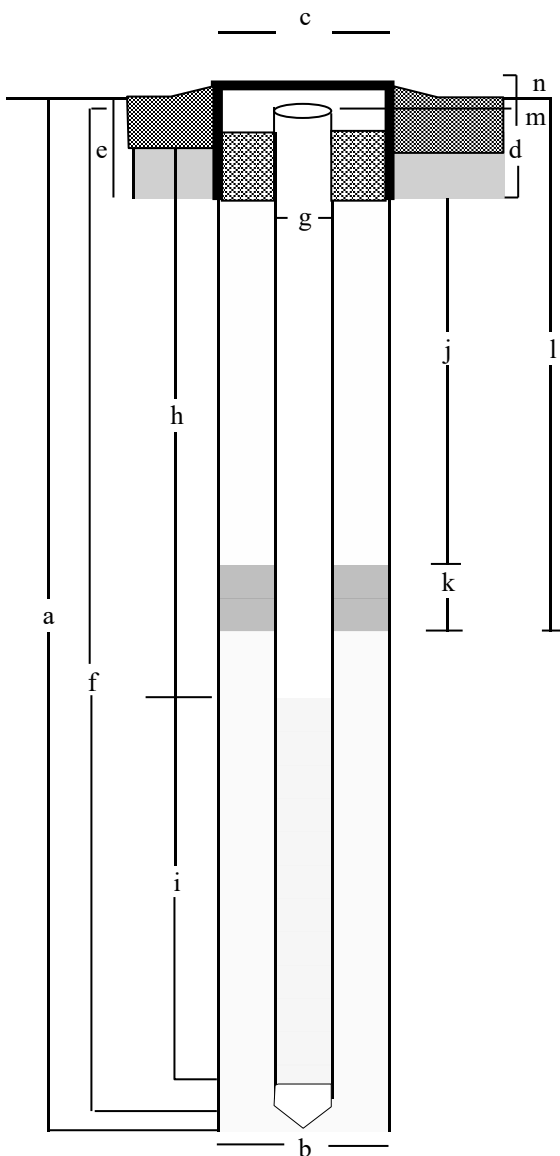
Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-2B</u>	Date: <u>11/1/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	58 ft
b. Boring Diameter:	6 in
c. Diameter of Protective Casing:	6 in
d. Length of Protective Casing:	Flush Mount
e. Appx. Top of Annular Seal:	high solids bentonite
Surface Casing Length/Diameter:	
Type of Surface Casing:	
Secondary Casing Length/Diam.:	
Depth of Centralizer(s) if any:	
Type of Centralizer(s):	
f. Total Riser Casing Length:	0.5 - 57.5 ft
Length of Sediment Sump:	0.5 ft
Casing Type:	Schedule 40 PVC
g. Inner Diameter:	2 in
h. Depth to Screen:	47 ft
i. Screen Length:	10 ft
Screen Interval:	47 - 57 ft
Screen/Slot Type:	10 slot
j. Top of Bentonite Seal:	43 ft
k. Thickness of Seal:	1 ft
Type of Seal Material:	3/8 in. hole plug
l. Depth to Top of Filter Pack:	44 ft
Type of Filter Pack:	Red Flint #15 Sand
m. Elevation of T/PVC Casing:	693.835 ft
n. Surface Elevation:	694.216 ft
Other:	

Tetra Tech Monitoring Well Construction Log

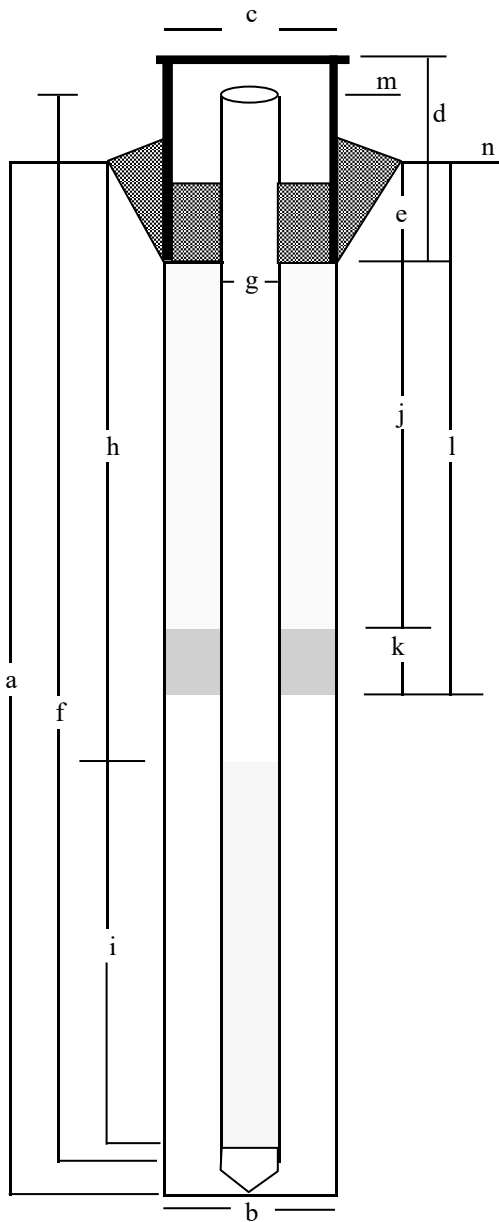
Project Name: <u>Clinton Engines</u>	Well No: <u>MW-3B</u>	Date: <u>11/3/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	58 ft
b. Boring Diameter:	6 in
c. Diameter of Protective Casing:	6 in
d. Length of Protective Casing:	
Type of Protective Casing:	Flush Mount
e. Appx. Top of Annular Seal:	
Type of Seal Used:	high solids bentonite
Surface Casing Length/Diameter:	
Type of Surface Casing:	
Secondary Casing Length/Diam.:	
Depth of Centralizer(s) if any:	
Type of Centralizer(s):	
f. Total Riser Casing Length:	0.5 - 57.5 ft
Length of Sediment Sump:	0.5 ft
Casing Type:	Schedule 40 PVC
g. Inner Diameter:	2 in
h. Depth to Screen:	47 ft
i. Screen Length:	10 ft
Screen Interval:	47 - 57 ft
Screen/Slot Type:	10 slot
j. Top of Bentonite Seal:	43 ft
k. Thickness of Seal:	1 ft
Type of Seal Material:	3/8 in. hole plug
l. Depth to Top of Filter Pack:	44 ft
Type of Filter Pack:	Red Flint #15 Sand
m. Elevation of T/PVC Casing:	699.182 ft
n. Surface Elevation:	699.590 ft
Other:	

Tetra Tech Monitoring Well Construction Log

Project Name:	<u>Clinton Engines</u>	Well No:	<u>MW-4B</u>	Date:	<u>11/2/2022</u>
Project No:	<u>103G65210190.009.03</u>	Drilling Method:	<u>Sonic - Cascade Drilling</u>		
Geologist:	<u>T. Kaley</u>	Iowa Driller:	<u>Dickenson # 9361</u>		



- | | | |
|----|---------------------------------|-----------------------------|
| a. | Total Boring Depth: | 58 ft |
| b. | Boring Diameter: | 6 in |
| c. | Diameter of Protective Casing: | 4 in |
| d. | Length of Protective Casing: | |
| | Type of Protective Casing: | steel stick up |
| e. | Appx. Depth of Surface Grout: | |
| | Surface Casing Length/Diameter: | |
| | Secondary Casing Length/Diam.: | |
| f. | Total Riser Casing Length: | 0.5 - 61 ft (3 ft stick up) |
| | Length of Sediment Sump: | 0.5 ft |
| | Casing Type: | Schedule 40 PVC |
| g. | Inner Diameter: | 2 in |
| h. | Depth to Screen: | 47 ft |
| i. | Screen Length: | 10 ft |
| | Screen Interval: | 47 - 57 ft |
| | Screen/Slot Type: | 10 slot |
| j. | Depth to Top of Seal: | 43 ft |
| k. | Thickness of Seal: | 1 ft |
| | Type of seal material: | 3/8 in hole plug |
| l. | Depth to Top of Filter Pack: | 44 ft |
| | Type of Filter Pack: | Red Flint #15 sand |
| m. | Elevation of T/PVC Casing: | 702.532 ft |
| n. | Surface Elevation: | 699.432 ft |
| | Other: | |

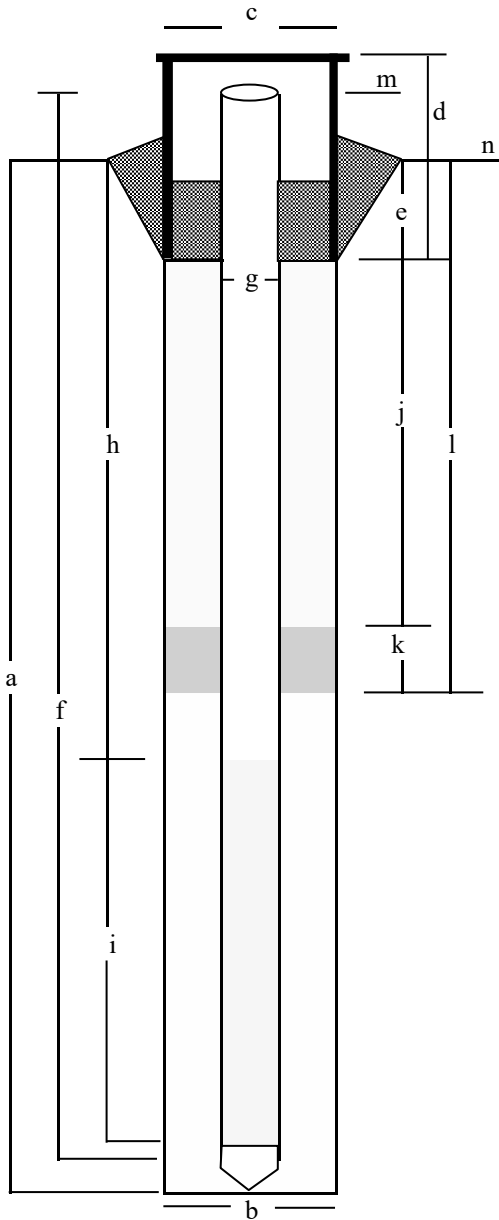
Tetra Tech Monitoring Well Construction Log

Project Name: Former Clinton Engines Well No: MW-6B Date: 11/1/2022

Project No: 103G65210190.009.03 Drilling Method: Sonic - Cascade Drilling

Iowa Driller: Dickenson # 9361

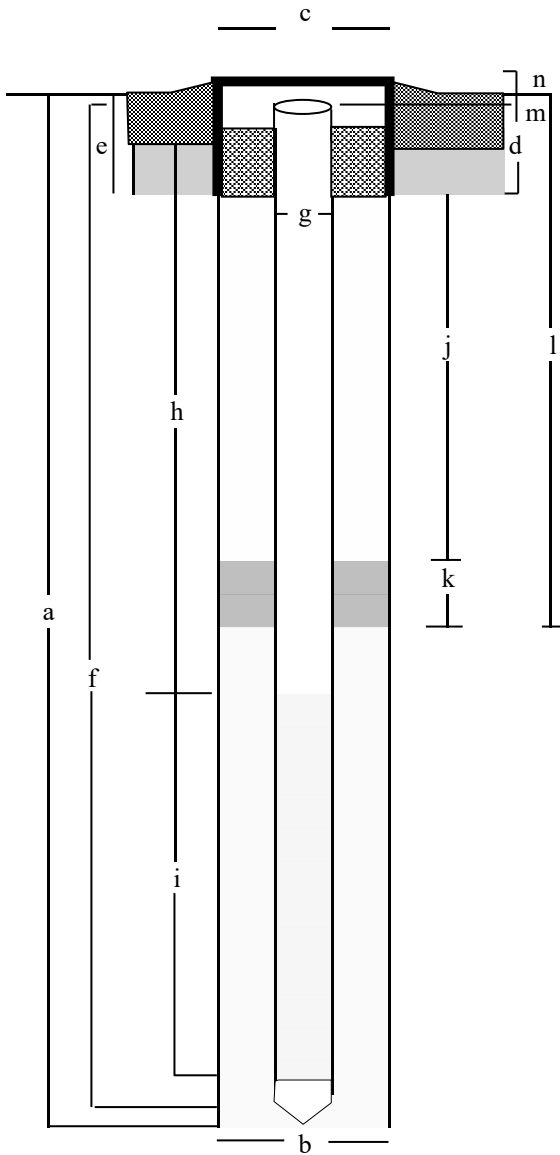
Geologist: T. Kaley



- | | |
|-----------------------------------|--------------------------------|
| a. Total Boring Depth: | <u>57 ft</u> |
| b. Boring Diameter: | <u>6 in</u> |
| c. Diameter of Protective Casing: | <u>4 in</u> |
| d. Length of Protective Casing: | <u>5 ft</u> |
| Type of Protective Casing: | <u>steel stick up</u> |
| e. Appx. Depth of Surface Grout: | <u> </u> |
| Surface Casing Length/Diameter: | <u> </u> |
| Secondary Casing Length/Diam.: | <u> </u> |
| f. Total Riser Casing Length: | <u>54 ft (2.5 ft stick up)</u> |
| Length of Sediment Sump: | <u>0.5 ft</u> |
| Casing Type: | <u>Schedule 40 PVC</u> |
| g. Inner Diameter: | <u>2 in</u> |
| h. Depth to Screen: | <u>51 ft</u> |
| i. Screen Length: | <u>10 ft</u> |
| Screen Interval: | <u>41 - 51 ft</u> |
| Screen/Slot Type: | <u>10 slot</u> |
| j. Depth to Top of Seal: | <u>36 ft</u> |
| k. Thickness of Seal: | <u>2 ft</u> |
| Type of seal material: | <u>3/8 in hole plug</u> |
| l. Depth to Top of Filter Pack: | <u>38 ft</u> |
| Type of Filter Pack: | <u>Red Flint #15 sand</u> |
| m. Elevation of T/PVC Casing: | <u>700.082 ft</u> |
| n. Surface Elevation: | <u>697.508 ft</u> |
| Other: | <u>53.5-57 hole plug</u> |
| | <u>Bedrock at 55 ft</u> |

Tetra Tech Monitoring Well Construction Log

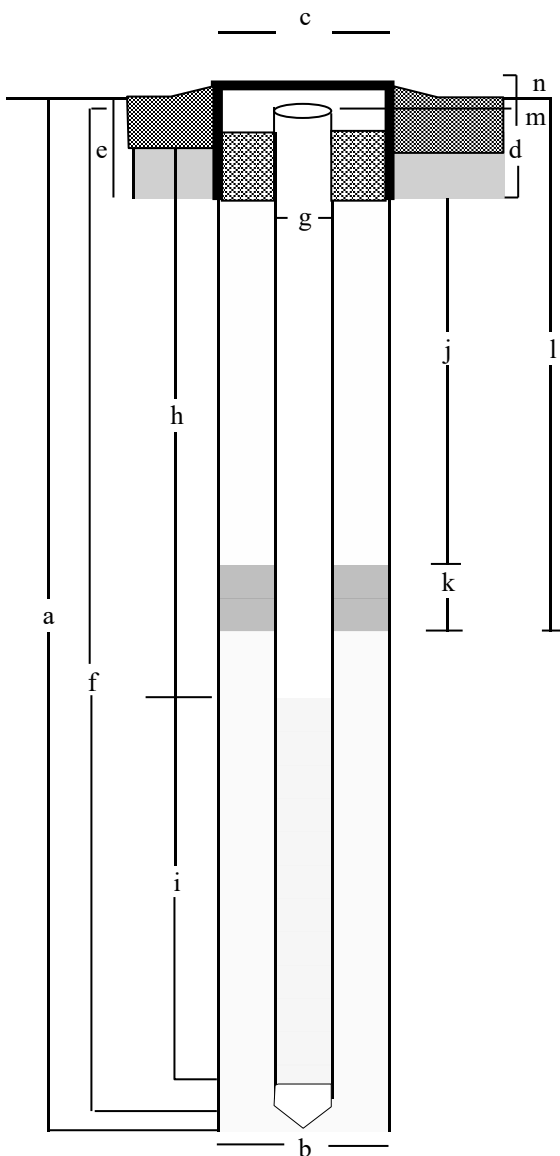
Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-8B</u>	Date: <u>11/2/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	<u>57 ft</u>
b. Boring Diameter:	<u>6 in</u>
c. Diameter of Protective Casing:	<u>6 in</u>
d. Length of Protective Casing:	<u>Flush Mount</u>
e. Appx. Top of Annular Seal:	<u>high solids bentonite</u>
Surface Casing Length/Diameter:	<u></u>
Type of Surface Casing:	<u></u>
Secondary Casing Length/Diam.:	<u></u>
Depth of Centralizer(s) if any:	<u></u>
Type of Centralizer(s):	<u></u>
f. Total Riser Casing Length:	<u>0.5 - 53.5 ft</u>
Length of Sediment Sump:	<u>0.5 ft</u>
Casing Type:	<u>Schedule 40 PVC</u>
g. Inner Diameter:	<u>2 in</u>
h. Depth to Screen:	<u>43 ft</u>
i. Screen Length:	<u>10 ft</u>
Screen Interval:	<u>43 - 53 ft</u>
Screen/Slot Type:	<u>10 slot</u>
j. Top of Bentonite Seal:	<u>39 ft</u>
k. Thickness of Seal:	<u>1 ft</u>
Type of Seal Material:	<u>3/8 in. hole plug</u>
l. Depth to Top of Filter Pack:	<u>40 ft</u>
Type of Filter Pack:	<u>Red Flint #15 Sand</u>
m. Elevation of T/PVC Casing:	<u>691.144 ft</u>
n. Surface Elevation:	<u>691.730 ft</u>
Other:	<u></u>

Tetra Tech Monitoring Well Construction Log

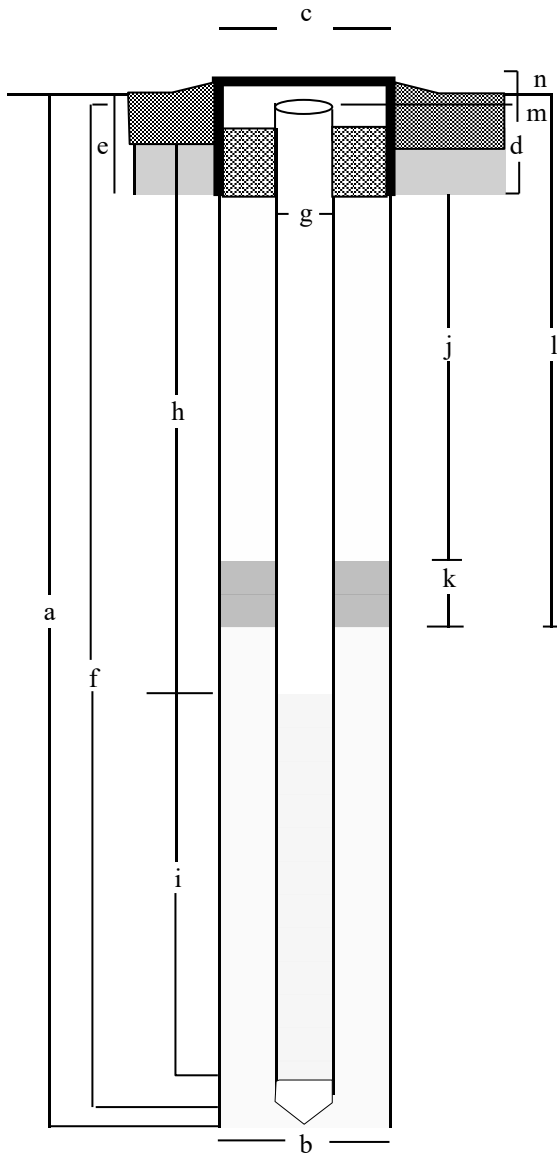
Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-9</u>	Date: <u>11/4/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	57 ft
b. Boring Diameter:	6 in
c. Diameter of Protective Casing:	6 in
d. Length of Protective Casing:	
Type of Protective Casing:	Flush Mount
e. Appx. Top of Annular Seal:	
Type of Seal Used:	high solids bentonite
Surface Casing Length/Diameter:	
Type of Surface Casing:	
Secondary Casing Length/Diam.:	
Depth of Centralizer(s) if any:	
Type of Centralizer(s):	
f. Total Riser Casing Length:	0.5 - 56.5 ft
Length of Sediment Sump:	0.5 ft
Casing Type:	Schedule 40 PVC
g. Inner Diameter:	2 in
h. Depth to Screen:	46 ft
i. Screen Length:	10 ft
Screen Interval:	46 - 56 ft
Screen/Slot Type:	10 slot
j. Top of Bentonite Seal:	42 ft
k. Thickness of Seal:	1 ft
Type of Seal Material:	3/8 in. hole plug
l. Depth to Top of Filter Pack:	43 ft
Type of Filter Pack:	Red Flint #15 Sand
m. Elevation of T/PVC Casing:	693.648 ft
n. Surface Elevation:	694.122 ft
Other:	

Tetra Tech Monitoring Well Construction Log

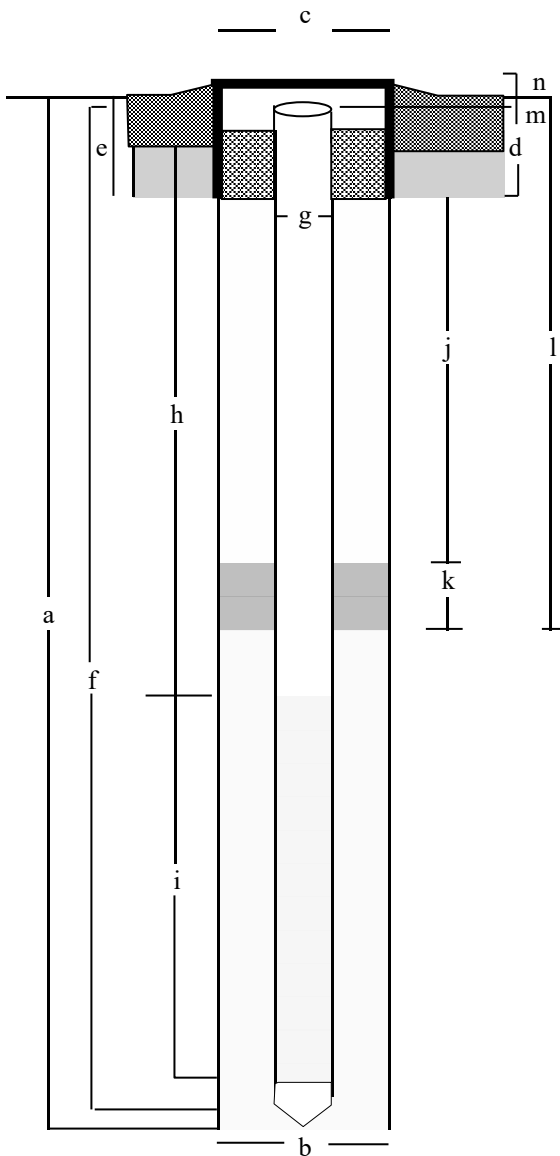
Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-10A</u>	Date: <u>11/2/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	<u>58 ft</u>
b. Boring Diameter:	<u>6 in</u>
c. Diameter of Protective Casing:	<u>6 in</u>
d. Length of Protective Casing:	<u>Flush Mount</u>
e. Appx. Top of Annular Seal:	<u>high solids bentonite</u>
Surface Casing Length/Diameter:	<u></u>
Type of Surface Casing:	<u></u>
Secondary Casing Length/Diam.:	<u></u>
Depth of Centralizer(s) if any:	<u></u>
Type of Centralizer(s):	<u></u>
f. Total Riser Casing Length:	<u>0.5 - 57.5 ft</u>
Length of Sediment Sump:	<u>0.5 ft</u>
Casing Type:	<u>Schedule 40 PVC</u>
g. Inner Diameter:	<u>2 in</u>
h. Depth to Screen:	<u>47 ft</u>
i. Screen Length:	<u>10 ft</u>
Screen Interval:	<u>47 - 57 ft</u>
Screen/Slot Type:	<u>10 slot</u>
j. Top of Bentonite Seal:	<u>43 ft</u>
k. Thickness of Seal:	<u>1 ft</u>
Type of Seal Material:	<u>3/8 in. hole plug</u>
l. Depth to Top of Filter Pack:	<u>44 ft</u>
Type of Filter Pack:	<u>Red Flint #15 Sand</u>
m. Elevation of T/Casing:	<u>689.654 ft</u>
n. Surface Elevation:	<u>689.911 ft</u>
Other:	<u></u>

Tetra Tech Monitoring Well Construction Log

Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-10B</u>	Date: <u>11/2/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	77 ft
b. Boring Diameter:	6 in
c. Diameter of Protective Casing:	6 in
d. Length of Protective Casing:	
Type of Protective Casing:	Flush Mount
e. Appx. Top of Annular Seal:	
Type of Seal Used:	high solids bentonite
Surface Casing Length/Diameter:	
Type of Surface Casing:	
Secondary Casing Length/Diam.:	
Depth of Centralizer(s) if any:	
Type of Centralizer(s):	
f. Total Riser Casing Length:	0.5 - 73.5 ft
Length of Sediment Sump:	0.5 ft
Casing Type:	Schedule 40 PVC
g. Inner Diameter:	2 in
h. Depth to Screen:	63 ft
i. Screen Length:	10 ft
Screen Interval:	63 - 73 ft
Screen/Slot Type:	10 slot
j. Top of Bentonite Seal:	59 ft
k. Thickness of Seal:	1 ft
Type of Seal Material:	3/8 in. hole plug
l. Depth to Top of Filter Pack:	60 ft
Type of Filter Pack:	Red Flint #15 Sand
m. Elevation of T/PVC Casing:	689.398 ft
n. Surface Elevation:	689.962 ft
Other:	hole plug 74.5 - 77 ft
	Bedrock at 75 ft

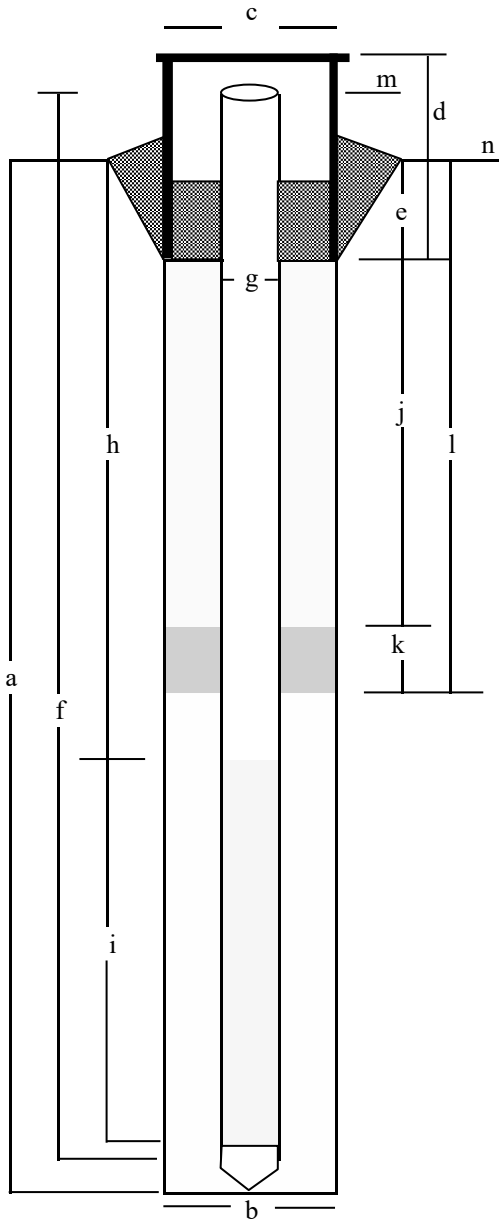
Tetra Tech Monitoring Well Construction Log

Project Name: Former Clinton Engines Well No: MW-11 Date: 10/31/2022

Project No: 103G65210190.009.03 Drilling Method: Sonic - Cascade Drilling

Iowa Driller: Dickenson # 9361

Geologist: T. Kaley



a. Total Boring Depth: 57 ft

b. Boring Diameter: 6 in

c. Diameter of Protective Casing: 4 in

d. Length of Protective Casing:
Type of Protective Casing: steel stick up

e. Appx. Depth of Surface Grout:
Surface Casing Length/Diameter:
Secondary Casing Length/Diam.:

f. Total Riser Casing Length: 52.7 ft (2.2 ft stick up)
Length of Sediment Sump: 0.5 ft
Casing Type: Schedule 40 PVC

g. Inner Diameter: 2 in

h. Depth to Screen: 40 ft

i. Screen Length: 10 ft
Screen Interval: 40 - 50 ft
Screen/Slot Type: 10 slot

j. Depth to Top of Seal: 36 ft

k. Thickness of Seal: 1 ft
Type of seal material: 3/8 in hole plug

l. Depth to Top of Filter Pack: 37 ft
Type of Filter Pack: Red Flint #15 sand

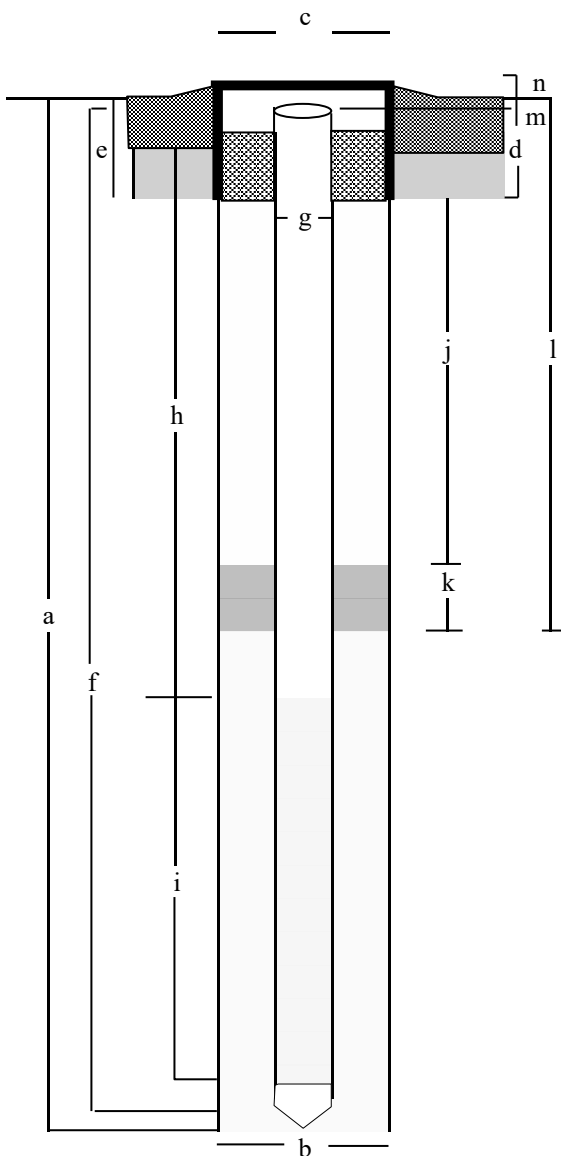
m. Elevation of Casing: 701.474 ft

n. Surface Elevation: 699.307 ft

Other: Sand to 57 ft

Tetra Tech Monitoring Well Construction Log

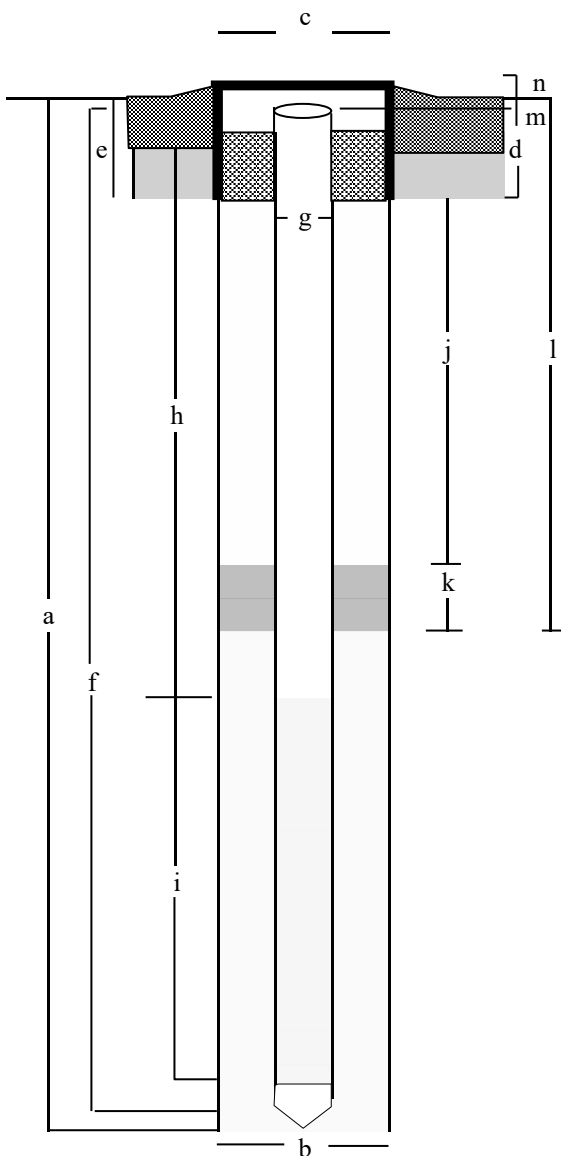
Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-12</u>	Date: <u>11/4/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	62 ft
b. Boring Diameter:	6 in
c. Diameter of Protective Casing:	6 in
d. Length of Protective Casing:	Flush Mount
e. Appx. Top of Annular Seal:	high solids bentonite
Surface Casing Length/Diameter: _____	
Type of Surface Casing: _____	
Secondary Casing Length/Diam.: _____	
Depth of Centralizer(s) if any: _____	
Type of Centralizer(s): _____	
f. Total Riser Casing Length:	0.5 - 45.5 ft
Length of Sediment Sump:	0.5 ft
Casing Type:	Schedule 40 PVC
g. Inner Diameter:	2 in
h. Depth to Screen:	35 ft
i. Screen Length:	10 ft
Screen Interval:	35 - 45 ft
Screen/Slot Type:	10 slot
j. Top of Bentonite Seal:	31 ft
k. Thickness of Seal:	1 ft
Type of Seal Material:	3/8 in. hole plug
l. Depth to Top of Filter Pack:	32 ft
Type of Filter Pack:	Red Flint #15 Sand
m. Elevation of T/PVC Casing:	684.2 ft
n. Surface Elevation:	684.776 ft
Other:	46 - 62 ft hole plug

Tetra Tech Monitoring Well Construction Log

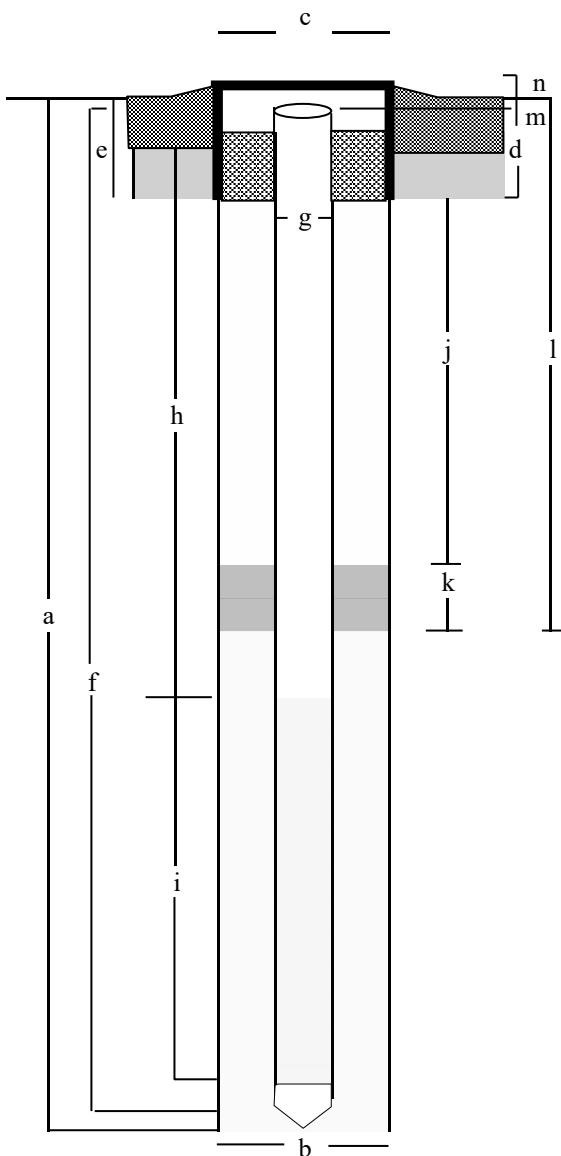
Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-13</u>	Date: <u>11/3/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	<u>44 ft</u>
b. Boring Diameter:	<u>6 in</u>
c. Diameter of Protective Casing:	<u>6 in</u>
d. Length of Protective Casing:	<u>Flush Mount</u>
e. Appx. Top of Annular Seal:	<u>high solids bentonite</u>
Surface Casing Length/Diameter: _____	
Type of Surface Casing: _____	
Secondary Casing Length/Diam.: _____	
Depth of Centralizer(s) if any: _____	
Type of Centralizer(s): _____	
f. Total Riser Casing Length:	<u>0.5 - 45.5 ft</u>
Length of Sediment Sump:	<u>0.5 ft</u>
Casing Type:	<u>Schedule 40 PVC</u>
g. Inner Diameter:	<u>2 in</u>
h. Depth to Screen:	<u>33 ft</u>
i. Screen Length:	<u>10 ft</u>
Screen Interval:	<u>33 - 43 ft</u>
Screen/Slot Type:	<u>10 slot</u>
j. Top of Bentonite Seal:	<u>29 ft</u>
k. Thickness of Seal:	<u>1 ft</u>
Type of Seal Material:	<u>3/8 in. hole plug</u>
l. Depth to Top of Filter Pack:	<u>30 ft</u>
Type of Filter Pack:	<u>Red Flint #15 Sand</u>
m. Elevation of T/PVC Casing:	<u>680.0 ft</u>
n. Surface Elevation:	<u>680.659 ft</u>
Other:	_____

Tetra Tech Monitoring Well Construction Log

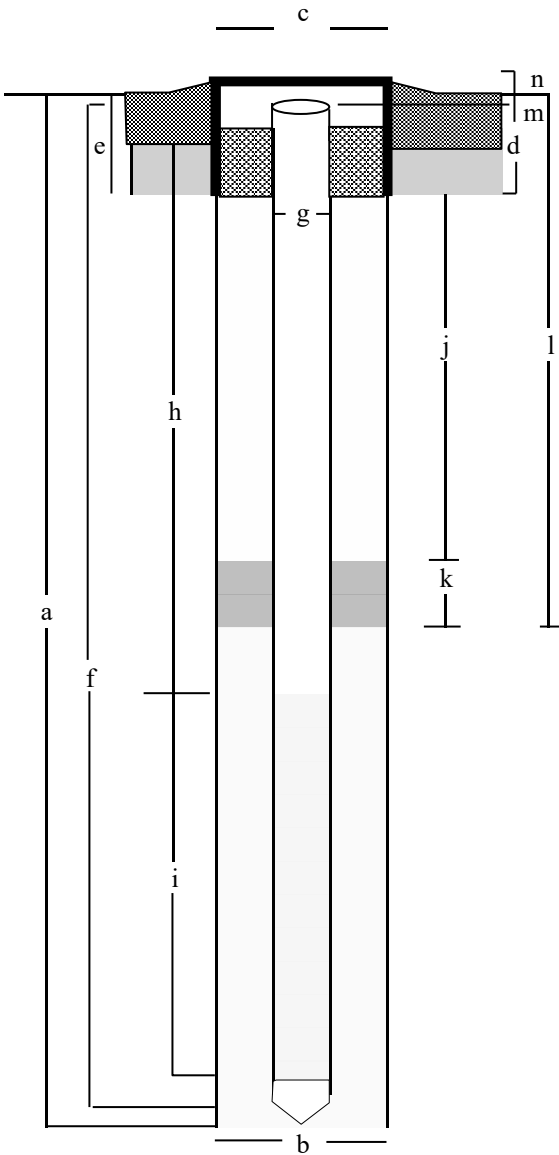
Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-14</u>	Date: <u>11/3/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	61 ft
b. Boring Diameter:	6 in
c. Diameter of Protective Casing:	6 in
d. Length of Protective Casing:	
Type of Protective Casing:	Flush Mount
e. Appx. Top of Annular Seal:	
Type of Seal Used:	high solids bentonite
Surface Casing Length/Diameter:	
Type of Surface Casing:	
Secondary Casing Length/Diam.:	
Depth of Centralizer(s) if any:	
Type of Centralizer(s):	
f. Total Riser Casing Length:	0.5 - 60.5 ft
Length of Sediment Sump:	0.5 ft
Casing Type:	Schedule 40 PVC
g. Inner Diameter:	2 in
h. Depth to Screen:	50 ft
i. Screen Length:	10 ft
Screen Interval:	50 - 60 ft
Screen/Slot Type:	10 slot
j. Top of Bentonite Seal:	46 ft
k. Thickness of Seal:	1 ft
Type of Seal Material:	3/8 in. hole plug
l. Depth to Top of Filter Pack:	47 ft
Type of Filter Pack:	Red Flint #15 Sand
m. Elevation of T/Casing:	679.283 ft
n. Surface Elevation:	679.566 ft
Other:	

Tetra Tech Monitoring Well Construction Log

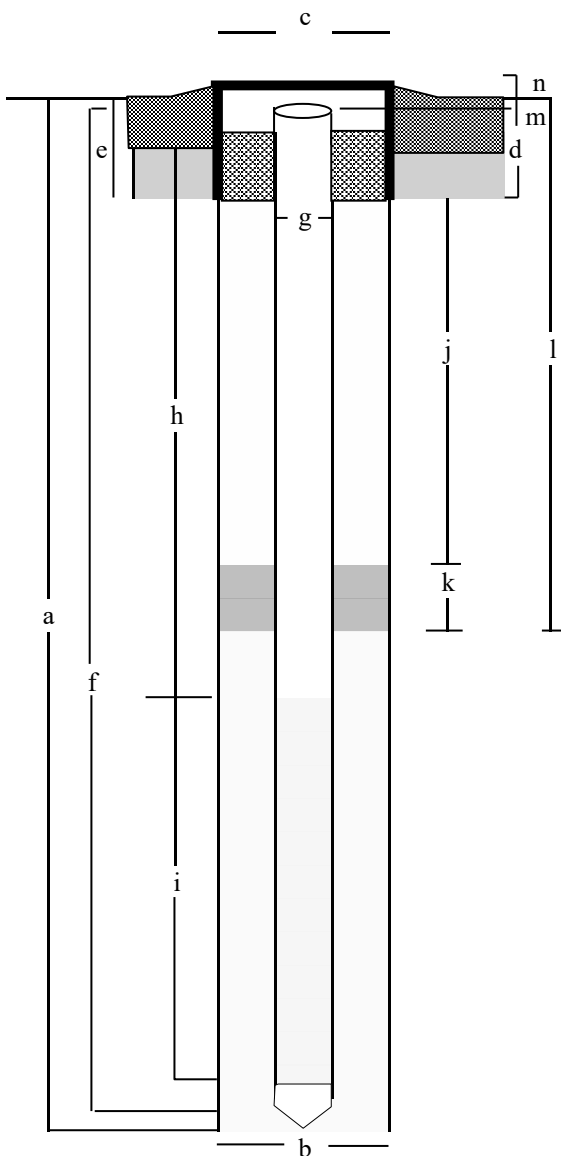
Project Name:	<u>Former Clinton Engines</u>	Well No:	<u>MW-101</u>	Date:	<u>10/28/2022</u>
Project No:	<u>103G65210190.009.03</u>	Drilling Method:	<u>Sonic - Cascade Drilling</u>		
		Iowa Driller:	<u>Dickenson # 9361</u>		
Geologist:	<u>T. Kaley</u>				



- | | | |
|----|---------------------------------|-----------------------|
| a. | Total Boring Depth: | 128 ft |
| b. | Boring Diameter: | 6 in |
| c. | Diameter of Protective Casing: | 6 in |
| d. | Length of Protective Casing: | |
| | Type of Protective Casing: | Flush Mount |
| e. | Appx. Top of Annular Seal: | |
| | Type of Seal Used: | high solids bentonite |
| | Surface Casing Length/Diameter: | |
| | Type of Surface Casing: | |
| | Secondary Casing Length/Diam.: | |
| | Depth of Centralizer(s) if any: | |
| | Type of Centralizer(s): | |
| f. | Total Riser Casing Length: | 0.5 - 127.5 ft |
| | Length of Sediment Sump: | 0.5 ft |
| | Casing Type: | Schedule 40 PVC |
| g. | Inner Diameter: | 2 in |
| h. | Depth to Screen: | 117 ft |
| i. | Screen Length: | 10 ft |
| | Screen Interval: | 117 - 127 ft |
| | Screen/Slot Type: | 10 slot |
| j. | Top of Bentonite Seal: | 113 ft |
| k. | Thickness of Seal: | 1 ft |
| | Type of Seal Material: | 3/8 in. hole plug |
| l. | Depth to Top of Filter Pack: | 114 ft |
| | Type of Filter Pack: | Red Flint #15 Sand |
| m. | Elevation of T/PVC Casing: | 702.415 ft |
| n. | Surface Elevation: | 702.894 ft |
| | Other: | Bedrock at 117 ft |

Tetra Tech Monitoring Well Construction Log

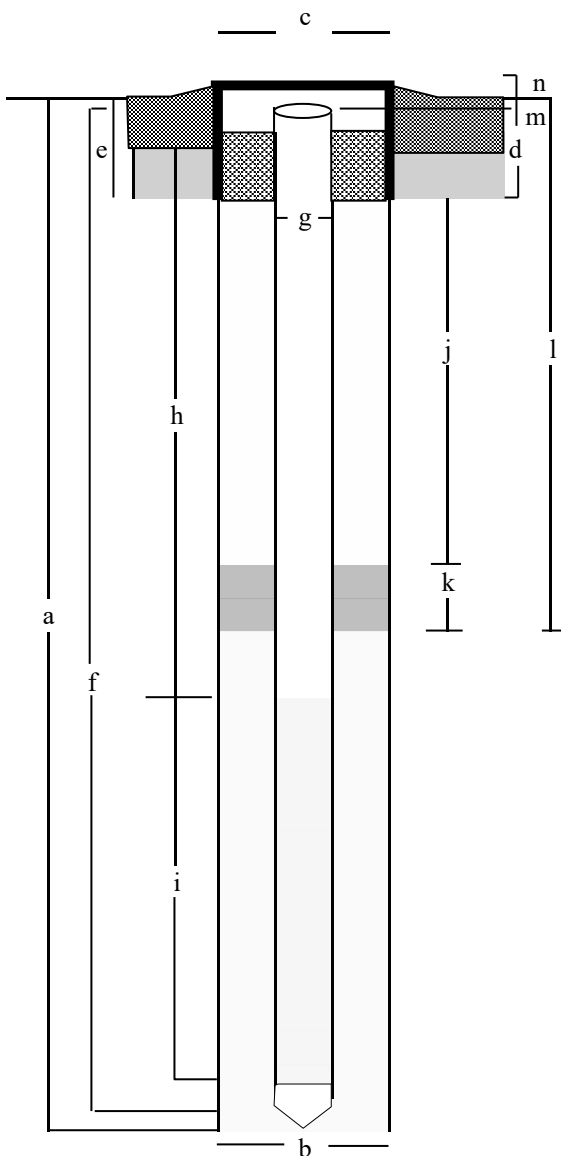
Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-102</u>	Date: <u>10/30/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	137 ft
b. Boring Diameter:	6 in, then 7in
c. Diameter of Protective Casing:	6 in
d. Length of Protective Casing:	Flush Mount
e. Appx. Top of Annular Seal:	1 ft bgs
Type of Seal Used:	high solids bentonite
Surface Casing Length/Diameter:	
Type of Surface Casing:	
Secondary Casing Length/Diam.:	
Depth of Centralizer(s) if any:	
Type of Centralizer(s):	
f. Total Riser Casing Length:	0.5 - 135.5 ft
Length of Sediment Sump:	0.5 ft
Casing Type:	Schedule 40 PVC
g. Inner Diameter:	2 in
h. Depth to Screen:	125 ft
i. Screen Length:	10 ft
Screen Interval:	125 - 135 ft
Screen/Slot Type:	10 slot
j. Top of Bentonite Seal:	121 ft
k. Thickness of Seal:	1 ft
Type of Seal Material:	3/8 in. hole plug
l. Depth to Top of Filter Pack:	122 ft
Type of Filter Pack:	Red Flint #15 Sand
m. Elevation of T/Casing:	744.429 ft
n. Surface Elevation:	744.677 ft
Other:	Bedrock at 122 ft

Tetra Tech Monitoring Well Construction Log

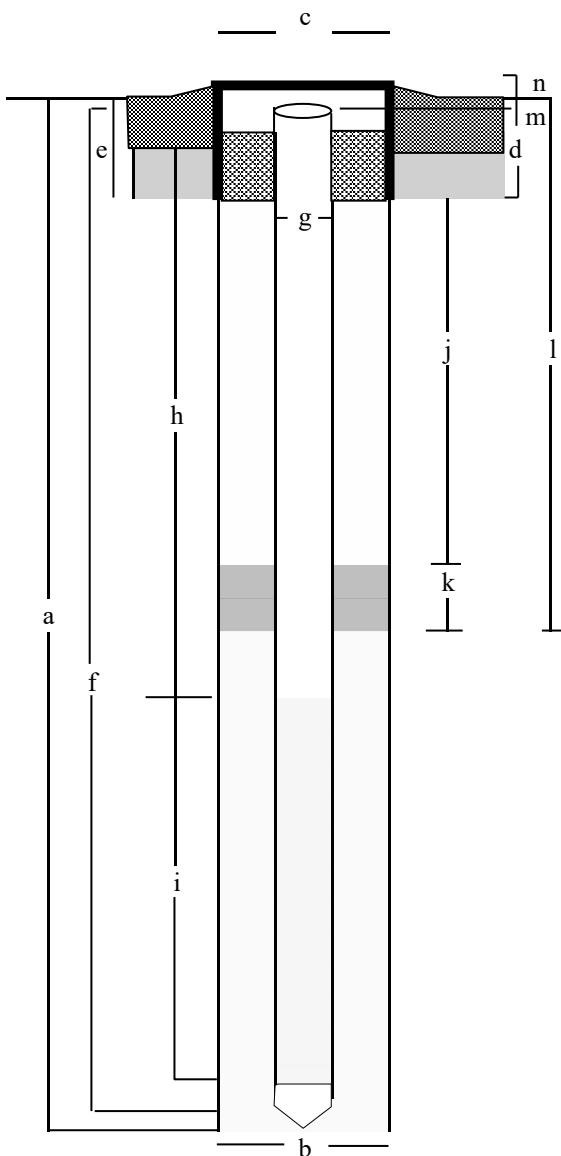
Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-103</u>	Date: <u>10/26/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	38 ft
b. Boring Diameter:	7 in
c. Diameter of Protective Casing:	
d. Length of Protective Casing:	1 ft
Type of Protective Casing:	Flush Mount
e. Appx. Top of Annular Seal:	
Type of Seal Used:	high solids bentonite
Surface Casing Length/Diameter:	
Type of Surface Casing:	
Secondary Casing Length/Diam.:	
Depth of Centralizer(s) if any:	
Type of Centralizer(s):	
f. Total Riser Casing Length:	0.5 - 37.5 ft
Length of Sediment Sump:	0.5 ft
Casing Type:	Schedule 40 PVC
g. Inner Diameter:	2 in
h. Depth to Screen:	27 ft
i. Screen Length:	10 ft
Screen Interval:	27 - 37 ft
Screen/Slot Type:	10 slot
j. Top of Bentonite Seal:	23 ft
k. Thickness of Seal:	1 ft
Type of Seal Material:	3/8 in. hole plug
l. Depth to Top of Filter Pack:	24 ft
Type of Filter Pack:	Red Flint #15 Sand
m. Elevation of T/PVC Casing:	679.851 ft
n. Surface Elevation:	680.185 ft
Other:	Bedrock at 21 ft

Tetra Tech Monitoring Well Construction Log

Project Name: <u>Former Clinton Engines</u>	Well No: <u>MW-104</u>	Date: <u>10/27/2022</u>
Project No: <u>103G65210190.009.03</u>	Drilling Method: <u>Sonic - Cascade Drilling</u>	
Geologist: <u>T. Kaley</u>	Iowa Driller: <u>Dickenson # 9361</u>	



a. Total Boring Depth:	88 ft
b. Boring Diameter:	7 in
c. Diameter of Protective Casing:	7 in
d. Length of Protective Casing:	1 ft
Type of Protective Casing:	Flush Mount
e. Appx. Top of Annular Seal:	1 ft
Type of Seal Used:	high solids bentonite
Surface Casing Length/Diameter:	
Type of Surface Casing:	
Secondary Casing Length/Diam.:	
Depth of Centralizer(s) if any:	
Type of Centralizer(s):	
f. Total Riser Casing Length:	0.5-87.5 ft
Length of Sediment Sump:	0.5 ft
Casing Type:	Schedule 40 PVC
g. Inner Diameter:	2 in
h. Depth to Screen:	77 ft
i. Screen Length:	10 ft
Screen Interval:	77 - 87 ft
Screen/Slot Type:	10 slot
j. Top of Bentonite Seal:	73 ft
k. Thickness of Seal:	1 ft
Type of Seal Material:	3/8 in. hole plug
l. Depth to Top of Filter Pack:	74 ft
Type of Filter Pack:	Red Flint #15 Sand
m. Elevation of T/Casing:	684.785 ft
n. Surface Elevation:	685.012 ft
Other:	



Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO.

WELL NO. MW-13

Project _____
Project No. _____
Date(s) of Installation _____
Date(s) of Development _____
Personnel/Company _____
Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water
 (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water
 (TOC) _____ Date _____ Time _____

TECHNIQUE(S)	DEVELOPMENT
	EQUIPMENT TYPE/CAPACITY

☐ Jetting (Airlift) _____
☐ Surge Block _____
☐ Bailing _____
☒ Pumping _____
☐ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water:

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
x _____ Gallons/Foot
= _____ Gallons per Single Casing Volume

Sand Pack Volume: _____ Ft. of Saturated Sand Pack
x _____ Gallons/Foot (borehole diameter)
= _____ Gallons (in borehole)
- _____ Gallons of Casing Volume
= _____ X 0.3 (Assuming porosity = 30%)
= _____ Gallons Within Sand Pack

Single Purge Volume: 5.45 Gallons (Casing Vol. +
Sand Pack Vol. + Fluids Added)

Minimum Purge Volume: 16.35 Gallons (Casing Vol. +
Actual Purge Volume: 30 Gallons (Casing Vol. +
Volume Measured by: _____

Rate of Development _____ Gallons/Minute (Hour, Day)

Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)

Immiscible Phases Present: Y N Thickness _____

Development Criteria:

[illegible]

Development Completed at 30 Gallons Discharged. Date: 11/16/22 Time: 1343

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.

343
stop



Tetra Tech EM Inc.

Sheet ___ of ___

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-2 B

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
☒ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 6.56 Gallons (Casing Vol. + Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 19.68 Gallons (Casing Vol. + Actual Purge Volume: 40 Gallons (Casing Vol. + Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
24	1 gpm	1135	13.34	7.17	767	19.0	3.0
29		1140	13.36	7.09	770	14.0	2.2
34		1145	13.38	7.08	770	11.71	1.9
39		1150	13.38	7.05	772	10.51	1.8

Development Completed at 40 Gallons Discharged. Date: 11/16/22 Time: 1151

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.

hark
 111
 151
 stop



Tetra Tech EM Inc.

Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. NW-3B

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____

Initial Depth to Water _____
 (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water _____
 (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
☒ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack

Single Purge Volume: 5.8 Gallons (Casing Vol. +
 Sand Pack Vol. + Fluids Added)

Minimum Purge Volume: 17.4 Gallons (Casing Vol. +
 Actual Purge Volume: 33 Gallons (Casing Vol. +

Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
23	1 gpm	1443	13.48	7.28	786	5.8	3.0
26	↓	1446	13.49	7.22	784	6.08	2.4
29	↓	1449	13.51	7.28	785	4.81	2.1
32	↓	1452	13.47	7.27	783	3.08	2.1
1453 stop							

Development Completed at 33 Gallons Discharged. Date: 11/16/22 Time: 1453

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.



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17.63 DTW
60.22 TD
Sheet ___ of ___

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-413

Project _____
Project No. _____
Date(s) of Installation _____
Date(s) of Development _____
Personnel/Company _____
Type of Rig Used _____

Casing Diameter/Type _____
Borehole Diameter _____
Screened Interval(s) _____
Total Length of Well Casing _____
Measure Total Depth (TOC) Initial _____
Final _____
Initial Depth to Water (TOC) _____ Date _____ Time _____
Stabilized Depth to Water (TOC) _____ Date _____ Time _____

DEVELOPMENT TECHNIQUE(S) EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
_____ Surge Block _____
_____ Bailing _____
X Pumping Monsoon
_____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
Lost Purge Water: _____ Gallons
Water During Installation: _____ Gallons
Total Fluids Added: _____ Gallons
Source of Added Water: _____
Sample Collected of Added Water: Y N
Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
x _____ Gallons/Foot
= _____ Gallons per Single Casing Volume
Sand Pack Volume: _____ Ft. of Saturated Sand Pack
x _____ Gallons/Foot (borehole diameter)
= _____ Gallons (in borehole)
- _____ Gallons of Casing Volume
= _____ X 0.3 (Assuming porosity = 30%)
= _____ Gallons Within Sand Pack
Single Purge Volume: 6.88 Gallons (Casing Vol. +
Sand Pack Vol. + Fluids Added)
Minimum Purge Volume: 20.64 Gallons (Casing Vol. +
Actual Purge Volume: 25 Gallons (Casing Vol. +
Volume Measured by: _____
Rate of Development _____ Gallons/Minute (Hour, Day)
Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
0	1 gpm	1429	11.99	7.90	441	0.2	7.3
		1431	11.99	7.95	447	0.2	7.4
17		1433	11.72	7.99	453	0.2	7.3
17	0.75	1157	11.86	8.00	454	0.2	6.0
21		1202	11.44	8.07	428	0.2	5.5
25		1206	12.10	7.95	438	0.2	5.6

Development Completed at 25 Gallons Discharged. Date: 11/18/22 Time: 1206

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.

Start
2940
2957
stop
stop
1637
209

11/17/22
11/18/22



Tetra Tech EM Inc.

Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-6B

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
X _____ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 5.14 Gallons (Casing Vol. +
 Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 15.42 Gallons (Casing Vol. +
 Actual Purge Volume: 39 Gallons (Casing Vol. +
 Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp °C	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
26	1 gpm	1037	13.11	7.42	607	Overrun	3.4
29		1040	13.09	7.36	627	45.8	2.8
32		1043	13.1	7.34	631	37.6	2.7
35		1046	13.11	7.29	638	2.5	2.5
38	↓	1049	13.09	7.30	647	48.1	2.4

Development Completed at 1050 39 Gallons Discharged. Date: 11/16/22 Time: 1050

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.



Tetra Tech EM Inc.

Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-8B

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____

Initial Depth to Water (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
X _____ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack

Single Purge Volume: 18 6.33 Gallons (Casing Vol. + Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 18.99 Gallons (Casing Vol. + Actual Purge Volume: 44 Gallons (Casing Vol. + Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
<u>24.4</u>	<u>0.6 gpm</u>	<u>10:56</u>	<u>12.73</u>	<u>7.86</u>	<u>926</u>	<u>OR</u>	<u>5.7</u>
<u>27</u>		<u>11:01</u>	<u>12.45</u>	<u>7.98</u>	<u>915</u>	<u>OR</u>	<u>4.9</u>
<u>30</u>		<u>11:06</u>	<u>12.79</u>	<u>7.89</u>	<u>914</u>	<u>OR</u>	<u>4.5</u>
<u>33</u>		<u>11:11</u>	<u>13.23</u>	<u>7.82</u>	<u>943</u>	<u>OR</u>	<u>5.0</u>
<u>36</u>		<u>11:16</u>	<u>12.82</u>	<u>7.79</u>	<u>936</u>	<u>OR</u>	<u>6.1</u>
<u>39</u>		<u>11:21</u>	<u>12.77</u>	<u>7.65</u>	<u>928</u>	<u>OR</u>	<u>6.5</u>
<u>42</u>		<u>11:26</u>	<u>12.78</u>	<u>7.5</u>	<u>923</u>	<u>OR</u>	<u>6.3</u>
<u>43</u>		<u>11:31</u>	<u>12.61</u>	<u>7.52</u>	<u>922</u>	<u>OR</u>	<u>5.9</u>
<u>44</u>	<u>↓</u>	<u>11:36</u>	<u>13.07</u>	<u>7.26</u>	<u>931</u>	<u>OR</u>	<u>6.2</u>

Development Completed at 44 Gallons Discharged. Date: 11/18/22 Time: 11:37

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.

13.56
 52.79



Tetra Tech EM Inc.

Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-01

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
 EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
☒ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 6.36 Gallons (Casing Vol. + Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 19.08 Gallons (Casing Vol. + Actual Purge Volume: 51.75 Gallons (Casing Vol. + Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
28.5	0.75	1528	14.08	8.17	971	80.7	2.6
36		1538	14.1	6.91	972	43.2	1.6
43.5		1548	14.02	7.04	971	16.7	1.6
51.0		1558	14.09	7.23	971	11.45	1.8

Development Completed at 51.75 Gallons Discharged. Date: 11/17/22 Time: 1559

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.



Tetra Tech EM Inc.

Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-10A

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
☒ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 7.31 Gallons (Casing Vol. +
 Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 21.93 Gallons (Casing Vol. +
 Actual Purge Volume: 31 Gallons (Casing Vol. +
 Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
20	10pm	1539	13.78	7.09	838	20.0	3.1
23		1542	13.82	7.04	838	18.1	2.5
26		1545	13.80	7.07	837	13.4	2.3
29		1548	13.77	7.09	837	9.80	2.3

Development Completed at 31 Gallons Discharged. Date: 11/16/22 Time: 1550

Personnel: _____

Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.

1550 stop



Tetra Tech EM Inc.

1552 DTW 113.67
TD 72.70

Sheet ___ of ___

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-10B

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water _____
 (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water _____
 (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
X _____ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 9.55 Gallons (Casing Vol. +
 Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 28.65 Gallons (Casing Vol. +
 Actual Purge Volume: 36 Gallons (Casing Vol. +
 Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
29	12pm	1629	13.87	7.13	849	14.6	3.3
32	↓	1632	13.87	7.13	850	8.74	3.1
35	↓	1635	13.87	7.11	850	7.02	3.0

Development Completed at 36 Gallons Discharged. Date: 11/16/22 Time: 1636

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.



Tetra Tech EM Inc.

Sheet 1 of 1

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-11

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
 EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
X _____ Pumping monsoon
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 5.61 Gallons (Casing Vol. +
 Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 17 Gallons (Casing Vol. +
 Actual Purge Volume: 36.0 Gallons (Casing Vol. +
 Volume Measured by: _____
 Rate of Development 1.0 Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: 3 well vol & 50 NTU

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
28	1601/min	847	12.56	7.33	414	38.1	2.0, clear
30		849	12.52	7.34	412	4.28	1.9, clear
32		851	12.56	7.34	412	16.7	1.8, clear
34		853	12.56	7.32	409		1.7, clear
35	Stop	0855					

Development Completed at 36 Gallons Discharged. Date: 11/16/22 Time: 0855

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.

start 0819



Tetra Tech EM Inc.

Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. NW-12

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
 _____ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: .617 Gallons (Casing Vol. + Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 18.51 Gallons (Casing Vol. + Actual Purge Volume: 37 Gallons (Casing Vol. + Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
20.5	0.89gpm	1336	13.82	7.95	1073	012	1.4
23.0		1343	13.79	7.48	1071	94.2	1.5
25.5		1348	13.79	7.38	1074	89.9	1.5
31.5		1400	13.91	7.85	1072	53.8	1.7
36.5		1410	13.77	7.88	1077	38.4	1.7

Development Completed at 37 Gallons Discharged. Date: 11/17/22 Time: 1411

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.

4



Tetra Tech EM Inc.

Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-13

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____

 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water _____
 (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water _____
 (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
 _____ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 5.79 Gallons (Casing Vol. +
 Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 17.37 Gallons (Casing Vol. +
 Actual Purge Volume: 23 Gallons (Casing Vol. +
 Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
13.5	0.5 gpm	1146	13.23	7.36	692	OR	4.3
15		1149	13.07	7.27	684	OR	2.5
16.5		1152	13.38	7.28	662	OR	2.2
18		1155	13.41	7.31	649	OR	2.4
19.5		1158	12.94	7.37	662	OR	2.1

Development Completed at 23 Gallons Discharged. Date: 11/17/22 Time: 1205

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.

1205



Tetra Tech EM Inc.

Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-14

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____

 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
X _____ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 7.91 Gallons (Casing Vol. +
 Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 23.73 Gallons (Casing Vol. +
 Actual Purge Volume: 30 Gallons (Casing Vol. +
 Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
23	10pm	754	13.71	7.07	1131	34	2.6
26	↓	757	13.75	5.75	1265	24.3	2.1
29	✗	800	13.50	5.55	1255	22.8	1.8

Development Completed at 30 Gallons Discharged. Date: 11/17/22 Time: 0801

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.



Tetra Tech EM Inc.

50.28

Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-101

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
 EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
X _____ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 16.76 Gallons (Casing Vol. + Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 50.28 Gallons (Casing Vol. + Actual Purge Volume: 66 Gallons (Casing Vol. + Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
52.5	1.5	0832	14.0	7.02	875	65.0	8.6
57	1	0835	14.02	7.82	875	23.2	8.5
61.5	1	0838	13.96	7.23	875	13.3	8.5
66	1	0841	13.94	7.20	874	10.77	8.6

Development Completed at 66 Gallons Discharged. Date: 11/18/22 Time: 0841

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.



Tetra Tech EM Inc.

Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-102

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
 EQUIPMENT TYPE/CAPACITY

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
☒ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 11.88 Gallons (Casing Vol. + Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 35.64 Gallons (Casing Vol. + Actual Purge Volume: 46.5 Gallons (Casing Vol. + Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
36	1.5	0955	12.96	7.23	618	27.4	7.8
40.5	↓	0958	12.87	7.13	617	8.09	7.7
45	↓	1001	12.96	7.16	617	4.86	7.7

Development Completed at 46.5 Gallons Discharged. Date: 4/18/22 Time: 0900 1002

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.

9+37.5=



Tetra Tech EM Inc.

Sheet ___ of ___

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-103

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) Initial _____
 Final _____
 Initial Depth to Water (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water (TOC) _____ Date _____ Time _____

DEVELOPMENT
 TECHNIQUE(S) _____
 EQUIPMENT TYPE/CAPACITY _____

_____ Jetting (Airlift) _____
 _____ Surge Block _____
 _____ Bailing _____
X _____ Pumping _____
 _____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 3.38 Gallons (Casing Vol. + Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 10.14 Gallons (Casing Vol. + Actual Purge Volume: 21 Gallons (Casing Vol. + Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
15	1 gpm	0905	13.5	7.69	1388	14.6	5.3
18	↓	0908	13.52	7.11	1368	7.74	4.9
21	↓	0911	13.51	7.57	1366	3.77	4.8

Development Completed at 21 Gallons Discharged. Date: 11/17/22 Time: 0911

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.



Tetra Tech EM Inc.

Sheet ____ of ____

WELL DEVELOPMENT DATA SHEET

BORING NO. _____

WELL NO. MW-104

Project _____
 Project No. _____
 Date(s) of Installation _____
 Date(s) of Development _____
 Personnel/Company _____
 Type of Rig Used _____

Casing Diameter/Type _____
 Borehole Diameter _____
 Screened Interval(s) _____
 Total Length of Well Casing _____
 Measure Total Depth (TOC) _____
 Initial _____
 Final _____
 Initial Depth to Water _____
 (TOC) _____ Date _____ Time _____
 Stabilized Depth to Water _____
 (TOC) _____ Date _____ Time _____

TECHNIQUE(S) DEVELOPMENT
EQUIPMENT TYPE/CAPACITY

____ Jetting (Airlift) _____
 ____ Surge Block _____
 ____ Bailing _____
☒ Pumping _____
 ____ Other _____

FLUIDS ADDED

Lost Drilling Fluid: _____ Gallons
 Lost Purge Water: _____ Gallons
 Water During Installation: _____ Gallons
 Total Fluids Added: _____ Gallons
 Source of Added Water: _____
 Sample Collected of Added Water: Y N
 Sample Designation of Added Water: _____

PURGE VOLUME CALCULATION

Casing Volume: _____ Ft. of water
 x _____ Gallons/Foot
 = _____ Gallons per Single Casing Volume
 Sand Pack Volume: _____ Ft. of Saturated Sand Pack
 x _____ Gallons/Foot (borehole diameter)
 = _____ Gallons (in borehole)
 - _____ Gallons of Casing Volume
 = _____ X 0.3 (Assuming porosity = 30%)
 = _____ Gallons Within Sand Pack
 Single Purge Volume: 10.74 Gallons (Casing Vol. +
 Sand Pack Vol. + Fluids Added)
 Minimum Purge Volume: 32.22 Gallons (Casing Vol. +
 Actual Purge Volume: 83 Gallons (Casing Vol. +
 Volume Measured by: _____
 Rate of Development _____ Gallons/Minute (Hour, Day)
 Pumping Rate/Depth _____ @ _____ Ft. (Below Grd.)
 Immiscible Phases Present: Y N Thickness _____

Development Criteria: _____

Total Volume Discharge	Rate of Discharge	Time	Temp	pH	Specific* Conductance	Turbidity (NTU)	D.O., Clarity, Odor, PID Readings, Other:
41	1 gpm	1017	12.5	9.5	972	0.2	4.6
51		1027	12.67	7.82	960	91.6	4.7
61		1037	12.74	8.20	961	70.0	5.1
71		1047	12.67	8.32	951	55.5	5.1
81		1057	12.51	8.25	947	45.5	5.8

Development Completed at: 83 Gallons Discharged. Date: 11/17/22 Time: 1059

Personnel: _____

* Specific Conductance readings temperature compensated to 25°C, if not, report temperatures at which reading obtained.

Date: 11/20/22

Chain of Custody No.: _____

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

Well Volume Calculation: _____ gal

Comments: _____

Date: 11/20/22

Chain of Custody No.: _____

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: _____ gal

Begin Purge: 0815 Method of Purging Low Flow Purged Dry? -

End Purge: 0845 Total Volume Purged: 4.5 L How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 11/20/22 0850 Sample Number(s): MW-2B

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 11/20/22

Monitoring Well No.: MW-3B

Chain of Custody No.: _____

Personnel: P7 and TIC

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Depth to Well Bottom: 56.87 ft. Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Water Column: 39.83 ft. Well Volume Calculation: _____ gal

Well Volume Calculation: _____ gal

[illegible]

Begin Purge: 112 Method of Purging LOW FLOW Purged Dry? -

End Purge: 1121 Total Volume Purged: 0.9 How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 11/20/22 1125 Sample Number (s): MW-3B

Comments: _____

Date: 11/19/22

Chain of Custody No.: _____

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: _____ gal

Begin Purge: 1537 Method of Purging Low Flow Purged Dry? -

End Purge: 1546 Total Volume Purged: 1.35L How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 11/19/22 1555 Sample Number (s): MW-4B

Comments: _____

Date: 11/19/22

Chain of Custody No.:_____

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: _____ gal

Begin Purge: 1615 Method of Purging Low Flow Purged Dry? —

End Purge: 1635 Total Volume Purged: 3.75 L How Measured? Flow x Time

QA/QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 4/19/22 1640, 1650 Sample Number(s): MW-6B, MW-6B-FD

Comments: _____

Date: 11/20/22

Chain of Custody No.:

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: _____ gal

Begin Purge: 0725 Method of Purging Low Flow Purged Dry? -

End Purge: 0745 Total Volume Purged: 2.8 L How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 0750 11/20/22 Sample Number (s): _____

Comments: _____

Date: 11/19/22

Chain of Custody No.: _____

Organic Vapor Concentration TOC: 1 ppm Breathing Zone: - ppm

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: _____ gal

Begin Purge: 1330 Method of Purging Low Flow Purged Dry?

End Purge: 1348 Total Volume Purged: 3.15 How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 11/19/22 1352 Sample Number (s): MW-9

Comments: _____

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 11/20/22

Monitoring Well No.: MW-10A

Chain of Custody No.: _____

Personnel: P7 and TK

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Depth to Well Bottom: 57.06 ft. Well Volume: 2-inch well = water column x 0.163 gal/ft

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Depth to Water: 11.81 ft.

Water Column: 45.25 ft.

Well Volume Calculation: _____ gal

[illegible]

Begin Purge: 1025 Method of Purging Low Flow Purged Dry? —

End Purge: 1041 Total Volume Purged: 2.5 L How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 1/20/22 1045 Sample Number (s): MW-10A

Comments: _____

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 11/20/22

Monitoring Well No.: MW-108

Chain of Custody No.:_____

Personnel: PT and TK

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Depth to Well Bottom: 72.70 ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Depth to Water: 13.67 ft.

Water Column: 59.03 ft.

Well Volume Calculation: _____ gal

[illegible]

Begin Purge: 0916 Method of Purging Low Flow Purged Dry? —

End Purge: 0932 Total Volume Purged: 1.6 L How Measured? Flow x Time

QA/QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 11/20/22 0935+0940 Sample Number (s): MW-10B, MW-10B-FD

Comments: _____

Date: 11/19/22

Chain of Custody No.: _____

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Water Column: 34.67 ft.

Well Volume Calculation: _____ gal

Begin Purge: 1450 Method of Purging Low Flow Purged Dry? —

End Purge: 1459 Total Volume Purged: 1.35 How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 11/19/22 1905 Sample Number(s): MW-11

Comments: _____

Date: 1/19/27

Chain of Custody No.:

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: _____ gal

Comments: _____

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 11/19/22

Monitoring Well No.: MW-13

Chain of Custody No.: _____

Personnel: TK and PT

Organic Vapor Concentration TOC: — ppm Breathing Zone: — ppm

Depth to Well Bottom: 42.51 ft. Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

Depth to Water: _____ ft. 4-inch well = water column x 0.652 gal/ft

Water Column: _____ ft. Well Volume Calculation: _____ gal

Time	Vol. Purged (L)	Flow Rate (L/min)	Water Level (ft bgs)	pH	Conductivity (uS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV/pH)
1120	0.75	0.15	12.12	6.74	677	9.41	63.2	0.51	-39.8
1125	1.50	0.15	12.10	6.86	685	10.18	34.0	0.33	-35.7
1130	2.25	0.15	12.10	6.74	688	10.32	24.4	0.25	-30.7
1135	3.0	0.15	12.10	6.71	689	10.38	20.9	0.27	-28.6
1140	3.75	0.15	12.10	6.69	690	10.61	27.8	0.31	-26.6

Begin Purge: 1120 Method of Purging Low Flow Purged Dry? —

End Purge: 1140 Total Volume Purged: 3.75 How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 11/19/22 1145 Sample Number (s): MW-13

Comments: _____

Date: 11/18/22

Chain of Custody No.:_____

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: _____ gal

Begin Purge: 1517 Method of Purging Low Flow Purged Dry? —

End Purge: 1523 Total Volume Purged: 4.5 How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 11/18/22 1526 Sample Number (s): MW 74

Comments: _____

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 11/19/22

Monitoring Well No.: MW-101

Chain of Custody No.: _____

Personnel: PT and TK

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 128.15 ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Depth to Water: 24.38 ft.

Water Column: 103.77 ft.

Well Volume Calculation: _____ gal

with pump

Time	Vol. Purged (L)	Flow Rate (L/min)	Water Level (ft bgs)	pH	Conductivity (uS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV/pH)
1005	<u>0</u>	<u>0.25</u>	<u>24.38</u>	<u>7.44</u>	<u>807</u>	<u>11.58</u>	<u>26.5</u>	<u>1.22</u>	<u>-61.5</u>
1010	<u>1.25</u>	<u>0.25</u>	<u>24.38</u>	<u>7.02</u>	<u>870</u>	<u>11.82</u>	<u>OK</u>	<u>1.14</u>	<u>-43.0</u>
1015	<u>2.50</u>	<u>0.25</u>	<u>24.38</u>	<u>7.0</u>	<u>870</u>	<u>11.79</u>	<u>OK</u>	<u>1.15</u>	<u>-42.8</u>
1020	<u>3.75</u>	<u>0.25</u>	<u>24.38</u>	<u>6.88</u>	<u>870</u>	<u>11.82</u>	<u>27.9</u>	<u>1.16</u>	<u>-36.9</u>
1025	<u>5.00</u>	<u>0.25</u>	<u>24.38</u>	<u>6.79</u>	<u>873</u>	<u>11.89</u>	<u>13.2</u>	<u>1.19</u>	<u>-32.7</u>
1030	<u>6.25</u>	<u>0.25</u>	<u>24.38</u>	<u>6.72</u>	<u>874</u>	<u>11.78</u>	<u>12.67</u>	<u>1.23</u>	<u>-29.5</u>
1035	<u>7.50</u>	<u>0.25</u>	<u>24.38</u>	<u>6.67</u>	<u>875</u>	<u>11.84</u>	<u>12.85</u>	<u>1.27</u>	<u>-27.2</u>

Begin Purge: 1005 Method of Purging: Low Flow Purged Dry? -

End Purge: 1035 Total Volume Purged: 7.50 How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 11/19/22 1040 Sample Number (s): MW-101

Comments: _____

Date: 11/19/22

Chain of Custody No.:

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Water Column: 73.25 ft.

Well Volume Calculation: _____ gal

Begin Purge: 0909 Method of Purging Low Flow Purged Dry? -

End Purge: 0.925 Total Volume Purged: 4.25 How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 0930 11/19/22 Sample Number(s): MW-102

Comments: _____

Date: 11/18/22

Chain of Custody No.: _____

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: _____ gal

Begin Purge: 1124 Method of Purging Low Flow Purged Dry? no

End Purge: 1430 Total Volume Purged: 4.56 How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 11/18/22 1435 Sample Number (s): MW-103

Comments: _____

Date: 11/18/22

Chain of Custody No.: _____

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Well Volume: 2-inch well = water column x 0.163 gal/ft

3-inch well = water column x 0.367 gal/ft

4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: _____ gal

Begin Purge: 1558 Method of Purging Low Flow Purged Dry? -

End Purge: 1607 Total Volume Purged: 6.75 How Measured? Flow x Time

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 11/15/22 1615 Sample Number (s): MW-104

Comments: _____

APPENDIX D
PHOTOGRAPHIC DOCUMENTATION LOG



Photographic Documentation Log

Client: U.S. Environmental Protection Agency
Site Name: Former Clinton Engines Site
Location: 605-607 East Maple Street, Maquoketa, IA

Prepared by: Thomas Kaley
Task Order: 68E0719F0190
Dates: October 25 – December 14, 2022

Photograph No. 1

Date: October 25, 2022

Description:

This photo shows the sonic rig set up for bedrock well MW-103.



Photograph No. 2

Date: October 26, 2022

Description:

This photo shows fossiliferous, water-bearing bedrock at MW-103.





Photographic Documentation Log

Client: U.S. Environmental Protection Agency
Site Name: Former Clinton Engines Site
Location: 605-607 East Maple Street, Maquoketa, IA

Prepared by: Thomas Kaley
Task Order: 68E0719F0190
Dates: October 25 – December 14, 2022

Photograph No. 3

Date: October 26, 2022

Description:

This photo shows collection of the soil-gas sample at MW-103.



Photograph No. 4

Date: October 26, 2022

Description:

This photo shows sonic rig set-up at bedrock well MW-104.





Photographic Documentation Log

Client: U.S. Environmental Protection Agency
Site Name: Former Clinton Engines Site
Location: 605-607 East Maple Street, Maquoketa, IA

Prepared by: Thomas Kaley
Task Order: 68E0719F0190
Dates: October 25 – December 14, 2022

Photograph No. 5

Date: October 26, 2022

Description:

This photo shows water-bearing bedrock from the MW-104 boring.



Photograph No. 6

Date: October 28, 2022

Description:

This photo shows sonic rig at bedrock well location MW-101.





Photographic Documentation Log

Client: U.S. Environmental Protection Agency
Site Name: Former Clinton Engines Site
Location: 605-607 East Maple Street, Maquoketa, IA

Prepared by: Thomas Kaley
Task Order: 68E0719F0190
Dates: October 25 – December 14, 2022

Photograph No. 7

Date: October 28, 2022

Description:

This photo shows portion of sand layer from bedrock well location MW-101.



Photograph No. 8

Date: October 29, 2022

Description:

This photo shows purging of soil-gas rod near bedrock well MW-101.





Photographic Documentation Log

Client: U.S. Environmental Protection Agency
Site Name: Former Clinton Engines Site
Location: 605-607 East Maple Street, Maquoketa, IA

Prepared by: Thomas Kaley
Task Order: 68E0719F0190
Dates: October 25 – December 14, 2022

Photograph No. 9

Date: October 29, 2022

Description:

This photo shows monitoring well MW-101 after construction of the well pad.



Photograph No. 10

Date: October 30, 2022

Description:

This photo shows sonic rig setup for bedrock well MW-102.





Photographic Documentation Log

Client: U.S. Environmental Protection Agency
Site Name: Former Clinton Engines Site
Location: 605-607 East Maple Street, Maquoketa, IA

Prepared by: Thomas Kaley
Task Order: 68E0719F0190
Dates: October 25 – December 14, 2022

Photograph No. 11

Date: November 01, 2022

Description:

This photo shows collection of drummed drilling investigation-derived waste (IDW) wastewater on-site.



Photograph No. 12

Date: November 01, 2022

Description:

This photo shows a general site overview.





Photographic Documentation Log

Client: U.S. Environmental Protection Agency
Site Name: Former Clinton Engines Site
Location: 605-607 East Maple Street, Maquoketa, IA

Prepared by: Thomas Kaley
Task Order: 68E0719F0190
Dates: October 25 – December 14, 2022

Photograph No. 13

Date: November 04, 2022

Description:

This photo shows the deepest soil core from the MW-9 boring with transition from soil to weathered bedrock.



Photograph No. 14

Date: November 11, 2022

Description:

This photo shows completed well pad for bedrock well MW-103.





Photographic Documentation Log

Client: U.S. Environmental Protection Agency
Site Name: Former Clinton Engines Site
Location: 605-607 East Maple Street, Maquoketa, IA

Prepared by: Thomas Kaley
Task Order: 68E0719F0190
Dates: October 25 – December 14, 2022

<p>Photograph No. 15</p> <p>Date: November 15, 2022</p> <p>Description: This photo shows completed well pads for MW-10A and MW-10B.</p>	
<p>Photograph No. 16</p> <p>Date: November 15, 2022</p> <p>Description: This photo shows the completed stick-up well MW-4B.</p>	



Photographic Documentation Log

Client: U.S. Environmental Protection Agency
Site Name: Former Clinton Engines Site
Location: 605-607 East Maple Street, Maquoketa, IA

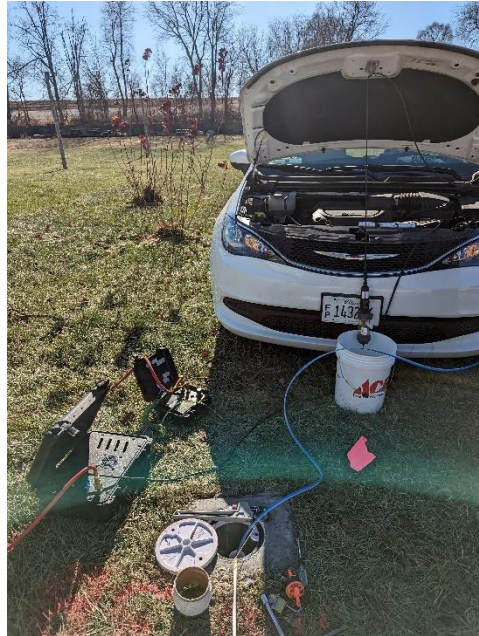
Prepared by: Thomas Kaley
Task Order: 68E0719F0190
Dates: October 25 – December 14, 2022

Photograph No. 17

Date: November 20, 2022

Description:

This photo shows low-flow sampling setup at well MW-3B.



Photograph No. 18

Date: November 20, 2022

Description:

This photo shows low-flow sample collection at well MW-1B.





Photographic Documentation Log

Client: U.S. Environmental Protection Agency
Site Name: Former Clinton Engines Site
Location: 605-607 East Maple Street, Maquoketa, IA

Prepared by: Thomas Kaley
Task Order: 68E0719F0190
Dates: October 25 – December 14, 2022

Photograph No. 19

Date: December 14, 2022

Description:

This photo shows non-hazardous solid IDW generated during all monitoring well installation activities and contained on site.



Photograph No. 20

Date: December 14, 2022

Description:

This photo shows all containers of drummed IDW wastewater generated on site during monitoring well installation activities.



APPENDIX E

ANALYTICAL DATA PACKAGES AND DATA VALIDATION REPORTS

DATA VERIFICATION REPORT

Prepared by: Ellen McEntee
Date: December 29, 2022
Site Name/Job Number: Clinton Engines / 103G65210190.009.03
Laboratory: Pace Analytical, Lenexa, KS

Data Package or SDG Number: 60414618

Sample Designations/Names:

MW4B-(24-26)	MW11-(44-46)	MW101-(114-116)
MW102-(117-119)	MW103-(19-21)	MW104-(64-66)

Matrices: Solid
Analytical Parameters: VOCs by SW-846 Method 8260B

Data Package Element	Usable	Rejected	NA	Description of Affected Data (note specific samples and analytical parameters affected)
Chain of custody	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The chain of custody was completed appropriately.
Data package completeness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The data package contains all the required elements.
Sample preservation, storage, and holding times	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The samples were received on 11/01/2022; the samples arrived in good condition. Custody seals were not present. All samples were analyzed within the recommended holding time.
Method and field blank contamination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The method blank was non-detect for all target analytes. A trip blank was not submitted with these samples. Results were not qualified.
Surrogate spikes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Surrogate spikes were within control limits.
Matrix spikes/matrix spike duplicates (MS/MSD)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	MS/MSDs were not analyzed with these samples.
Laboratory control samples/Laboratory control sample duplicates (LCS/LCSD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Laboratory control samples were performed and all analytes were within control limits.
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Summary Results are usable as reported by the laboratory. No qualifications of the results are recommended.				

November 08, 2022

Paulina Tinoco
Tetra Tech EMI
415 Oak Street
Kansas City, MO 64106

RE: Project: CLINTON ENGINES
Pace Project No.: 60414618

Dear Paulina Tinoco:

Enclosed are the analytical results for sample(s) received by the laboratory on November 01, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,



Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Kaitlyn Mitchell, Tetra Tech EMI



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Inorganic Drinking Water Certification #: 10090

Arkansas Drinking Water

Arkansas Certification #: 22-031-0

Illinois Certification #: 2000302021-3

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212023-1

Oklahoma Certification #: 2022-057

Florida: Cert E871149 SEKS WET

Texas Certification #: T104704407-21-15

Utah Certification #: KS000212022-12

Illinois Certification #: 004592

Kansas Field Laboratory Accreditation: # E-92587

Missouri SEKS Micro Certification: 10070

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CLINTON ENGINES

Pace Project No.: 60414618

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60414618001	MW103-(19-21)	Solid	10/26/22 09:05	11/01/22 08:50
60414618002	MW104-(64-66)	Solid	10/26/22 17:00	11/01/22 08:50
60414618003	MW101-(114-116)	Solid	10/28/22 13:30	11/01/22 08:50
60414618004	MW102-(117-119)	Solid	10/30/22 10:27	11/01/22 08:50
60414618005	MW11-(44-46)	Solid	10/31/22 10:40	11/01/22 08:50
60414618006	MW4B-(24-26)	Solid	10/31/22 14:00	11/01/22 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CLINTON ENGINES

Pace Project No.: 60414618

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60414618001	MW103-(19-21)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60414618002	MW104-(64-66)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60414618003	MW101-(114-116)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60414618004	MW102-(117-119)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60414618005	MW11-(44-46)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60414618006	MW4B-(24-26)	EPA 8260B	RAD	67	PASI-K
		EPA 8260B	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW103-(19-21) Lab ID: 60414618001 Collected: 10/26/22 09:05 Received: 11/01/22 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	19.8	16.1	1	11/03/22 10:13	11/03/22 11:41	67-64-1	
Benzene	ND	ug/kg	5.0	0.49	1	11/03/22 10:13	11/03/22 11:41	71-43-2	
Bromobenzene	ND	ug/kg	5.0	0.93	1	11/03/22 10:13	11/03/22 11:41	108-86-1	
Bromochloromethane	ND	ug/kg	5.0	0.60	1	11/03/22 10:13	11/03/22 11:41	74-97-5	
Bromodichloromethane	ND	ug/kg	5.0	0.60	1	11/03/22 10:13	11/03/22 11:41	75-27-4	
Bromoform	ND	ug/kg	5.0	0.57	1	11/03/22 10:13	11/03/22 11:41	75-25-2	
Bromomethane	ND	ug/kg	5.0	2.9	1	11/03/22 10:13	11/03/22 11:41	74-83-9	
2-Butanone (MEK)	ND	ug/kg	9.9	3.4	1	11/03/22 10:13	11/03/22 11:41	78-93-3	
n-Butylbenzene	ND	ug/kg	5.0	0.64	1	11/03/22 10:13	11/03/22 11:41	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	0.72	1	11/03/22 10:13	11/03/22 11:41	135-98-8	
tert-Butylbenzene	ND	ug/kg	24.8	0.87	1	11/03/22 10:13	11/03/22 11:41	98-06-6	
Carbon disulfide	ND	ug/kg	5.0	0.64	1	11/03/22 10:13	11/03/22 11:41	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.0	0.85	1	11/03/22 10:13	11/03/22 11:41	56-23-5	
Chlorobenzene	ND	ug/kg	5.0	0.62	1	11/03/22 10:13	11/03/22 11:41	108-90-7	
Chloroethane	ND	ug/kg	5.0	1.5	1	11/03/22 10:13	11/03/22 11:41	75-00-3	
Chloroform	ND	ug/kg	5.0	0.49	1	11/03/22 10:13	11/03/22 11:41	67-66-3	
Chloromethane	ND	ug/kg	5.0	0.79	1	11/03/22 10:13	11/03/22 11:41	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.0	0.72	1	11/03/22 10:13	11/03/22 11:41	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.0	0.59	1	11/03/22 10:13	11/03/22 11:41	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	9.9	1.8	1	11/03/22 10:13	11/03/22 11:41	96-12-8	
Dibromochloromethane	ND	ug/kg	5.0	0.64	1	11/03/22 10:13	11/03/22 11:41	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	0.53	1	11/03/22 10:13	11/03/22 11:41	106-93-4	
Dibromomethane	ND	ug/kg	5.0	0.59	1	11/03/22 10:13	11/03/22 11:41	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.0	0.62	1	11/03/22 10:13	11/03/22 11:41	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.0	0.71	1	11/03/22 10:13	11/03/22 11:41	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.0	0.80	1	11/03/22 10:13	11/03/22 11:41	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.0	1.2	1	11/03/22 10:13	11/03/22 11:41	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.0	0.39	1	11/03/22 10:13	11/03/22 11:41	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	0.40	1	11/03/22 10:13	11/03/22 11:41	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.0	1.1	1	11/03/22 10:13	11/03/22 11:41	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.0	0.63	1	11/03/22 10:13	11/03/22 11:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.0	0.43	1	11/03/22 10:13	11/03/22 11:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	0.67	1	11/03/22 10:13	11/03/22 11:41	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.0	0.97	1	11/03/22 10:13	11/03/22 11:41	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.0	0.69	1	11/03/22 10:13	11/03/22 11:41	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.0	0.47	1	11/03/22 10:13	11/03/22 11:41	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.0	0.89	1	11/03/22 10:13	11/03/22 11:41	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.0	0.53	1	11/03/22 10:13	11/03/22 11:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.0	0.45	1	11/03/22 10:13	11/03/22 11:41	10061-02-6	
Ethylbenzene	ND	ug/kg	5.0	0.46	1	11/03/22 10:13	11/03/22 11:41	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	0.84	1	11/03/22 10:13	11/03/22 11:41	87-68-3	
2-Hexanone	ND	ug/kg	19.8	2.5	1	11/03/22 10:13	11/03/22 11:41	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	0.56	1	11/03/22 10:13	11/03/22 11:41	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.0	0.68	1	11/03/22 10:13	11/03/22 11:41	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW103-(19-21) Lab ID: 60414618001 Collected: 10/26/22 09:05 Received: 11/01/22 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	5.0	2.7	1	11/03/22 10:13	11/03/22 11:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	9.9	3.0	1	11/03/22 10:13	11/03/22 11:41	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.0	0.48	1	11/03/22 10:13	11/03/22 11:41	1634-04-4	
Naphthalene	ND	ug/kg	9.9	0.81	1	11/03/22 10:13	11/03/22 11:41	91-20-3	
n-Propylbenzene	ND	ug/kg	5.0	0.80	1	11/03/22 10:13	11/03/22 11:41	103-65-1	
Styrene	ND	ug/kg	5.0	0.58	1	11/03/22 10:13	11/03/22 11:41	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	1.0	1	11/03/22 10:13	11/03/22 11:41	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	0.99	1	11/03/22 10:13	11/03/22 11:41	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	0.41	1	11/03/22 10:13	11/03/22 11:41	127-18-4	
Toluene	0.74J	ug/kg	5.0	0.35	1	11/03/22 10:13	11/03/22 11:41	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	0.79	1	11/03/22 10:13	11/03/22 11:41	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	0.79	1	11/03/22 10:13	11/03/22 11:41	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.0	0.74	1	11/03/22 10:13	11/03/22 11:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.0	0.62	1	11/03/22 10:13	11/03/22 11:41	79-00-5	
Trichloroethene	ND	ug/kg	5.0	0.72	1	11/03/22 10:13	11/03/22 11:41	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	0.61	1	11/03/22 10:13	11/03/22 11:41	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.0	2.1	1	11/03/22 10:13	11/03/22 11:41	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	0.66	1	11/03/22 10:13	11/03/22 11:41	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	0.62	1	11/03/22 10:13	11/03/22 11:41	108-67-8	
Vinyl chloride	ND	ug/kg	5.0	0.66	1	11/03/22 10:13	11/03/22 11:41	75-01-4	
Xylene (Total)	ND	ug/kg	5.0	1.1	1	11/03/22 10:13	11/03/22 11:41	1330-20-7	
Surrogates									
Toluene-d8 (S)	98	%	80-120		1	11/03/22 10:13	11/03/22 11:41	2037-26-5	
4-Bromofluorobenzene (S)	104	%	80-125		1	11/03/22 10:13	11/03/22 11:41	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1	11/03/22 10:13	11/03/22 11:41	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City									
Percent Moisture	12.4	%	0.50	0.50	1		11/03/22 11:03		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW104-(64-66) Lab ID: 60414618002 Collected: 10/26/22 17:00 Received: 11/01/22 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	22.1	17.9	1	11/03/22 10:13	11/03/22 11:58	67-64-1	
Benzene	ND	ug/kg	5.5	0.55	1	11/03/22 10:13	11/03/22 11:58	71-43-2	
Bromobenzene	ND	ug/kg	5.5	1.0	1	11/03/22 10:13	11/03/22 11:58	108-86-1	
Bromochloromethane	ND	ug/kg	5.5	0.66	1	11/03/22 10:13	11/03/22 11:58	74-97-5	
Bromodichloromethane	ND	ug/kg	5.5	0.66	1	11/03/22 10:13	11/03/22 11:58	75-27-4	
Bromoform	ND	ug/kg	5.5	0.64	1	11/03/22 10:13	11/03/22 11:58	75-25-2	
Bromomethane	ND	ug/kg	5.5	3.3	1	11/03/22 10:13	11/03/22 11:58	74-83-9	
2-Butanone (MEK)	ND	ug/kg	11.1	3.8	1	11/03/22 10:13	11/03/22 11:58	78-93-3	
n-Butylbenzene	ND	ug/kg	5.5	0.72	1	11/03/22 10:13	11/03/22 11:58	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.5	0.81	1	11/03/22 10:13	11/03/22 11:58	135-98-8	
tert-Butylbenzene	ND	ug/kg	27.6	0.98	1	11/03/22 10:13	11/03/22 11:58	98-06-6	
Carbon disulfide	ND	ug/kg	5.5	0.71	1	11/03/22 10:13	11/03/22 11:58	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.5	0.95	1	11/03/22 10:13	11/03/22 11:58	56-23-5	
Chlorobenzene	ND	ug/kg	5.5	0.69	1	11/03/22 10:13	11/03/22 11:58	108-90-7	
Chloroethane	ND	ug/kg	5.5	1.7	1	11/03/22 10:13	11/03/22 11:58	75-00-3	
Chloroform	ND	ug/kg	5.5	0.55	1	11/03/22 10:13	11/03/22 11:58	67-66-3	
Chloromethane	ND	ug/kg	5.5	0.88	1	11/03/22 10:13	11/03/22 11:58	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.5	0.81	1	11/03/22 10:13	11/03/22 11:58	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.5	0.66	1	11/03/22 10:13	11/03/22 11:58	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	11.1	2.0	1	11/03/22 10:13	11/03/22 11:58	96-12-8	
Dibromochloromethane	ND	ug/kg	5.5	0.71	1	11/03/22 10:13	11/03/22 11:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.5	0.59	1	11/03/22 10:13	11/03/22 11:58	106-93-4	
Dibromomethane	ND	ug/kg	5.5	0.66	1	11/03/22 10:13	11/03/22 11:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.5	0.69	1	11/03/22 10:13	11/03/22 11:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.5	0.80	1	11/03/22 10:13	11/03/22 11:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.5	0.90	1	11/03/22 10:13	11/03/22 11:58	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.5	1.3	1	11/03/22 10:13	11/03/22 11:58	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.5	0.43	1	11/03/22 10:13	11/03/22 11:58	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.5	0.44	1	11/03/22 10:13	11/03/22 11:58	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.5	1.2	1	11/03/22 10:13	11/03/22 11:58	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.5	0.71	1	11/03/22 10:13	11/03/22 11:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.5	0.48	1	11/03/22 10:13	11/03/22 11:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.5	0.75	1	11/03/22 10:13	11/03/22 11:58	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.5	1.1	1	11/03/22 10:13	11/03/22 11:58	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.5	0.77	1	11/03/22 10:13	11/03/22 11:58	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.5	0.53	1	11/03/22 10:13	11/03/22 11:58	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.5	0.99	1	11/03/22 10:13	11/03/22 11:58	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.5	0.59	1	11/03/22 10:13	11/03/22 11:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.5	0.51	1	11/03/22 10:13	11/03/22 11:58	10061-02-6	
Ethylbenzene	ND	ug/kg	5.5	0.51	1	11/03/22 10:13	11/03/22 11:58	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.5	0.94	1	11/03/22 10:13	11/03/22 11:58	87-68-3	
2-Hexanone	ND	ug/kg	22.1	2.8	1	11/03/22 10:13	11/03/22 11:58	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.5	0.63	1	11/03/22 10:13	11/03/22 11:58	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.5	0.76	1	11/03/22 10:13	11/03/22 11:58	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW104-(64-66) Lab ID: 60414618002 Collected: 10/26/22 17:00 Received: 11/01/22 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	5.5	3.0	1	11/03/22 10:13	11/03/22 11:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.1	3.4	1	11/03/22 10:13	11/03/22 11:58	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.5	0.53	1	11/03/22 10:13	11/03/22 11:58	1634-04-4	
Naphthalene	ND	ug/kg	11.1	0.91	1	11/03/22 10:13	11/03/22 11:58	91-20-3	
n-Propylbenzene	ND	ug/kg	5.5	0.89	1	11/03/22 10:13	11/03/22 11:58	103-65-1	
Styrene	ND	ug/kg	5.5	0.65	1	11/03/22 10:13	11/03/22 11:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.5	1.1	1	11/03/22 10:13	11/03/22 11:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.5	1.1	1	11/03/22 10:13	11/03/22 11:58	79-34-5	
Tetrachloroethene	ND	ug/kg	5.5	0.46	1	11/03/22 10:13	11/03/22 11:58	127-18-4	
Toluene	ND	ug/kg	5.5	0.39	1	11/03/22 10:13	11/03/22 11:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.5	0.88	1	11/03/22 10:13	11/03/22 11:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.5	0.88	1	11/03/22 10:13	11/03/22 11:58	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.5	0.83	1	11/03/22 10:13	11/03/22 11:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.5	0.70	1	11/03/22 10:13	11/03/22 11:58	79-00-5	
Trichloroethene	ND	ug/kg	5.5	0.80	1	11/03/22 10:13	11/03/22 11:58	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.5	0.68	1	11/03/22 10:13	11/03/22 11:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.5	2.4	1	11/03/22 10:13	11/03/22 11:58	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.5	0.74	1	11/03/22 10:13	11/03/22 11:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.5	0.69	1	11/03/22 10:13	11/03/22 11:58	108-67-8	
Vinyl chloride	ND	ug/kg	5.5	0.74	1	11/03/22 10:13	11/03/22 11:58	75-01-4	
Xylene (Total)	ND	ug/kg	5.5	1.3	1	11/03/22 10:13	11/03/22 11:58	1330-20-7	
Surrogates									
Toluene-d8 (S)	97	%	80-120		1	11/03/22 10:13	11/03/22 11:58	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-125		1	11/03/22 10:13	11/03/22 11:58	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1	11/03/22 10:13	11/03/22 11:58	2199-69-1	

Percent Moisture

Analytical Method: ASTM D2974

Pace Analytical Services - Kansas City

Percent Moisture	21.1	%	0.50	0.50	1	11/03/22 11:03
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW101-(114-116) Lab ID: 60414618003 Collected: 10/28/22 13:30 Received: 11/01/22 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	18.1	14.6	1	11/03/22 10:13	11/03/22 12:14	67-64-1	
Benzene	0.79J	ug/kg	4.5	0.45	1	11/03/22 10:13	11/03/22 12:14	71-43-2	
Bromobenzene	ND	ug/kg	4.5	0.85	1	11/03/22 10:13	11/03/22 12:14	108-86-1	
Bromochloromethane	ND	ug/kg	4.5	0.54	1	11/03/22 10:13	11/03/22 12:14	74-97-5	
Bromodichloromethane	ND	ug/kg	4.5	0.54	1	11/03/22 10:13	11/03/22 12:14	75-27-4	
Bromoform	ND	ug/kg	4.5	0.52	1	11/03/22 10:13	11/03/22 12:14	75-25-2	
Bromomethane	ND	ug/kg	4.5	2.7	1	11/03/22 10:13	11/03/22 12:14	74-83-9	
2-Butanone (MEK)	ND	ug/kg	9.0	3.1	1	11/03/22 10:13	11/03/22 12:14	78-93-3	
n-Butylbenzene	ND	ug/kg	4.5	0.59	1	11/03/22 10:13	11/03/22 12:14	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.5	0.66	1	11/03/22 10:13	11/03/22 12:14	135-98-8	
tert-Butylbenzene	ND	ug/kg	22.6	0.80	1	11/03/22 10:13	11/03/22 12:14	98-06-6	
Carbon disulfide	ND	ug/kg	4.5	0.58	1	11/03/22 10:13	11/03/22 12:14	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.5	0.77	1	11/03/22 10:13	11/03/22 12:14	56-23-5	
Chlorobenzene	ND	ug/kg	4.5	0.57	1	11/03/22 10:13	11/03/22 12:14	108-90-7	
Chloroethane	ND	ug/kg	4.5	1.4	1	11/03/22 10:13	11/03/22 12:14	75-00-3	
Chloroform	ND	ug/kg	4.5	0.45	1	11/03/22 10:13	11/03/22 12:14	67-66-3	
Chloromethane	ND	ug/kg	4.5	0.72	1	11/03/22 10:13	11/03/22 12:14	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.5	0.66	1	11/03/22 10:13	11/03/22 12:14	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.5	0.54	1	11/03/22 10:13	11/03/22 12:14	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	9.0	1.7	1	11/03/22 10:13	11/03/22 12:14	96-12-8	
Dibromochloromethane	ND	ug/kg	4.5	0.58	1	11/03/22 10:13	11/03/22 12:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.5	0.48	1	11/03/22 10:13	11/03/22 12:14	106-93-4	
Dibromomethane	ND	ug/kg	4.5	0.54	1	11/03/22 10:13	11/03/22 12:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.5	0.56	1	11/03/22 10:13	11/03/22 12:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.5	0.65	1	11/03/22 10:13	11/03/22 12:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.5	0.73	1	11/03/22 10:13	11/03/22 12:14	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.5	1.1	1	11/03/22 10:13	11/03/22 12:14	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.5	0.35	1	11/03/22 10:13	11/03/22 12:14	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.5	0.36	1	11/03/22 10:13	11/03/22 12:14	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	4.5	1.0	1	11/03/22 10:13	11/03/22 12:14	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.5	0.58	1	11/03/22 10:13	11/03/22 12:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.5	0.39	1	11/03/22 10:13	11/03/22 12:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.5	0.61	1	11/03/22 10:13	11/03/22 12:14	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.5	0.88	1	11/03/22 10:13	11/03/22 12:14	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.5	0.63	1	11/03/22 10:13	11/03/22 12:14	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.5	0.43	1	11/03/22 10:13	11/03/22 12:14	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.5	0.81	1	11/03/22 10:13	11/03/22 12:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.5	0.48	1	11/03/22 10:13	11/03/22 12:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.5	0.41	1	11/03/22 10:13	11/03/22 12:14	10061-02-6	
Ethylbenzene	2.1J	ug/kg	4.5	0.42	1	11/03/22 10:13	11/03/22 12:14	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.5	0.77	1	11/03/22 10:13	11/03/22 12:14	87-68-3	
2-Hexanone	ND	ug/kg	18.1	2.3	1	11/03/22 10:13	11/03/22 12:14	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.5	0.52	1	11/03/22 10:13	11/03/22 12:14	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.5	0.62	1	11/03/22 10:13	11/03/22 12:14	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW101-(114-116) **Lab ID:** 60414618003 **Collected:** 10/28/22 13:30 **Received:** 11/01/22 08:50 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.5	2.5	1	11/03/22 10:13	11/03/22 12:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	9.0	2.7	1	11/03/22 10:13	11/03/22 12:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.5	0.43	1	11/03/22 10:13	11/03/22 12:14	1634-04-4	
Naphthalene	ND	ug/kg	9.0	0.74	1	11/03/22 10:13	11/03/22 12:14	91-20-3	
n-Propylbenzene	ND	ug/kg	4.5	0.73	1	11/03/22 10:13	11/03/22 12:14	103-65-1	
Styrene	ND	ug/kg	4.5	0.53	1	11/03/22 10:13	11/03/22 12:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.5	0.92	1	11/03/22 10:13	11/03/22 12:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.5	0.90	1	11/03/22 10:13	11/03/22 12:14	79-34-5	
Tetrachloroethene	ND	ug/kg	4.5	0.37	1	11/03/22 10:13	11/03/22 12:14	127-18-4	
Toluene	2.3J	ug/kg	4.5	0.32	1	11/03/22 10:13	11/03/22 12:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.5	0.72	1	11/03/22 10:13	11/03/22 12:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.5	0.72	1	11/03/22 10:13	11/03/22 12:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.5	0.68	1	11/03/22 10:13	11/03/22 12:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.5	0.57	1	11/03/22 10:13	11/03/22 12:14	79-00-5	
Trichloroethene	ND	ug/kg	4.5	0.66	1	11/03/22 10:13	11/03/22 12:14	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.5	0.55	1	11/03/22 10:13	11/03/22 12:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.5	1.9	1	11/03/22 10:13	11/03/22 12:14	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.5	0.61	1	11/03/22 10:13	11/03/22 12:14	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.5	0.57	1	11/03/22 10:13	11/03/22 12:14	108-67-8	
Vinyl chloride	ND	ug/kg	4.5	0.60	1	11/03/22 10:13	11/03/22 12:14	75-01-4	
Xylene (Total)	1.1J	ug/kg	4.5	1.0	1	11/03/22 10:13	11/03/22 12:14	1330-20-7	
Surrogates									
Toluene-d8 (S)	96	%	80-120		1	11/03/22 10:13	11/03/22 12:14	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-125		1	11/03/22 10:13	11/03/22 12:14	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1	11/03/22 10:13	11/03/22 12:14	2199-69-1	

Percent Moisture

Analytical Method: ASTM D2974

Pace Analytical Services - Kansas City

Percent Moisture	20.7	%	0.50	0.50	1	11/03/22 11:03
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW102-(117-119) Lab ID: 60414618004 Collected: 10/30/22 10:27 Received: 11/01/22 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	20.3	16.5	1	11/03/22 10:13	11/03/22 12:30	67-64-1	
Benzene	ND	ug/kg	5.1	0.50	1	11/03/22 10:13	11/03/22 12:30	71-43-2	
Bromobenzene	ND	ug/kg	5.1	0.95	1	11/03/22 10:13	11/03/22 12:30	108-86-1	
Bromochloromethane	ND	ug/kg	5.1	0.61	1	11/03/22 10:13	11/03/22 12:30	74-97-5	
Bromodichloromethane	ND	ug/kg	5.1	0.61	1	11/03/22 10:13	11/03/22 12:30	75-27-4	
Bromoform	ND	ug/kg	5.1	0.58	1	11/03/22 10:13	11/03/22 12:30	75-25-2	
Bromomethane	ND	ug/kg	5.1	3.0	1	11/03/22 10:13	11/03/22 12:30	74-83-9	
2-Butanone (MEK)	ND	ug/kg	10.2	3.5	1	11/03/22 10:13	11/03/22 12:30	78-93-3	
n-Butylbenzene	ND	ug/kg	5.1	0.66	1	11/03/22 10:13	11/03/22 12:30	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.1	0.74	1	11/03/22 10:13	11/03/22 12:30	135-98-8	
tert-Butylbenzene	ND	ug/kg	25.4	0.90	1	11/03/22 10:13	11/03/22 12:30	98-06-6	
Carbon disulfide	ND	ug/kg	5.1	0.65	1	11/03/22 10:13	11/03/22 12:30	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.1	0.87	1	11/03/22 10:13	11/03/22 12:30	56-23-5	
Chlorobenzene	ND	ug/kg	5.1	0.64	1	11/03/22 10:13	11/03/22 12:30	108-90-7	
Chloroethane	ND	ug/kg	5.1	1.5	1	11/03/22 10:13	11/03/22 12:30	75-00-3	
Chloroform	ND	ug/kg	5.1	0.50	1	11/03/22 10:13	11/03/22 12:30	67-66-3	
Chloromethane	ND	ug/kg	5.1	0.81	1	11/03/22 10:13	11/03/22 12:30	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.1	0.74	1	11/03/22 10:13	11/03/22 12:30	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.1	0.61	1	11/03/22 10:13	11/03/22 12:30	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10.2	1.9	1	11/03/22 10:13	11/03/22 12:30	96-12-8	
Dibromochloromethane	ND	ug/kg	5.1	0.66	1	11/03/22 10:13	11/03/22 12:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.1	0.54	1	11/03/22 10:13	11/03/22 12:30	106-93-4	
Dibromomethane	ND	ug/kg	5.1	0.61	1	11/03/22 10:13	11/03/22 12:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.1	0.64	1	11/03/22 10:13	11/03/22 12:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.1	0.73	1	11/03/22 10:13	11/03/22 12:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.1	0.82	1	11/03/22 10:13	11/03/22 12:30	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.1	1.2	1	11/03/22 10:13	11/03/22 12:30	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.1	0.40	1	11/03/22 10:13	11/03/22 12:30	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.1	0.41	1	11/03/22 10:13	11/03/22 12:30	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.1	1.1	1	11/03/22 10:13	11/03/22 12:30	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.1	0.65	1	11/03/22 10:13	11/03/22 12:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.1	0.44	1	11/03/22 10:13	11/03/22 12:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.1	0.69	1	11/03/22 10:13	11/03/22 12:30	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.1	0.99	1	11/03/22 10:13	11/03/22 12:30	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.1	0.70	1	11/03/22 10:13	11/03/22 12:30	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.1	0.48	1	11/03/22 10:13	11/03/22 12:30	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.1	0.91	1	11/03/22 10:13	11/03/22 12:30	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.1	0.54	1	11/03/22 10:13	11/03/22 12:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.1	0.46	1	11/03/22 10:13	11/03/22 12:30	10061-02-6	
Ethylbenzene	ND	ug/kg	5.1	0.47	1	11/03/22 10:13	11/03/22 12:30	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.1	0.86	1	11/03/22 10:13	11/03/22 12:30	87-68-3	
2-Hexanone	ND	ug/kg	20.3	2.5	1	11/03/22 10:13	11/03/22 12:30	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.1	0.58	1	11/03/22 10:13	11/03/22 12:30	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.1	0.70	1	11/03/22 10:13	11/03/22 12:30	99-87-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW102-(117-119) **Lab ID:** 60414618004 **Collected:** 10/30/22 10:27 **Received:** 11/01/22 08:50 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	5.1	2.8	1	11/03/22 10:13	11/03/22 12:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.2	3.1	1	11/03/22 10:13	11/03/22 12:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.1	0.49	1	11/03/22 10:13	11/03/22 12:30	1634-04-4	
Naphthalene	ND	ug/kg	10.2	0.83	1	11/03/22 10:13	11/03/22 12:30	91-20-3	
n-Propylbenzene	ND	ug/kg	5.1	0.82	1	11/03/22 10:13	11/03/22 12:30	103-65-1	
Styrene	ND	ug/kg	5.1	0.60	1	11/03/22 10:13	11/03/22 12:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.1	1.0	1	11/03/22 10:13	11/03/22 12:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.1	1.0	1	11/03/22 10:13	11/03/22 12:30	79-34-5	
Tetrachloroethene	ND	ug/kg	5.1	0.42	1	11/03/22 10:13	11/03/22 12:30	127-18-4	
Toluene	0.95J	ug/kg	5.1	0.36	1	11/03/22 10:13	11/03/22 12:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.1	0.81	1	11/03/22 10:13	11/03/22 12:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.1	0.81	1	11/03/22 10:13	11/03/22 12:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.1	0.76	1	11/03/22 10:13	11/03/22 12:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.1	0.64	1	11/03/22 10:13	11/03/22 12:30	79-00-5	
Trichloroethene	ND	ug/kg	5.1	0.74	1	11/03/22 10:13	11/03/22 12:30	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.1	0.62	1	11/03/22 10:13	11/03/22 12:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.1	2.2	1	11/03/22 10:13	11/03/22 12:30	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.1	0.68	1	11/03/22 10:13	11/03/22 12:30	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.1	0.64	1	11/03/22 10:13	11/03/22 12:30	108-67-8	
Vinyl chloride	ND	ug/kg	5.1	0.68	1	11/03/22 10:13	11/03/22 12:30	75-01-4	
Xylene (Total)	ND	ug/kg	5.1	1.2	1	11/03/22 10:13	11/03/22 12:30	1330-20-7	
Surrogates									
Toluene-d8 (S)	96	%	80-120		1	11/03/22 10:13	11/03/22 12:30	2037-26-5	
4-Bromofluorobenzene (S)	104	%	80-125		1	11/03/22 10:13	11/03/22 12:30	460-00-4	
1,2-Dichlorobenzene-d4 (S)	105	%	80-120		1	11/03/22 10:13	11/03/22 12:30	2199-69-1	

Percent Moisture

Analytical Method: ASTM D2974

Pace Analytical Services - Kansas City

Percent Moisture	14.9	%	0.50	0.50	1	11/03/22 11:03
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW11-(44-46) Lab ID: 60414618005 Collected: 10/31/22 10:40 Received: 11/01/22 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	17.8	14.4	1	11/03/22 10:13	11/03/22 12:46	67-64-1	
Benzene	0.56J	ug/kg	4.5	0.44	1	11/03/22 10:13	11/03/22 12:46	71-43-2	
Bromobenzene	ND	ug/kg	4.5	0.84	1	11/03/22 10:13	11/03/22 12:46	108-86-1	
Bromochloromethane	ND	ug/kg	4.5	0.53	1	11/03/22 10:13	11/03/22 12:46	74-97-5	
Bromodichloromethane	ND	ug/kg	4.5	0.53	1	11/03/22 10:13	11/03/22 12:46	75-27-4	
Bromoform	ND	ug/kg	4.5	0.51	1	11/03/22 10:13	11/03/22 12:46	75-25-2	
Bromomethane	ND	ug/kg	4.5	2.6	1	11/03/22 10:13	11/03/22 12:46	74-83-9	
2-Butanone (MEK)	ND	ug/kg	8.9	3.0	1	11/03/22 10:13	11/03/22 12:46	78-93-3	
n-Butylbenzene	ND	ug/kg	4.5	0.58	1	11/03/22 10:13	11/03/22 12:46	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.5	0.65	1	11/03/22 10:13	11/03/22 12:46	135-98-8	
tert-Butylbenzene	ND	ug/kg	22.3	0.79	1	11/03/22 10:13	11/03/22 12:46	98-06-6	
Carbon disulfide	ND	ug/kg	4.5	0.57	1	11/03/22 10:13	11/03/22 12:46	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.5	0.76	1	11/03/22 10:13	11/03/22 12:46	56-23-5	
Chlorobenzene	ND	ug/kg	4.5	0.56	1	11/03/22 10:13	11/03/22 12:46	108-90-7	
Chloroethane	ND	ug/kg	4.5	1.3	1	11/03/22 10:13	11/03/22 12:46	75-00-3	
Chloroform	ND	ug/kg	4.5	0.44	1	11/03/22 10:13	11/03/22 12:46	67-66-3	
Chloromethane	ND	ug/kg	4.5	0.71	1	11/03/22 10:13	11/03/22 12:46	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.5	0.65	1	11/03/22 10:13	11/03/22 12:46	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.5	0.53	1	11/03/22 10:13	11/03/22 12:46	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	8.9	1.6	1	11/03/22 10:13	11/03/22 12:46	96-12-8	
Dibromochloromethane	ND	ug/kg	4.5	0.57	1	11/03/22 10:13	11/03/22 12:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.5	0.48	1	11/03/22 10:13	11/03/22 12:46	106-93-4	
Dibromomethane	ND	ug/kg	4.5	0.53	1	11/03/22 10:13	11/03/22 12:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.5	0.56	1	11/03/22 10:13	11/03/22 12:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.5	0.64	1	11/03/22 10:13	11/03/22 12:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.5	0.72	1	11/03/22 10:13	11/03/22 12:46	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.5	1.1	1	11/03/22 10:13	11/03/22 12:46	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.5	0.35	1	11/03/22 10:13	11/03/22 12:46	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.5	0.36	1	11/03/22 10:13	11/03/22 12:46	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	4.5	0.99	1	11/03/22 10:13	11/03/22 12:46	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.5	0.57	1	11/03/22 10:13	11/03/22 12:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.5	0.38	1	11/03/22 10:13	11/03/22 12:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.5	0.60	1	11/03/22 10:13	11/03/22 12:46	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.5	0.87	1	11/03/22 10:13	11/03/22 12:46	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.5	0.62	1	11/03/22 10:13	11/03/22 12:46	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.5	0.42	1	11/03/22 10:13	11/03/22 12:46	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.5	0.80	1	11/03/22 10:13	11/03/22 12:46	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.5	0.47	1	11/03/22 10:13	11/03/22 12:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.5	0.41	1	11/03/22 10:13	11/03/22 12:46	10061-02-6	
Ethylbenzene	1.3J	ug/kg	4.5	0.41	1	11/03/22 10:13	11/03/22 12:46	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.5	0.76	1	11/03/22 10:13	11/03/22 12:46	87-68-3	
2-Hexanone	ND	ug/kg	17.8	2.2	1	11/03/22 10:13	11/03/22 12:46	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.5	0.51	1	11/03/22 10:13	11/03/22 12:46	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.5	0.61	1	11/03/22 10:13	11/03/22 12:46	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW11-(44-46) **Lab ID:** 60414618005 **Collected:** 10/31/22 10:40 **Received:** 11/01/22 08:50 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.5	2.4	1	11/03/22 10:13	11/03/22 12:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	8.9	2.7	1	11/03/22 10:13	11/03/22 12:46	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.5	0.43	1	11/03/22 10:13	11/03/22 12:46	1634-04-4	
Naphthalene	ND	ug/kg	8.9	0.73	1	11/03/22 10:13	11/03/22 12:46	91-20-3	
n-Propylbenzene	ND	ug/kg	4.5	0.71	1	11/03/22 10:13	11/03/22 12:46	103-65-1	
Styrene	ND	ug/kg	4.5	0.52	1	11/03/22 10:13	11/03/22 12:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.5	0.91	1	11/03/22 10:13	11/03/22 12:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.5	0.89	1	11/03/22 10:13	11/03/22 12:46	79-34-5	
Tetrachloroethene	ND	ug/kg	4.5	0.37	1	11/03/22 10:13	11/03/22 12:46	127-18-4	
Toluene	1.6J	ug/kg	4.5	0.31	1	11/03/22 10:13	11/03/22 12:46	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.5	0.71	1	11/03/22 10:13	11/03/22 12:46	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.5	0.71	1	11/03/22 10:13	11/03/22 12:46	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.5	0.67	1	11/03/22 10:13	11/03/22 12:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.5	0.56	1	11/03/22 10:13	11/03/22 12:46	79-00-5	
Trichloroethene	ND	ug/kg	4.5	0.65	1	11/03/22 10:13	11/03/22 12:46	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.5	0.55	1	11/03/22 10:13	11/03/22 12:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.5	1.9	1	11/03/22 10:13	11/03/22 12:46	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.5	0.60	1	11/03/22 10:13	11/03/22 12:46	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.5	0.56	1	11/03/22 10:13	11/03/22 12:46	108-67-8	
Vinyl chloride	ND	ug/kg	4.5	0.59	1	11/03/22 10:13	11/03/22 12:46	75-01-4	
Xylene (Total)	ND	ug/kg	4.5	1.0	1	11/03/22 10:13	11/03/22 12:46	1330-20-7	
Surrogates									
Toluene-d8 (S)	96	%	80-120		1	11/03/22 10:13	11/03/22 12:46	2037-26-5	
4-Bromofluorobenzene (S)	106	%	80-125		1	11/03/22 10:13	11/03/22 12:46	460-00-4	
1,2-Dichlorobenzene-d4 (S)	106	%	80-120		1	11/03/22 10:13	11/03/22 12:46	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City									
Percent Moisture	14.5	%	0.50	0.50	1		11/03/22 11:03		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW4B-(24-26) Lab ID: 60414618006 Collected: 10/31/22 14:00 Received: 11/01/22 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	19.5	15.8	1	11/03/22 10:13	11/03/22 13:02	67-64-1	
Benzene	0.61J	ug/kg	4.9	0.48	1	11/03/22 10:13	11/03/22 13:02	71-43-2	
Bromobenzene	ND	ug/kg	4.9	0.92	1	11/03/22 10:13	11/03/22 13:02	108-86-1	
Bromochloromethane	ND	ug/kg	4.9	0.59	1	11/03/22 10:13	11/03/22 13:02	74-97-5	
Bromodichloromethane	ND	ug/kg	4.9	0.59	1	11/03/22 10:13	11/03/22 13:02	75-27-4	
Bromoform	ND	ug/kg	4.9	0.56	1	11/03/22 10:13	11/03/22 13:02	75-25-2	
Bromomethane	ND	ug/kg	4.9	2.9	1	11/03/22 10:13	11/03/22 13:02	74-83-9	
2-Butanone (MEK)	ND	ug/kg	9.7	3.3	1	11/03/22 10:13	11/03/22 13:02	78-93-3	
n-Butylbenzene	ND	ug/kg	4.9	0.63	1	11/03/22 10:13	11/03/22 13:02	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.9	0.71	1	11/03/22 10:13	11/03/22 13:02	135-98-8	
tert-Butylbenzene	ND	ug/kg	24.4	0.86	1	11/03/22 10:13	11/03/22 13:02	98-06-6	
Carbon disulfide	ND	ug/kg	4.9	0.63	1	11/03/22 10:13	11/03/22 13:02	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.9	0.84	1	11/03/22 10:13	11/03/22 13:02	56-23-5	
Chlorobenzene	ND	ug/kg	4.9	0.61	1	11/03/22 10:13	11/03/22 13:02	108-90-7	
Chloroethane	ND	ug/kg	4.9	1.5	1	11/03/22 10:13	11/03/22 13:02	75-00-3	
Chloroform	ND	ug/kg	4.9	0.48	1	11/03/22 10:13	11/03/22 13:02	67-66-3	
Chloromethane	ND	ug/kg	4.9	0.78	1	11/03/22 10:13	11/03/22 13:02	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.9	0.71	1	11/03/22 10:13	11/03/22 13:02	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.9	0.58	1	11/03/22 10:13	11/03/22 13:02	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	9.7	1.8	1	11/03/22 10:13	11/03/22 13:02	96-12-8	
Dibromochloromethane	ND	ug/kg	4.9	0.63	1	11/03/22 10:13	11/03/22 13:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.9	0.52	1	11/03/22 10:13	11/03/22 13:02	106-93-4	
Dibromomethane	ND	ug/kg	4.9	0.58	1	11/03/22 10:13	11/03/22 13:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.9	0.61	1	11/03/22 10:13	11/03/22 13:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.9	0.70	1	11/03/22 10:13	11/03/22 13:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.9	0.79	1	11/03/22 10:13	11/03/22 13:02	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.9	1.2	1	11/03/22 10:13	11/03/22 13:02	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.9	0.38	1	11/03/22 10:13	11/03/22 13:02	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.9	0.39	1	11/03/22 10:13	11/03/22 13:02	107-06-2	
1,2-Dichloroethene (Total)	141	ug/kg	4.9	1.1	1	11/03/22 10:13	11/03/22 13:02	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.9	0.62	1	11/03/22 10:13	11/03/22 13:02	75-35-4	
cis-1,2-Dichloroethene	131	ug/kg	4.9	0.42	1	11/03/22 10:13	11/03/22 13:02	156-59-2	
trans-1,2-Dichloroethene	10.3	ug/kg	4.9	0.66	1	11/03/22 10:13	11/03/22 13:02	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.9	0.95	1	11/03/22 10:13	11/03/22 13:02	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.9	0.67	1	11/03/22 10:13	11/03/22 13:02	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.9	0.46	1	11/03/22 10:13	11/03/22 13:02	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.9	0.88	1	11/03/22 10:13	11/03/22 13:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.9	0.52	1	11/03/22 10:13	11/03/22 13:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.9	0.45	1	11/03/22 10:13	11/03/22 13:02	10061-02-6	
Ethylbenzene	0.83J	ug/kg	4.9	0.45	1	11/03/22 10:13	11/03/22 13:02	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.9	0.83	1	11/03/22 10:13	11/03/22 13:02	87-68-3	
2-Hexanone	ND	ug/kg	19.5	2.4	1	11/03/22 10:13	11/03/22 13:02	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.9	0.56	1	11/03/22 10:13	11/03/22 13:02	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.9	0.67	1	11/03/22 10:13	11/03/22 13:02	99-87-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60414618

Sample: MW4B-(24-26) **Lab ID:** 60414618006 **Collected:** 10/31/22 14:00 **Received:** 11/01/22 08:50 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.9	2.7	1	11/03/22 10:13	11/03/22 13:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	9.7	3.0	1	11/03/22 10:13	11/03/22 13:02	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.9	0.47	1	11/03/22 10:13	11/03/22 13:02	1634-04-4	
Naphthalene	ND	ug/kg	9.7	0.80	1	11/03/22 10:13	11/03/22 13:02	91-20-3	
n-Propylbenzene	ND	ug/kg	4.9	0.78	1	11/03/22 10:13	11/03/22 13:02	103-65-1	
Styrene	ND	ug/kg	4.9	0.57	1	11/03/22 10:13	11/03/22 13:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.9	0.99	1	11/03/22 10:13	11/03/22 13:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.9	0.97	1	11/03/22 10:13	11/03/22 13:02	79-34-5	
Tetrachloroethene	ND	ug/kg	4.9	0.40	1	11/03/22 10:13	11/03/22 13:02	127-18-4	
Toluene	1.2J	ug/kg	4.9	0.34	1	11/03/22 10:13	11/03/22 13:02	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.9	0.78	1	11/03/22 10:13	11/03/22 13:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.9	0.78	1	11/03/22 10:13	11/03/22 13:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.9	0.73	1	11/03/22 10:13	11/03/22 13:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.9	0.61	1	11/03/22 10:13	11/03/22 13:02	79-00-5	
Trichlorofluoromethane	ND	ug/kg	4.9	0.60	1	11/03/22 10:13	11/03/22 13:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.9	2.1	1	11/03/22 10:13	11/03/22 13:02	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.9	0.65	1	11/03/22 10:13	11/03/22 13:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.9	0.61	1	11/03/22 10:13	11/03/22 13:02	108-67-8	
Vinyl chloride	6.5	ug/kg	4.9	0.65	1	11/03/22 10:13	11/03/22 13:02	75-01-4	
Xylene (Total)	ND	ug/kg	4.9	1.1	1	11/03/22 10:13	11/03/22 13:02	1330-20-7	
Surrogates									
Toluene-d8 (S)	96	%	80-120		1	11/03/22 10:13	11/03/22 13:02	2037-26-5	
4-Bromofluorobenzene (S)	105	%	80-125		1	11/03/22 10:13	11/03/22 13:02	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1	11/03/22 10:13	11/03/22 13:02	2199-69-1	
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Trichloroethene	3760	ug/kg	253	22.1	1	11/04/22 08:46	11/04/22 11:05	79-01-6	
Surrogates									
Toluene-d8 (S)	102	%	80-120		1	11/04/22 08:46	11/04/22 11:05	2037-26-5	
4-Bromofluorobenzene (S)	101	%	83-119		1	11/04/22 08:46	11/04/22 11:05	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1	11/04/22 08:46	11/04/22 11:05	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	13.1	%	0.50	0.50	1		11/03/22 11:03		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60414618

QC Batch: 816306

Analysis Method: EPA 8260B

QC Batch Method: EPA 5035A/5030

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60414618001, 60414618002, 60414618003, 60414618004, 60414618005, 60414618006

METHOD BLANK: 3246528

Matrix: Solid

Associated Lab Samples: 60414618001, 60414618002, 60414618003, 60414618004, 60414618005, 60414618006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	1.0	11/03/22 10:20	
1,1,1-Trichloroethane	ug/kg	ND	5.0	0.75	11/03/22 10:20	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	1.0	11/03/22 10:20	
1,1,2-Trichloroethane	ug/kg	ND	5.0	0.63	11/03/22 10:20	
1,1-Dichloroethane	ug/kg	ND	5.0	0.39	11/03/22 10:20	
1,1-Dichloroethene	ug/kg	ND	5.0	0.64	11/03/22 10:20	
1,1-Dichloropropene	ug/kg	ND	5.0	0.90	11/03/22 10:20	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	0.80	11/03/22 10:20	
1,2,3-Trichloropropane	ug/kg	ND	5.0	2.1	11/03/22 10:20	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	0.80	11/03/22 10:20	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	0.67	11/03/22 10:20	
1,2-Dibromo-3-chloropropane	ug/kg	ND	10.0	1.8	11/03/22 10:20	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	0.54	11/03/22 10:20	
1,2-Dichlorobenzene	ug/kg	ND	5.0	0.62	11/03/22 10:20	
1,2-Dichloroethane	ug/kg	ND	5.0	0.40	11/03/22 10:20	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	1.1	11/03/22 10:20	
1,2-Dichloropropane	ug/kg	ND	5.0	0.98	11/03/22 10:20	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	0.63	11/03/22 10:20	
1,3-Dichlorobenzene	ug/kg	ND	5.0	0.72	11/03/22 10:20	
1,3-Dichloropropane	ug/kg	ND	5.0	0.69	11/03/22 10:20	
1,4-Dichlorobenzene	ug/kg	ND	5.0	0.81	11/03/22 10:20	
2,2-Dichloropropane	ug/kg	ND	5.0	0.48	11/03/22 10:20	
2-Butanone (MEK)	ug/kg	ND	10.0	3.4	11/03/22 10:20	
2-Chlorotoluene	ug/kg	ND	5.0	0.73	11/03/22 10:20	
2-Hexanone	ug/kg	ND	20.0	2.5	11/03/22 10:20	
4-Chlorotoluene	ug/kg	ND	5.0	0.60	11/03/22 10:20	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	3.0	11/03/22 10:20	
Acetone	ug/kg	ND	20.0	16.2	11/03/22 10:20	
Benzene	ug/kg	ND	5.0	0.49	11/03/22 10:20	
Bromobenzene	ug/kg	ND	5.0	0.94	11/03/22 10:20	
Bromochloromethane	ug/kg	ND	5.0	0.60	11/03/22 10:20	
Bromodichloromethane	ug/kg	ND	5.0	0.60	11/03/22 10:20	
Bromoform	ug/kg	ND	5.0	0.58	11/03/22 10:20	
Bromomethane	ug/kg	ND	5.0	2.9	11/03/22 10:20	
Carbon disulfide	ug/kg	ND	5.0	0.64	11/03/22 10:20	
Carbon tetrachloride	ug/kg	ND	5.0	0.86	11/03/22 10:20	
Chlorobenzene	ug/kg	ND	5.0	0.63	11/03/22 10:20	
Chloroethane	ug/kg	ND	5.0	1.5	11/03/22 10:20	
Chloroform	ug/kg	ND	5.0	0.49	11/03/22 10:20	
Chloromethane	ug/kg	ND	5.0	0.80	11/03/22 10:20	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60414618

METHOD BLANK: 3246528

Matrix: Solid

Associated Lab Samples: 60414618001, 60414618002, 60414618003, 60414618004, 60414618005, 60414618006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	ND	5.0	0.43	11/03/22 10:20	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	0.53	11/03/22 10:20	
Dibromochloromethane	ug/kg	ND	5.0	0.65	11/03/22 10:20	
Dibromomethane	ug/kg	ND	5.0	0.60	11/03/22 10:20	
Dichlorodifluoromethane	ug/kg	ND	5.0	1.2	11/03/22 10:20	
Ethylbenzene	ug/kg	ND	5.0	0.46	11/03/22 10:20	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	0.85	11/03/22 10:20	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	0.57	11/03/22 10:20	
Methyl-tert-butyl ether	ug/kg	ND	5.0	0.48	11/03/22 10:20	
Methylene Chloride	ug/kg	ND	5.0	2.7	11/03/22 10:20	
n-Butylbenzene	ug/kg	ND	5.0	0.65	11/03/22 10:20	
n-Propylbenzene	ug/kg	ND	5.0	0.80	11/03/22 10:20	
Naphthalene	ug/kg	ND	10.0	0.82	11/03/22 10:20	
p-Isopropyltoluene	ug/kg	ND	5.0	0.69	11/03/22 10:20	
sec-Butylbenzene	ug/kg	ND	5.0	0.73	11/03/22 10:20	
Styrene	ug/kg	ND	5.0	0.59	11/03/22 10:20	
tert-Butylbenzene	ug/kg	ND	25.0	0.88	11/03/22 10:20	
Tetrachloroethene	ug/kg	ND	5.0	0.41	11/03/22 10:20	
Toluene	ug/kg	ND	5.0	0.35	11/03/22 10:20	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	0.68	11/03/22 10:20	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	0.46	11/03/22 10:20	
Trichloroethene	ug/kg	ND	5.0	0.72	11/03/22 10:20	
Trichlorofluoromethane	ug/kg	ND	5.0	0.61	11/03/22 10:20	
Vinyl chloride	ug/kg	ND	5.0	0.67	11/03/22 10:20	
Xylene (Total)	ug/kg	ND	5.0	1.1	11/03/22 10:20	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		11/03/22 10:20	
4-Bromofluorobenzene (S)	%	102	80-125		11/03/22 10:20	
Toluene-d8 (S)	%	99	80-120		11/03/22 10:20	

LABORATORY CONTROL SAMPLE: 3246529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	100	104	104	80-125	
1,1,1-Trichloroethane	ug/kg	100	104	104	80-125	
1,1,2,2-Tetrachloroethane	ug/kg	100	100	100	70-125	
1,1,2-Trichloroethane	ug/kg	100	98.7	99	80-125	
1,1-Dichloroethane	ug/kg	100	97.7	98	75-120	
1,1-Dichloroethene	ug/kg	100	92.0	92	70-125	
1,1-Dichloropropene	ug/kg	100	103	103	80-125	
1,2,3-Trichlorobenzene	ug/kg	100	102	102	75-135	
1,2,3-Trichloropropane	ug/kg	100	102	102	70-125	
1,2,4-Trichlorobenzene	ug/kg	100	106	106	70-135	
1,2,4-Trimethylbenzene	ug/kg	100	101	101	80-125	
1,2-Dibromo-3-chloropropane	ug/kg	100	111	111	70-135	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60414618

LABORATORY CONTROL SAMPLE: 3246529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	100	98.6	99	80-125	
1,2-Dichlorobenzene	ug/kg	100	97.0	97	80-120	
1,2-Dichloroethane	ug/kg	100	95.2	95	75-125	
1,2-Dichloroethene (Total)	ug/kg	200	195	97	80-120	
1,2-Dichloropropane	ug/kg	100	99.4	99	80-120	
1,3,5-Trimethylbenzene	ug/kg	100	104	104	80-125	
1,3-Dichlorobenzene	ug/kg	100	97.0	97	80-120	
1,3-Dichloropropane	ug/kg	100	97.3	97	80-125	
1,4-Dichlorobenzene	ug/kg	100	98.8	99	80-120	
2,2-Dichloropropane	ug/kg	100	104	104	75-125	
2-Butanone (MEK)	ug/kg	500	515	103	45-155	
2-Chlorotoluene	ug/kg	100	98.9	99	75-120	
2-Hexanone	ug/kg	500	556	111	60-145	
4-Chlorotoluene	ug/kg	100	101	101	80-120	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	534	107	65-135	
Acetone	ug/kg	500	489	98	25-170	
Benzene	ug/kg	100	95.3	95	80-120	
Bromobenzene	ug/kg	100	98.1	98	80-120	
Bromochloromethane	ug/kg	100	98.4	98	75-125	
Bromodichloromethane	ug/kg	100	105	105	80-120	
Bromoform	ug/kg	100	105	105	75-130	
Bromomethane	ug/kg	100	89.9	90	40-140	
Carbon disulfide	ug/kg	100	92.1	92	60-130	
Carbon tetrachloride	ug/kg	100	104	104	80-125	
Chlorobenzene	ug/kg	100	97.6	98	80-120	
Chloroethane	ug/kg	100	94.5	95	55-130	
Chloroform	ug/kg	100	95.3	95	80-120	
Chloromethane	ug/kg	100	81.8	82	40-130	
cis-1,2-Dichloroethene	ug/kg	100	99.2	99	80-120	
cis-1,3-Dichloropropene	ug/kg	100	106	106	80-125	
Dibromochloromethane	ug/kg	100	101	101	80-125	
Dibromomethane	ug/kg	100	96.9	97	80-120	
Dichlorodifluoromethane	ug/kg	100	63.0	63	15-150	
Ethylbenzene	ug/kg	100	102	102	80-125	
Hexachloro-1,3-butadiene	ug/kg	100	107	107	70-135	
Isopropylbenzene (Cumene)	ug/kg	100	101	101	80-130	
Methyl-tert-butyl ether	ug/kg	100	97.5	97	75-125	
Methylene Chloride	ug/kg	100	81.1	81	70-125	
n-Butylbenzene	ug/kg	100	101	101	80-125	
n-Propylbenzene	ug/kg	100	99.3	99	80-120	
Naphthalene	ug/kg	100	102	102	75-130	
p-Isopropyltoluene	ug/kg	100	103	103	80-125	
sec-Butylbenzene	ug/kg	100	102	102	80-125	
Styrene	ug/kg	100	98.8	99	80-130	
tert-Butylbenzene	ug/kg	100	101	101	80-125	
Tetrachloroethene	ug/kg	100	99.4	99	75-135	
Toluene	ug/kg	100	96.7	97	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60414618

LABORATORY CONTROL SAMPLE: 3246529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	ug/kg	100	95.7	96	80-120	
trans-1,3-Dichloropropene	ug/kg	100	104	104	80-120	
Trichloroethene	ug/kg	100	97.9	98	80-120	
Trichlorofluoromethane	ug/kg	100	96.2	96	60-130	
Vinyl chloride	ug/kg	100	91.0	91	40-135	
Xylene (Total)	ug/kg	300	309	103	80-125	
1,2-Dichlorobenzene-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			97	80-125	
Toluene-d8 (S)	%			99	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60414618

QC Batch: 816553

Analysis Method: EPA 8260B

QC Batch Method: EPA 5035A/5030B

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60414618006

METHOD BLANK: 3247696

Matrix: Solid

Associated Lab Samples: 60414618006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/kg	ND	250	21.9	11/04/22 10:49	
1,2-Dichlorobenzene-d4 (S)	%	98	80-120		11/04/22 10:49	
4-Bromofluorobenzene (S)	%	101	83-119		11/04/22 10:49	
Toluene-d8 (S)	%	102	80-120		11/04/22 10:49	

LABORATORY CONTROL SAMPLE: 3247697

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/kg	5000	4870	97	82-128	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			102	83-119	
Toluene-d8 (S)	%			95	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60414618

QC Batch:	816360	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60414618001, 60414618002, 60414618003, 60414618004, 60414618005, 60414618006

METHOD BLANK: 3246800

Matrix: Solid

Associated Lab Samples: 60414618001, 60414618002, 60414618003, 60414618004, 60414618005, 60414618006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	0.50	11/03/22 11:02	

SAMPLE DUPLICATE: 3246801

Parameter	Units	60414531001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	8.1	8.1	0	20	

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QUALIFIERS

Project: CLINTON ENGINES

Pace Project No.: 60414618

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CLINTON ENGINES

Pace Project No.: 60414618

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60414618001	MW103-(19-21)	EPA 5035A/5030	816306	EPA 8260B	816372
60414618002	MW104-(64-66)	EPA 5035A/5030	816306	EPA 8260B	816372
60414618003	MW101-(114-116)	EPA 5035A/5030	816306	EPA 8260B	816372
60414618004	MW102-(117-119)	EPA 5035A/5030	816306	EPA 8260B	816372
60414618005	MW11-(44-46)	EPA 5035A/5030	816306	EPA 8260B	816372
60414618006	MW4B-(24-26)	EPA 5035A/5030	816306	EPA 8260B	816372
60414618006	MW4B-(24-26)	EPA 5035A/5030B	816553	EPA 8260B	816585
60414618001	MW103-(19-21)	ASTM D2974	816360		
60414618002	MW104-(64-66)	ASTM D2974	816360		
60414618003	MW101-(114-116)	ASTM D2974	816360		
60414618004	MW102-(117-119)	ASTM D2974	816360		
60414618005	MW11-(44-46)	ASTM D2974	816360		
60414618006	MW4B-(24-26)	ASTM D2974	816360		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-LENE-0009_Sam

WO#: 60414618

Revision: 2

Effective Date: 01/12/20

Client Name: Tetra TechCourier: FedEx ☒ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐Tracking #: 3900 5851 8979 Pace Shipping Label Used? Yes ☒ No ☐Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☒ None ☐ Other ☐Thermometer Used: T299 Type of Ice: We Blue ☐ None ☐Cooler Temperature (°C): As-read 0.1 Corr. Factor 0 Corrected 0.1Date and initials of person examining contents: BC 11/2

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>SL</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples from USDA Regulated Area: State: <u>IA</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	

Client Notification/ Resolution:

Copy COC to Client? Y / N

Field Data Required? Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

Tetra Tech

Client:

Clinton Engines

Site:

Profile #

15191 line 5

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	SL						1	2							1															
2	SL						1	2							1															
3	SL						1	2							1															
4	SL						1	2							1															
5	SL						1	2							1															
6	SL						1	2							1															
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass		Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic
DG9H	40mL HCl amber vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate
				BP4U	125mL unpreserved plastic
				BP4N	125mL HNO3 plastic
				BP4S	125mL H2SO4 plastic
				WPDU	16oz unpreserved plastic

Work Order Number:

60411618 60411618

DATA VERIFICATION REPORT

Prepared by: Ellen McEntee
Date: December 29, 2022
Site Name/Job Number: Clinton Engines / 103G65210190.009.03
Laboratory: Pace Analytical, Lenexa, KS

Data Package or SDG Number: 60415168

Sample Designations/Names:

MW1B-(19-21)	MW2B-(55-57)	MW3B-(36-38)	MW5B-(21-23)	MW6B-(18-20)	MW6B-(50-52)
MW8B-(14-16)	MW8B-(55-57)	MW9-(55-57)	MW10A-(39-41)	MW10B-(43-45)	MW12-(39-41)
MW12-(39-41)-FD	MW13-(22-24)	MW14-(59-61)	RINSATE	TRIP BLANK	

Matrices: Solid/Water (Rinsate blank)
Analytical Parameters: VOCs by SW-846 Method 8260B

Data Package Element	Usable	Rejected	NA	Description of Affected Data (note specific samples and analytical parameters affected)
Chain of custody	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The chain of custody was completed appropriately.
Data package completeness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The data package contains all the required elements.
Sample preservation, storage, and holding times	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The samples were received on 11/08/2022; the samples arrived in good condition. Custody seals were not present. All samples were analyzed within the recommended holding time.

Data Package Element	Usable	Rejected	NA	Description of Affected Data (note specific samples and analytical parameters affected)
Method and field blank contamination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Method Blank 3253656: 1,2,3-Trichlorobenzene was detected in the medium level method blank associated with sample MW1B-(19-21) at a concentration less than the reporting limit (RL). The result for sample MW1B-(19-21) is detected at less than the RL and was qualified as non-detect (flagged U) at the RL.</p> <p>Method Blank 3253747: Chloroform was detected in the method blank associated with sample RINSATE at a concentration less than the RL. The associated sample result is non-detect; therefore, the result was not qualified.</p> <p>Trip Blank: Methylene chloride was detected in the trip blank at a concentration less than the RL. The associated sample results are non-detects; therefore, the results were not qualified.</p>
Surrogate spikes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Surrogate spikes were within control limits.
Matrix spikes/matrix spike duplicates (MS/MSD)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	MS/MSDs analyzed on samples from other data packages were not evaluated.
Laboratory control samples/Laboratory control sample duplicates (LCS/LCSD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Laboratory control samples were performed and all analytes were within control limits.
Other	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A field duplicate was collected for sample MW12-(39-41). The relative percent differences for 1,2-dichloroethene (total), cis-1,2-dichloroethene, and trichloroethene were above the acceptance limit. The results for these analytes in samples MW12-(39-41) and MW12-(39-41)-FD were qualified as estimated (flagged J).
Summary Data is usable as qualified based on the findings for this validation effort.				

November 15, 2022

Paulina Tinoco
Tetra Tech EMI
415 Oak Street
Kansas City, MO 64106

RE: Project: CLINTON ENGINES
Pace Project No.: 60415168

Dear Paulina Tinoco:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,



Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Kaitlyn Mitchell, Tetra Tech EMI



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Inorganic Drinking Water Certification #: 10090

Arkansas Drinking Water

Arkansas Certification #: 22-031-0

Illinois Certification #: 2000302021-3

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212023-1

Oklahoma Certification #: 2022-057

Florida: Cert E871149 SEKS WET

Texas Certification #: T104704407-21-15

Utah Certification #: KS000212022-12

Illinois Certification #: 004592

Kansas Field Laboratory Accreditation: # E-92587

Missouri SEKS Micro Certification: 10070

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CLINTON ENGINES

Pace Project No.: 60415168

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60415168001	MW5B-(21-23)	Solid	10/31/22 17:00	11/08/22 15:30
60415168002	MW6B-(18.20)	Solid	11/01/22 11:00	11/08/22 15:30
60415168003	MW6B-(50-52)	Solid	11/01/22 11:30	11/08/22 15:30
60415168004	MW2B-(55-57)	Solid	11/01/22 14:32	11/08/22 15:30
60415168005	MW1B-(19-21)	Solid	11/01/22 16:30	11/08/22 15:30
60415168006	MW8B-(14-16)	Solid	11/02/22 09:30	11/08/22 15:30
60415168007	MW10B-(43-45)	Solid	11/02/22 12:20	11/08/22 15:30
60415168008	MW10A-(39-41)	Solid	11/02/22 15:15	11/08/22 15:30
60415168009	MW3B-(36-38)	Solid	11/03/22 08:35	11/08/22 15:30
60415168010	MW14-(59-61)	Solid	11/03/22 12:20	11/08/22 15:30
60415168011	MW13-(22-24)	Solid	11/03/22 16:05	11/08/22 15:30
60415168012	MW12-(39-41)	Solid	11/04/22 09:30	11/08/22 15:30
60415168013	MW9-(55-57)	Solid	11/04/22 12:15	11/08/22 15:30
60415168014	MW12-(39-41)-FD	Solid	11/04/22 09:31	11/08/22 15:30
60415168015	MW8B-(55-57)	Solid	11/02/22 09:45	11/08/22 15:30
60415168016	TRIP BLANK	Solid	11/04/22 18:00	11/08/22 15:30
60415168017	RINSATE	Water	11/04/22 12:00	11/08/22 15:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CLINTON ENGINES

Pace Project No.: 60415168

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60415168001	MW5B-(21-23)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168002	MW6B-(18.20)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168003	MW6B-(50-52)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168004	MW2B-(55-57)	EPA 8260B	RAD	67	PASI-K
		EPA 8260B	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168005	MW1B-(19-21)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168006	MW8B-(14-16)	EPA 8260B	RAD	67	PASI-K
		EPA 8260B	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168007	MW10B-(43-45)	EPA 8260B	RAD	67	PASI-K
		EPA 8260B	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168008	MW10A-(39-41)	EPA 8260B	RAD	67	PASI-K
		EPA 8260B	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168009	MW3B-(36-38)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168010	MW14-(59-61)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168011	MW13-(22-24)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168012	MW12-(39-41)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168013	MW9-(55-57)	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168014	MW12-(39-41)-FD	EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168015	MW8B-(55-57)	EPA 8260B	RAD	67	PASI-K
		EPA 8260B	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
60415168016	TRIP BLANK	EPA 8260B	RAD	68	PASI-K
60415168017	RINSATE	EPA 5030B/8260	PGH	69	PASI-K

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CLINTON ENGINES

Pace Project No.: 60415168

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
PASI-K = Pace Analytical Services - Kansas City					

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW5B-(21-23) Lab ID: 60415168001 Collected: 10/31/22 17:00 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	17.6	14.2	1	11/09/22 13:20	11/09/22 16:55	67-64-1	
Benzene	0.55J	ug/kg	4.4	0.43	1	11/09/22 13:20	11/09/22 16:55	71-43-2	
Bromobenzene	ND	ug/kg	4.4	0.82	1	11/09/22 13:20	11/09/22 16:55	108-86-1	
Bromochloromethane	ND	ug/kg	4.4	0.53	1	11/09/22 13:20	11/09/22 16:55	74-97-5	
Bromodichloromethane	ND	ug/kg	4.4	0.53	1	11/09/22 13:20	11/09/22 16:55	75-27-4	
Bromoform	ND	ug/kg	4.4	0.51	1	11/09/22 13:20	11/09/22 16:55	75-25-2	
Bromomethane	ND	ug/kg	4.4	2.6	1	11/09/22 13:20	11/09/22 16:55	74-83-9	
2-Butanone (MEK)	ND	ug/kg	8.8	3.0	1	11/09/22 13:20	11/09/22 16:55	78-93-3	
n-Butylbenzene	ND	ug/kg	4.4	0.57	1	11/09/22 13:20	11/09/22 16:55	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.4	0.64	1	11/09/22 13:20	11/09/22 16:55	135-98-8	
tert-Butylbenzene	ND	ug/kg	22.0	0.78	1	11/09/22 13:20	11/09/22 16:55	98-06-6	
Carbon disulfide	ND	ug/kg	4.4	0.56	1	11/09/22 13:20	11/09/22 16:55	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.4	0.75	1	11/09/22 13:20	11/09/22 16:55	56-23-5	
Chlorobenzene	ND	ug/kg	4.4	0.55	1	11/09/22 13:20	11/09/22 16:55	108-90-7	
Chloroethane	ND	ug/kg	4.4	1.3	1	11/09/22 13:20	11/09/22 16:55	75-00-3	
Chloroform	ND	ug/kg	4.4	0.43	1	11/09/22 13:20	11/09/22 16:55	67-66-3	
Chloromethane	ND	ug/kg	4.4	0.70	1	11/09/22 13:20	11/09/22 16:55	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.4	0.64	1	11/09/22 13:20	11/09/22 16:55	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.4	0.53	1	11/09/22 13:20	11/09/22 16:55	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	8.8	1.6	1	11/09/22 13:20	11/09/22 16:55	96-12-8	
Dibromochloromethane	ND	ug/kg	4.4	0.57	1	11/09/22 13:20	11/09/22 16:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.4	0.47	1	11/09/22 13:20	11/09/22 16:55	106-93-4	
Dibromomethane	ND	ug/kg	4.4	0.53	1	11/09/22 13:20	11/09/22 16:55	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.4	0.55	1	11/09/22 13:20	11/09/22 16:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.4	0.63	1	11/09/22 13:20	11/09/22 16:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.4	0.71	1	11/09/22 13:20	11/09/22 16:55	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.4	1.0	1	11/09/22 13:20	11/09/22 16:55	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.4	0.34	1	11/09/22 13:20	11/09/22 16:55	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.4	0.35	1	11/09/22 13:20	11/09/22 16:55	107-06-2	
1,2-Dichloroethene (Total)	28.3	ug/kg	4.4	0.98	1	11/09/22 13:20	11/09/22 16:55	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.4	0.56	1	11/09/22 13:20	11/09/22 16:55	75-35-4	
cis-1,2-Dichloroethene	27.6	ug/kg	4.4	0.38	1	11/09/22 13:20	11/09/22 16:55	156-59-2	
trans-1,2-Dichloroethene	0.74J	ug/kg	4.4	0.60	1	11/09/22 13:20	11/09/22 16:55	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.4	0.86	1	11/09/22 13:20	11/09/22 16:55	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.4	0.61	1	11/09/22 13:20	11/09/22 16:55	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.4	0.42	1	11/09/22 13:20	11/09/22 16:55	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.4	0.79	1	11/09/22 13:20	11/09/22 16:55	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.4	0.47	1	11/09/22 13:20	11/09/22 16:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.4	0.40	1	11/09/22 13:20	11/09/22 16:55	10061-02-6	
Ethylbenzene	1.1J	ug/kg	4.4	0.41	1	11/09/22 13:20	11/09/22 16:55	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.4	0.75	1	11/09/22 13:20	11/09/22 16:55	87-68-3	
2-Hexanone	ND	ug/kg	17.6	2.2	1	11/09/22 13:20	11/09/22 16:55	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.4	0.50	1	11/09/22 13:20	11/09/22 16:55	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.4	0.60	1	11/09/22 13:20	11/09/22 16:55	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW5B-(21-23) **Lab ID: 60415168001** Collected: 10/31/22 17:00 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.4	2.4	1	11/09/22 13:20	11/09/22 16:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	8.8	2.7	1	11/09/22 13:20	11/09/22 16:55	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.4	0.42	1	11/09/22 13:20	11/09/22 16:55	1634-04-4	
Naphthalene	ND	ug/kg	8.8	0.72	1	11/09/22 13:20	11/09/22 16:55	91-20-3	
n-Propylbenzene	ND	ug/kg	4.4	0.71	1	11/09/22 13:20	11/09/22 16:55	103-65-1	
Styrene	ND	ug/kg	4.4	0.52	1	11/09/22 13:20	11/09/22 16:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.4	0.90	1	11/09/22 13:20	11/09/22 16:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.4	0.88	1	11/09/22 13:20	11/09/22 16:55	79-34-5	
Tetrachloroethene	ND	ug/kg	4.4	0.36	1	11/09/22 13:20	11/09/22 16:55	127-18-4	
Toluene	1.3J	ug/kg	4.4	0.31	1	11/09/22 13:20	11/09/22 16:55	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.4	0.70	1	11/09/22 13:20	11/09/22 16:55	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.4	0.70	1	11/09/22 13:20	11/09/22 16:55	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.4	0.66	1	11/09/22 13:20	11/09/22 16:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.4	0.55	1	11/09/22 13:20	11/09/22 16:55	79-00-5	
Trichloroethene	90.2	ug/kg	4.4	0.64	1	11/09/22 13:20	11/09/22 16:55	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.4	0.54	1	11/09/22 13:20	11/09/22 16:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.4	1.9	1	11/09/22 13:20	11/09/22 16:55	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.4	0.59	1	11/09/22 13:20	11/09/22 16:55	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.4	0.55	1	11/09/22 13:20	11/09/22 16:55	108-67-8	
Vinyl chloride	1.0J	ug/kg	4.4	0.59	1	11/09/22 13:20	11/09/22 16:55	75-01-4	
Xylene (Total)	ND	ug/kg	4.4	1.0	1	11/09/22 13:20	11/09/22 16:55	1330-20-7	
Surrogates									
Toluene-d8 (S)	97	%	80-120		1	11/09/22 13:20	11/09/22 16:55	2037-26-5	
4-Bromofluorobenzene (S)	103	%	80-125		1	11/09/22 13:20	11/09/22 16:55	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1	11/09/22 13:20	11/09/22 16:55	2199-69-1	

Percent Moisture

Analytical Method: ASTM D2974

Pace Analytical Services - Kansas City

Percent Moisture	14.0	%	0.50	0.50	1	11/09/22 11:53
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW6B-(18.20) Lab ID: 60415168002 Collected: 11/01/22 11:00 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	15.8J	ug/kg	18.1	14.7	1	11/09/22 13:20	11/09/22 17:11	67-64-1	
Benzene	ND	ug/kg	4.5	0.45	1	11/09/22 13:20	11/09/22 17:11	71-43-2	
Bromobenzene	ND	ug/kg	4.5	0.85	1	11/09/22 13:20	11/09/22 17:11	108-86-1	
Bromochloromethane	ND	ug/kg	4.5	0.54	1	11/09/22 13:20	11/09/22 17:11	74-97-5	
Bromodichloromethane	ND	ug/kg	4.5	0.54	1	11/09/22 13:20	11/09/22 17:11	75-27-4	
Bromoform	ND	ug/kg	4.5	0.52	1	11/09/22 13:20	11/09/22 17:11	75-25-2	
Bromomethane	ND	ug/kg	4.5	2.7	1	11/09/22 13:20	11/09/22 17:11	74-83-9	
2-Butanone (MEK)	3.4J	ug/kg	9.1	3.1	1	11/09/22 13:20	11/09/22 17:11	78-93-3	
n-Butylbenzene	ND	ug/kg	4.5	0.59	1	11/09/22 13:20	11/09/22 17:11	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.5	0.66	1	11/09/22 13:20	11/09/22 17:11	135-98-8	
tert-Butylbenzene	ND	ug/kg	22.6	0.80	1	11/09/22 13:20	11/09/22 17:11	98-06-6	
Carbon disulfide	ND	ug/kg	4.5	0.58	1	11/09/22 13:20	11/09/22 17:11	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.5	0.78	1	11/09/22 13:20	11/09/22 17:11	56-23-5	
Chlorobenzene	ND	ug/kg	4.5	0.57	1	11/09/22 13:20	11/09/22 17:11	108-90-7	
Chloroethane	ND	ug/kg	4.5	1.4	1	11/09/22 13:20	11/09/22 17:11	75-00-3	
Chloroform	ND	ug/kg	4.5	0.45	1	11/09/22 13:20	11/09/22 17:11	67-66-3	
Chloromethane	ND	ug/kg	4.5	0.72	1	11/09/22 13:20	11/09/22 17:11	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.5	0.66	1	11/09/22 13:20	11/09/22 17:11	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.5	0.54	1	11/09/22 13:20	11/09/22 17:11	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	9.1	1.7	1	11/09/22 13:20	11/09/22 17:11	96-12-8	
Dibromochloromethane	ND	ug/kg	4.5	0.59	1	11/09/22 13:20	11/09/22 17:11	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.5	0.48	1	11/09/22 13:20	11/09/22 17:11	106-93-4	
Dibromomethane	ND	ug/kg	4.5	0.54	1	11/09/22 13:20	11/09/22 17:11	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.5	0.57	1	11/09/22 13:20	11/09/22 17:11	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.5	0.65	1	11/09/22 13:20	11/09/22 17:11	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.5	0.73	1	11/09/22 13:20	11/09/22 17:11	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.5	1.1	1	11/09/22 13:20	11/09/22 17:11	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.5	0.35	1	11/09/22 13:20	11/09/22 17:11	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.5	0.36	1	11/09/22 13:20	11/09/22 17:11	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	4.5	1.0	1	11/09/22 13:20	11/09/22 17:11	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.5	0.58	1	11/09/22 13:20	11/09/22 17:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.5	0.39	1	11/09/22 13:20	11/09/22 17:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.5	0.62	1	11/09/22 13:20	11/09/22 17:11	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.5	0.89	1	11/09/22 13:20	11/09/22 17:11	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.5	0.63	1	11/09/22 13:20	11/09/22 17:11	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.5	0.43	1	11/09/22 13:20	11/09/22 17:11	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.5	0.81	1	11/09/22 13:20	11/09/22 17:11	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.5	0.48	1	11/09/22 13:20	11/09/22 17:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.5	0.41	1	11/09/22 13:20	11/09/22 17:11	10061-02-6	
Ethylbenzene	ND	ug/kg	4.5	0.42	1	11/09/22 13:20	11/09/22 17:11	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.5	0.77	1	11/09/22 13:20	11/09/22 17:11	87-68-3	
2-Hexanone	ND	ug/kg	18.1	2.3	1	11/09/22 13:20	11/09/22 17:11	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.5	0.52	1	11/09/22 13:20	11/09/22 17:11	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.5	0.62	1	11/09/22 13:20	11/09/22 17:11	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW6B-(18.20) **Lab ID: 60415168002** Collected: 11/01/22 11:00 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.5	2.5	1	11/09/22 13:20	11/09/22 17:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	9.1	2.7	1	11/09/22 13:20	11/09/22 17:11	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.5	0.44	1	11/09/22 13:20	11/09/22 17:11	1634-04-4	
Naphthalene	ND	ug/kg	9.1	0.74	1	11/09/22 13:20	11/09/22 17:11	91-20-3	
n-Propylbenzene	ND	ug/kg	4.5	0.73	1	11/09/22 13:20	11/09/22 17:11	103-65-1	
Styrene	ND	ug/kg	4.5	0.53	1	11/09/22 13:20	11/09/22 17:11	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.5	0.92	1	11/09/22 13:20	11/09/22 17:11	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.5	0.91	1	11/09/22 13:20	11/09/22 17:11	79-34-5	
Tetrachloroethene	ND	ug/kg	4.5	0.37	1	11/09/22 13:20	11/09/22 17:11	127-18-4	
Toluene	0.68J	ug/kg	4.5	0.32	1	11/09/22 13:20	11/09/22 17:11	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.5	0.72	1	11/09/22 13:20	11/09/22 17:11	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.5	0.72	1	11/09/22 13:20	11/09/22 17:11	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.5	0.68	1	11/09/22 13:20	11/09/22 17:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.5	0.57	1	11/09/22 13:20	11/09/22 17:11	79-00-5	
Trichloroethene	ND	ug/kg	4.5	0.66	1	11/09/22 13:20	11/09/22 17:11	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.5	0.56	1	11/09/22 13:20	11/09/22 17:11	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.5	1.9	1	11/09/22 13:20	11/09/22 17:11	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.5	0.61	1	11/09/22 13:20	11/09/22 17:11	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.5	0.57	1	11/09/22 13:20	11/09/22 17:11	108-67-8	
Vinyl chloride	ND	ug/kg	4.5	0.60	1	11/09/22 13:20	11/09/22 17:11	75-01-4	
Xylene (Total)	ND	ug/kg	4.5	1.0	1	11/09/22 13:20	11/09/22 17:11	1330-20-7	
Surrogates									
Toluene-d8 (S)	98	%	80-120		1	11/09/22 13:20	11/09/22 17:11	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-125		1	11/09/22 13:20	11/09/22 17:11	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1	11/09/22 13:20	11/09/22 17:11	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	13.2	%	0.50	0.50	1		11/09/22 11:53		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW6B-(50-52) Lab ID: 60415168003 Collected: 11/01/22 11:30 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	16.7	13.5	1	11/09/22 13:20	11/09/22 17:27	67-64-1	
Benzene	ND	ug/kg	4.2	0.41	1	11/09/22 13:20	11/09/22 17:27	71-43-2	
Bromobenzene	ND	ug/kg	4.2	0.79	1	11/09/22 13:20	11/09/22 17:27	108-86-1	
Bromochloromethane	ND	ug/kg	4.2	0.50	1	11/09/22 13:20	11/09/22 17:27	74-97-5	
Bromodichloromethane	ND	ug/kg	4.2	0.50	1	11/09/22 13:20	11/09/22 17:27	75-27-4	
Bromoform	ND	ug/kg	4.2	0.48	1	11/09/22 13:20	11/09/22 17:27	75-25-2	
Bromomethane	ND	ug/kg	4.2	2.5	1	11/09/22 13:20	11/09/22 17:27	74-83-9	
2-Butanone (MEK)	ND	ug/kg	8.4	2.9	1	11/09/22 13:20	11/09/22 17:27	78-93-3	
n-Butylbenzene	ND	ug/kg	4.2	0.54	1	11/09/22 13:20	11/09/22 17:27	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.2	0.61	1	11/09/22 13:20	11/09/22 17:27	135-98-8	
tert-Butylbenzene	ND	ug/kg	20.9	0.74	1	11/09/22 13:20	11/09/22 17:27	98-06-6	
Carbon disulfide	1.2J	ug/kg	4.2	0.54	1	11/09/22 13:20	11/09/22 17:27	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.2	0.72	1	11/09/22 13:20	11/09/22 17:27	56-23-5	
Chlorobenzene	ND	ug/kg	4.2	0.52	1	11/09/22 13:20	11/09/22 17:27	108-90-7	
Chloroethane	ND	ug/kg	4.2	1.3	1	11/09/22 13:20	11/09/22 17:27	75-00-3	
Chloroform	ND	ug/kg	4.2	0.41	1	11/09/22 13:20	11/09/22 17:27	67-66-3	
Chloromethane	ND	ug/kg	4.2	0.67	1	11/09/22 13:20	11/09/22 17:27	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.2	0.61	1	11/09/22 13:20	11/09/22 17:27	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.2	0.50	1	11/09/22 13:20	11/09/22 17:27	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	8.4	1.5	1	11/09/22 13:20	11/09/22 17:27	96-12-8	
Dibromochloromethane	ND	ug/kg	4.2	0.54	1	11/09/22 13:20	11/09/22 17:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.2	0.45	1	11/09/22 13:20	11/09/22 17:27	106-93-4	
Dibromomethane	ND	ug/kg	4.2	0.50	1	11/09/22 13:20	11/09/22 17:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.2	0.52	1	11/09/22 13:20	11/09/22 17:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.2	0.60	1	11/09/22 13:20	11/09/22 17:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.2	0.68	1	11/09/22 13:20	11/09/22 17:27	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.2	0.99	1	11/09/22 13:20	11/09/22 17:27	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.2	0.33	1	11/09/22 13:20	11/09/22 17:27	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.2	0.33	1	11/09/22 13:20	11/09/22 17:27	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	4.2	0.93	1	11/09/22 13:20	11/09/22 17:27	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.2	0.53	1	11/09/22 13:20	11/09/22 17:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.2	0.36	1	11/09/22 13:20	11/09/22 17:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.2	0.57	1	11/09/22 13:20	11/09/22 17:27	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.2	0.82	1	11/09/22 13:20	11/09/22 17:27	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.2	0.58	1	11/09/22 13:20	11/09/22 17:27	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.2	0.40	1	11/09/22 13:20	11/09/22 17:27	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.2	0.75	1	11/09/22 13:20	11/09/22 17:27	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.2	0.44	1	11/09/22 13:20	11/09/22 17:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.2	0.38	1	11/09/22 13:20	11/09/22 17:27	10061-02-6	
Ethylbenzene	0.50J	ug/kg	4.2	0.39	1	11/09/22 13:20	11/09/22 17:27	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.2	0.71	1	11/09/22 13:20	11/09/22 17:27	87-68-3	
2-Hexanone	ND	ug/kg	16.7	2.1	1	11/09/22 13:20	11/09/22 17:27	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.2	0.48	1	11/09/22 13:20	11/09/22 17:27	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.2	0.58	1	11/09/22 13:20	11/09/22 17:27	99-87-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW6B-(50-52) Lab ID: 60415168003 Collected: 11/01/22 11:30 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.2	2.3	1	11/09/22 13:20	11/09/22 17:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	8.4	2.5	1	11/09/22 13:20	11/09/22 17:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.2	0.40	1	11/09/22 13:20	11/09/22 17:27	1634-04-4	
Naphthalene	ND	ug/kg	8.4	0.69	1	11/09/22 13:20	11/09/22 17:27	91-20-3	
n-Propylbenzene	ND	ug/kg	4.2	0.67	1	11/09/22 13:20	11/09/22 17:27	103-65-1	
Styrene	ND	ug/kg	4.2	0.49	1	11/09/22 13:20	11/09/22 17:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.2	0.85	1	11/09/22 13:20	11/09/22 17:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.2	0.84	1	11/09/22 13:20	11/09/22 17:27	79-34-5	
Tetrachloroethene	ND	ug/kg	4.2	0.35	1	11/09/22 13:20	11/09/22 17:27	127-18-4	
Toluene	0.64J	ug/kg	4.2	0.29	1	11/09/22 13:20	11/09/22 17:27	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.2	0.67	1	11/09/22 13:20	11/09/22 17:27	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.2	0.67	1	11/09/22 13:20	11/09/22 17:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.2	0.63	1	11/09/22 13:20	11/09/22 17:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.2	0.53	1	11/09/22 13:20	11/09/22 17:27	79-00-5	
Trichloroethene	ND	ug/kg	4.2	0.61	1	11/09/22 13:20	11/09/22 17:27	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.2	0.51	1	11/09/22 13:20	11/09/22 17:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.2	1.8	1	11/09/22 13:20	11/09/22 17:27	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.2	0.56	1	11/09/22 13:20	11/09/22 17:27	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.2	0.52	1	11/09/22 13:20	11/09/22 17:27	108-67-8	
Vinyl chloride	ND	ug/kg	4.2	0.56	1	11/09/22 13:20	11/09/22 17:27	75-01-4	
Xylene (Total)	ND	ug/kg	4.2	0.95	1	11/09/22 13:20	11/09/22 17:27	1330-20-7	
Surrogates									
Toluene-d8 (S)	96	%	80-120		1	11/09/22 13:20	11/09/22 17:27	2037-26-5	
4-Bromofluorobenzene (S)	104	%	80-125		1	11/09/22 13:20	11/09/22 17:27	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1	11/09/22 13:20	11/09/22 17:27	2199-69-1	

Percent Moisture

Analytical Method: ASTM D2974

Pace Analytical Services - Kansas City

Percent Moisture	12.7	%	0.50	0.50	1	11/09/22 11:53
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW2B-(55-57) Lab ID: 60415168004 Collected: 11/01/22 14:32 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	23.4	19.0	1	11/09/22 13:20	11/09/22 17:43	67-64-1	
Benzene	2.6J	ug/kg	5.9	0.58	1	11/09/22 13:20	11/09/22 17:43	71-43-2	
Bromobenzene	ND	ug/kg	5.9	1.1	1	11/09/22 13:20	11/09/22 17:43	108-86-1	
Bromochloromethane	ND	ug/kg	5.9	0.70	1	11/09/22 13:20	11/09/22 17:43	74-97-5	
Bromodichloromethane	ND	ug/kg	5.9	0.70	1	11/09/22 13:20	11/09/22 17:43	75-27-4	
Bromoform	ND	ug/kg	5.9	0.67	1	11/09/22 13:20	11/09/22 17:43	75-25-2	
Bromomethane	ND	ug/kg	5.9	3.4	1	11/09/22 13:20	11/09/22 17:43	74-83-9	
2-Butanone (MEK)	ND	ug/kg	11.7	4.0	1	11/09/22 13:20	11/09/22 17:43	78-93-3	
n-Butylbenzene	ND	ug/kg	5.9	0.76	1	11/09/22 13:20	11/09/22 17:43	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.9	0.86	1	11/09/22 13:20	11/09/22 17:43	135-98-8	
tert-Butylbenzene	ND	ug/kg	29.3	1.0	1	11/09/22 13:20	11/09/22 17:43	98-06-6	
Carbon disulfide	ND	ug/kg	5.9	0.75	1	11/09/22 13:20	11/09/22 17:43	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.9	1.0	1	11/09/22 13:20	11/09/22 17:43	56-23-5	
Chlorobenzene	ND	ug/kg	5.9	0.73	1	11/09/22 13:20	11/09/22 17:43	108-90-7	
Chloroethane	ND	ug/kg	5.9	1.8	1	11/09/22 13:20	11/09/22 17:43	75-00-3	
Chloroform	1.5J	ug/kg	5.9	0.58	1	11/09/22 13:20	11/09/22 17:43	67-66-3	
Chloromethane	ND	ug/kg	5.9	0.93	1	11/09/22 13:20	11/09/22 17:43	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.9	0.85	1	11/09/22 13:20	11/09/22 17:43	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.9	0.70	1	11/09/22 13:20	11/09/22 17:43	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	11.7	2.1	1	11/09/22 13:20	11/09/22 17:43	96-12-8	
Dibromochloromethane	ND	ug/kg	5.9	0.76	1	11/09/22 13:20	11/09/22 17:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.9	0.63	1	11/09/22 13:20	11/09/22 17:43	106-93-4	
Dibromomethane	ND	ug/kg	5.9	0.70	1	11/09/22 13:20	11/09/22 17:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.9	0.73	1	11/09/22 13:20	11/09/22 17:43	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.9	0.84	1	11/09/22 13:20	11/09/22 17:43	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.9	0.95	1	11/09/22 13:20	11/09/22 17:43	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.9	1.4	1	11/09/22 13:20	11/09/22 17:43	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.9	0.46	1	11/09/22 13:20	11/09/22 17:43	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.9	0.47	1	11/09/22 13:20	11/09/22 17:43	107-06-2	
1,2-Dichloroethene (Total)	95.1	ug/kg	5.9	1.3	1	11/09/22 13:20	11/09/22 17:43	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.9	0.75	1	11/09/22 13:20	11/09/22 17:43	75-35-4	
cis-1,2-Dichloroethene	94.6	ug/kg	5.9	0.50	1	11/09/22 13:20	11/09/22 17:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.9	0.80	1	11/09/22 13:20	11/09/22 17:43	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.9	1.1	1	11/09/22 13:20	11/09/22 17:43	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.9	0.81	1	11/09/22 13:20	11/09/22 17:43	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.9	0.56	1	11/09/22 13:20	11/09/22 17:43	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.9	1.1	1	11/09/22 13:20	11/09/22 17:43	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.9	0.62	1	11/09/22 13:20	11/09/22 17:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.9	0.54	1	11/09/22 13:20	11/09/22 17:43	10061-02-6	
Ethylbenzene	ND	ug/kg	5.9	0.54	1	11/09/22 13:20	11/09/22 17:43	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.9	1.0	1	11/09/22 13:20	11/09/22 17:43	87-68-3	
2-Hexanone	ND	ug/kg	23.4	2.9	1	11/09/22 13:20	11/09/22 17:43	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.9	0.67	1	11/09/22 13:20	11/09/22 17:43	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.9	0.81	1	11/09/22 13:20	11/09/22 17:43	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW2B-(55-57) **Lab ID: 60415168004** Collected: 11/01/22 14:32 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	5.9	3.2	1	11/09/22 13:20	11/09/22 17:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.7	3.5	1	11/09/22 13:20	11/09/22 17:43	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.9	0.56	1	11/09/22 13:20	11/09/22 17:43	1634-04-4	
Naphthalene	ND	ug/kg	11.7	0.96	1	11/09/22 13:20	11/09/22 17:43	91-20-3	
n-Propylbenzene	ND	ug/kg	5.9	0.94	1	11/09/22 13:20	11/09/22 17:43	103-65-1	
Styrene	ND	ug/kg	5.9	0.69	1	11/09/22 13:20	11/09/22 17:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.9	1.2	1	11/09/22 13:20	11/09/22 17:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.9	1.2	1	11/09/22 13:20	11/09/22 17:43	79-34-5	
Tetrachloroethene	ND	ug/kg	5.9	0.48	1	11/09/22 13:20	11/09/22 17:43	127-18-4	
Toluene	0.43J	ug/kg	5.9	0.41	1	11/09/22 13:20	11/09/22 17:43	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.9	0.93	1	11/09/22 13:20	11/09/22 17:43	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.9	0.93	1	11/09/22 13:20	11/09/22 17:43	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.9	0.88	1	11/09/22 13:20	11/09/22 17:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.9	0.74	1	11/09/22 13:20	11/09/22 17:43	79-00-5	
Trichlorofluoromethane	ND	ug/kg	5.9	0.72	1	11/09/22 13:20	11/09/22 17:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.9	2.5	1	11/09/22 13:20	11/09/22 17:43	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.9	0.78	1	11/09/22 13:20	11/09/22 17:43	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.9	0.73	1	11/09/22 13:20	11/09/22 17:43	108-67-8	
Vinyl chloride	1.7J	ug/kg	5.9	0.78	1	11/09/22 13:20	11/09/22 17:43	75-01-4	
Xylene (Total)	ND	ug/kg	5.9	1.3	1	11/09/22 13:20	11/09/22 17:43	1330-20-7	
Surrogates									
Toluene-d8 (S)	97	%	80-120		1	11/09/22 13:20	11/09/22 17:43	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-125		1	11/09/22 13:20	11/09/22 17:43	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1	11/09/22 13:20	11/09/22 17:43	2199-69-1	
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Trichloroethene	2400	ug/kg	315	27.6	1	11/11/22 09:28	11/11/22 13:38	79-01-6	
Surrogates									
Toluene-d8 (S)	101	%	80-120		1	11/11/22 09:28	11/11/22 13:38	2037-26-5	
4-Bromofluorobenzene (S)	104	%	83-119		1	11/11/22 09:28	11/11/22 13:38	460-00-4	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1	11/11/22 09:28	11/11/22 13:38	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	17.7	%	0.50	0.50	1		11/09/22 11:53		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW1B-(19-21) Lab ID: 60415168005 Collected: 11/01/22 16:30 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	1140	248	1	11/11/22 09:28	11/14/22 10:37	67-64-1	
Benzene	40.4J	ug/kg	286	24.0	1	11/11/22 09:28	11/14/22 10:37	71-43-2	
Bromobenzene	ND	ug/kg	286	34.4	1	11/11/22 09:28	11/14/22 10:37	108-86-1	
Bromochloromethane	ND	ug/kg	286	30.5	1	11/11/22 09:28	11/14/22 10:37	74-97-5	
Bromodichloromethane	ND	ug/kg	286	21.6	1	11/11/22 09:28	11/14/22 10:37	75-27-4	
Bromoform	ND	ug/kg	286	17.3	1	11/11/22 09:28	11/14/22 10:37	75-25-2	
Bromomethane	ND	ug/kg	286	167	1	11/11/22 09:28	11/14/22 10:37	74-83-9	
2-Butanone (MEK)	184J	ug/kg	571	130	1	11/11/22 09:28	11/14/22 10:37	78-93-3	
n-Butylbenzene	7860	ug/kg	286	52.1	1	11/11/22 09:28	11/14/22 10:37	104-51-8	
sec-Butylbenzene	1250	ug/kg	286	43.4	1	11/11/22 09:28	11/14/22 10:37	135-98-8	
tert-Butylbenzene	57.1J	ug/kg	1430	36.3	1	11/11/22 09:28	11/14/22 10:37	98-06-6	
Carbon disulfide	ND	ug/kg	286	30.1	1	11/11/22 09:28	11/14/22 10:37	75-15-0	
Carbon tetrachloride	ND	ug/kg	286	27.0	1	11/11/22 09:28	11/14/22 10:37	56-23-5	
Chlorobenzene	ND	ug/kg	286	28.3	1	11/11/22 09:28	11/14/22 10:37	108-90-7	
Chloroethane	ND	ug/kg	286	43.6	1	11/11/22 09:28	11/14/22 10:37	75-00-3	
Chloroform	371	ug/kg	286	23.0	1	11/11/22 09:28	11/14/22 10:37	67-66-3	
Chloromethane	ND	ug/kg	286	69.7	1	11/11/22 09:28	11/14/22 10:37	74-87-3	
2-Chlorotoluene	ND	ug/kg	286	31.6	1	11/11/22 09:28	11/14/22 10:37	95-49-8	
4-Chlorotoluene	ND	ug/kg	286	40.3	1	11/11/22 09:28	11/14/22 10:37	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	571	63.9	1	11/11/22 09:28	11/14/22 10:37	96-12-8	
Dibromochloromethane	ND	ug/kg	286	24.2	1	11/11/22 09:28	11/14/22 10:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	286	20.9	1	11/11/22 09:28	11/14/22 10:37	106-93-4	
Dibromomethane	ND	ug/kg	286	29.1	1	11/11/22 09:28	11/14/22 10:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	286	44.0	1	11/11/22 09:28	11/14/22 10:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	286	43.1	1	11/11/22 09:28	11/14/22 10:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	286	43.6	1	11/11/22 09:28	11/14/22 10:37	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	286	45.1	1	11/11/22 09:28	11/14/22 10:37	75-71-8	
1,1-Dichloroethane	ND	ug/kg	286	102	1	11/11/22 09:28	11/14/22 10:37	75-34-3	
1,2-Dichloroethane	ND	ug/kg	286	20.2	1	11/11/22 09:28	11/14/22 10:37	107-06-2	
1,2-Dichloroethene (Total)	1970	ug/kg	286	48.1	1	11/11/22 09:28	11/14/22 10:37	540-59-0	
1,1-Dichloroethene	ND	ug/kg	286	29.3	1	11/11/22 09:28	11/14/22 10:37	75-35-4	
cis-1,2-Dichloroethene	1970	ug/kg	286	26.6	1	11/11/22 09:28	11/14/22 10:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	286	21.6	1	11/11/22 09:28	11/14/22 10:37	156-60-5	
1,2-Dichloropropane	ND	ug/kg	286	21.3	1	11/11/22 09:28	11/14/22 10:37	78-87-5	
1,3-Dichloropropane	ND	ug/kg	286	22.1	1	11/11/22 09:28	11/14/22 10:37	142-28-9	
2,2-Dichloropropane	ND	ug/kg	286	23.1	1	11/11/22 09:28	11/14/22 10:37	594-20-7	
1,1-Dichloropropene	ND	ug/kg	286	25.4	1	11/11/22 09:28	11/14/22 10:37	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	286	23.5	1	11/11/22 09:28	11/14/22 10:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	286	20.5	1	11/11/22 09:28	11/14/22 10:37	10061-02-6	
Ethylbenzene	286	ug/kg	286	29.8	1	11/11/22 09:28	11/14/22 10:37	100-41-4	
Hexachloro-1,3-butadiene	280J	ug/kg	286	72.7	1	11/11/22 09:28	11/14/22 10:37	87-68-3	
2-Hexanone	ND	ug/kg	1140	111	1	11/11/22 09:28	11/14/22 10:37	591-78-6	
Isopropylbenzene (Cumene)	446	ug/kg	286	39.9	1	11/11/22 09:28	11/14/22 10:37	98-82-8	
p-Isopropyltoluene	1740	ug/kg	286	43.0	1	11/11/22 09:28	11/14/22 10:37	99-87-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW1B-(19-21) **Lab ID:** 60415168005 **Collected:** 11/01/22 16:30 **Received:** 11/08/22 15:30 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	286	267	1	11/11/22 09:28	11/14/22 10:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	571	105	1	11/11/22 09:28	11/14/22 10:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	286	28.5	1	11/11/22 09:28	11/14/22 10:37	1634-04-4	
Naphthalene	693	ug/kg	571	78.4	1	11/11/22 09:28	11/14/22 10:37	91-20-3	
n-Propylbenzene	2050	ug/kg	286	41.7	1	11/11/22 09:28	11/14/22 10:37	103-65-1	
Styrene	ND	ug/kg	286	48.4	1	11/11/22 09:28	11/14/22 10:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	286	23.1	1	11/11/22 09:28	11/14/22 10:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	286	24.2	1	11/11/22 09:28	11/14/22 10:37	79-34-5	
Tetrachloroethene	ND	ug/kg	286	25.7	1	11/11/22 09:28	11/14/22 10:37	127-18-4	
Toluene	258J	ug/kg	286	26.3	1	11/11/22 09:28	11/14/22 10:37	108-88-3	
1,2,3-Trichlorobenzene	187J	ug/kg	286	82.6	1	11/11/22 09:28	11/14/22 10:37	87-61-6	B
1,2,4-Trichlorobenzene	ND	ug/kg	286	64.2	1	11/11/22 09:28	11/14/22 10:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	286	23.8	1	11/11/22 09:28	11/14/22 10:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	286	35.8	1	11/11/22 09:28	11/14/22 10:37	79-00-5	
Trichloroethene	132J	ug/kg	286	25.0	1	11/11/22 09:28	11/14/22 10:37	79-01-6	
Trichlorofluoromethane	ND	ug/kg	286	30.1	1	11/11/22 09:28	11/14/22 10:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	286	32.1	1	11/11/22 09:28	11/14/22 10:37	96-18-4	
1,2,4-Trimethylbenzene	8130	ug/kg	286	33.7	1	11/11/22 09:28	11/14/22 10:37	95-63-6	
1,3,5-Trimethylbenzene	4050	ug/kg	286	40.8	1	11/11/22 09:28	11/14/22 10:37	108-67-8	
Vinyl chloride	42.6J	ug/kg	286	29.1	1	11/11/22 09:28	11/14/22 10:37	75-01-4	
Xylene (Total)	737	ug/kg	286	93.8	1	11/11/22 09:28	11/14/22 10:37	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	80-120		1	11/11/22 09:28	11/14/22 10:37	2037-26-5	
4-Bromofluorobenzene (S)	119	%	83-119		1	11/11/22 09:28	11/14/22 10:37	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1	11/11/22 09:28	11/14/22 10:37	2199-69-1	

Percent Moisture

Analytical Method: ASTM D2974

Pace Analytical Services - Kansas City

Percent Moisture	12.8	%	0.50	0.50	1		11/09/22 11:53
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW8B-(14-16) Lab ID: 60415168006 Collected: 11/02/22 09:30 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	21.2	17.2	1	11/10/22 10:16	11/10/22 11:43	67-64-1	
Benzene	0.85J	ug/kg	5.3	0.52	1	11/10/22 10:16	11/10/22 11:43	71-43-2	
Bromobenzene	ND	ug/kg	5.3	1.0	1	11/10/22 10:16	11/10/22 11:43	108-86-1	
Bromochloromethane	ND	ug/kg	5.3	0.64	1	11/10/22 10:16	11/10/22 11:43	74-97-5	
Bromodichloromethane	ND	ug/kg	5.3	0.64	1	11/10/22 10:16	11/10/22 11:43	75-27-4	
Bromoform	ND	ug/kg	5.3	0.61	1	11/10/22 10:16	11/10/22 11:43	75-25-2	
Bromomethane	ND	ug/kg	5.3	3.1	1	11/10/22 10:16	11/10/22 11:43	74-83-9	
2-Butanone (MEK)	ND	ug/kg	10.6	3.6	1	11/10/22 10:16	11/10/22 11:43	78-93-3	
n-Butylbenzene	ND	ug/kg	5.3	0.69	1	11/10/22 10:16	11/10/22 11:43	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.3	0.78	1	11/10/22 10:16	11/10/22 11:43	135-98-8	
tert-Butylbenzene	ND	ug/kg	26.5	0.94	1	11/10/22 10:16	11/10/22 11:43	98-06-6	
Carbon disulfide	ND	ug/kg	5.3	0.68	1	11/10/22 10:16	11/10/22 11:43	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.3	0.91	1	11/10/22 10:16	11/10/22 11:43	56-23-5	
Chlorobenzene	ND	ug/kg	5.3	0.67	1	11/10/22 10:16	11/10/22 11:43	108-90-7	
Chloroethane	ND	ug/kg	5.3	1.6	1	11/10/22 10:16	11/10/22 11:43	75-00-3	
Chloroform	ND	ug/kg	5.3	0.52	1	11/10/22 10:16	11/10/22 11:43	67-66-3	
Chloromethane	ND	ug/kg	5.3	0.85	1	11/10/22 10:16	11/10/22 11:43	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.3	0.77	1	11/10/22 10:16	11/10/22 11:43	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.3	0.64	1	11/10/22 10:16	11/10/22 11:43	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10.6	1.9	1	11/10/22 10:16	11/10/22 11:43	96-12-8	
Dibromochloromethane	ND	ug/kg	5.3	0.69	1	11/10/22 10:16	11/10/22 11:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.3	0.57	1	11/10/22 10:16	11/10/22 11:43	106-93-4	
Dibromomethane	ND	ug/kg	5.3	0.64	1	11/10/22 10:16	11/10/22 11:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.3	0.66	1	11/10/22 10:16	11/10/22 11:43	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.3	0.76	1	11/10/22 10:16	11/10/22 11:43	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.3	0.86	1	11/10/22 10:16	11/10/22 11:43	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.3	1.3	1	11/10/22 10:16	11/10/22 11:43	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.3	0.41	1	11/10/22 10:16	11/10/22 11:43	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.3	0.42	1	11/10/22 10:16	11/10/22 11:43	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.3	1.2	1	11/10/22 10:16	11/10/22 11:43	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.3	0.68	1	11/10/22 10:16	11/10/22 11:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.3	0.46	1	11/10/22 10:16	11/10/22 11:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.3	0.72	1	11/10/22 10:16	11/10/22 11:43	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.3	1.0	1	11/10/22 10:16	11/10/22 11:43	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.3	0.73	1	11/10/22 10:16	11/10/22 11:43	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.3	0.50	1	11/10/22 10:16	11/10/22 11:43	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.3	0.95	1	11/10/22 10:16	11/10/22 11:43	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.3	0.56	1	11/10/22 10:16	11/10/22 11:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.3	0.49	1	11/10/22 10:16	11/10/22 11:43	10061-02-6	
Ethylbenzene	22.0	ug/kg	5.3	0.49	1	11/10/22 10:16	11/10/22 11:43	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.3	0.90	1	11/10/22 10:16	11/10/22 11:43	87-68-3	
2-Hexanone	ND	ug/kg	21.2	2.6	1	11/10/22 10:16	11/10/22 11:43	591-78-6	
Isopropylbenzene (Cumene)	1.5J	ug/kg	5.3	0.60	1	11/10/22 10:16	11/10/22 11:43	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.3	0.73	1	11/10/22 10:16	11/10/22 11:43	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW8B-(14-16) **Lab ID: 60415168006** Collected: 11/02/22 09:30 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	5.3	2.9	1	11/10/22 10:16	11/10/22 11:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.6	3.2	1	11/10/22 10:16	11/10/22 11:43	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.3	0.51	1	11/10/22 10:16	11/10/22 11:43	1634-04-4	
Naphthalene	1.5J	ug/kg	10.6	0.87	1	11/10/22 10:16	11/10/22 11:43	91-20-3	
n-Propylbenzene	1.3J	ug/kg	5.3	0.85	1	11/10/22 10:16	11/10/22 11:43	103-65-1	
Styrene	ND	ug/kg	5.3	0.63	1	11/10/22 10:16	11/10/22 11:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.3	1.1	1	11/10/22 10:16	11/10/22 11:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.3	1.1	1	11/10/22 10:16	11/10/22 11:43	79-34-5	
Tetrachloroethene	ND	ug/kg	5.3	0.44	1	11/10/22 10:16	11/10/22 11:43	127-18-4	
1,2,3-Trichlorobenzene	ND	ug/kg	5.3	0.85	1	11/10/22 10:16	11/10/22 11:43	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.3	0.85	1	11/10/22 10:16	11/10/22 11:43	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.3	0.79	1	11/10/22 10:16	11/10/22 11:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.3	0.67	1	11/10/22 10:16	11/10/22 11:43	79-00-5	
Trichloroethene	ND	ug/kg	5.3	0.77	1	11/10/22 10:16	11/10/22 11:43	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.3	0.65	1	11/10/22 10:16	11/10/22 11:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.3	2.3	1	11/10/22 10:16	11/10/22 11:43	96-18-4	
1,2,4-Trimethylbenzene	8.3	ug/kg	5.3	0.71	1	11/10/22 10:16	11/10/22 11:43	95-63-6	
1,3,5-Trimethylbenzene	1.3J	ug/kg	5.3	0.67	1	11/10/22 10:16	11/10/22 11:43	108-67-8	
Vinyl chloride	ND	ug/kg	5.3	0.71	1	11/10/22 10:16	11/10/22 11:43	75-01-4	
Xylene (Total)	110	ug/kg	5.3	1.2	1	11/10/22 10:16	11/10/22 11:43	1330-20-7	
Surrogates									
Toluene-d8 (S)	97	%	80-120		1	11/10/22 10:16	11/10/22 11:43	2037-26-5	
4-Bromofluorobenzene (S)	104	%	80-125		1	11/10/22 10:16	11/10/22 11:43	460-00-4	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1	11/10/22 10:16	11/10/22 11:43	2199-69-1	
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Toluene	144J	ug/kg	272	25.0	1	11/11/22 09:28	11/11/22 14:26	108-88-3	
Surrogates									
Toluene-d8 (S)	96	%	80-120		1	11/11/22 09:28	11/11/22 14:26	2037-26-5	
4-Bromofluorobenzene (S)	102	%	83-119		1	11/11/22 09:28	11/11/22 14:26	460-00-4	
1,2-Dichlorobenzene-d4 (S)	96	%	80-120		1	11/11/22 09:28	11/11/22 14:26	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	16.2	%	0.50	0.50	1		11/09/22 11:53		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW10B-(43-45) Lab ID: 60415168007 Collected: 11/02/22 12:20 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	19.7	15.9	1	11/10/22 14:03	11/10/22 14:24	67-64-1	
Benzene	1.3J	ug/kg	4.9	0.49	1	11/10/22 14:03	11/10/22 14:24	71-43-2	
Bromobenzene	ND	ug/kg	4.9	0.92	1	11/10/22 14:03	11/10/22 14:24	108-86-1	
Bromochloromethane	ND	ug/kg	4.9	0.59	1	11/10/22 14:03	11/10/22 14:24	74-97-5	
Bromodichloromethane	ND	ug/kg	4.9	0.59	1	11/10/22 14:03	11/10/22 14:24	75-27-4	
Bromoform	ND	ug/kg	4.9	0.57	1	11/10/22 14:03	11/10/22 14:24	75-25-2	
Bromomethane	ND	ug/kg	4.9	2.9	1	11/10/22 14:03	11/10/22 14:24	74-83-9	
2-Butanone (MEK)	ND	ug/kg	9.8	3.4	1	11/10/22 14:03	11/10/22 14:24	78-93-3	
n-Butylbenzene	ND	ug/kg	4.9	0.64	1	11/10/22 14:03	11/10/22 14:24	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.9	0.72	1	11/10/22 14:03	11/10/22 14:24	135-98-8	
tert-Butylbenzene	ND	ug/kg	24.6	0.87	1	11/10/22 14:03	11/10/22 14:24	98-06-6	
Carbon disulfide	ND	ug/kg	4.9	0.63	1	11/10/22 14:03	11/10/22 14:24	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.9	0.84	1	11/10/22 14:03	11/10/22 14:24	56-23-5	
Chlorobenzene	ND	ug/kg	4.9	0.62	1	11/10/22 14:03	11/10/22 14:24	108-90-7	
Chloroethane	ND	ug/kg	4.9	1.5	1	11/10/22 14:03	11/10/22 14:24	75-00-3	
Chloroform	ND	ug/kg	4.9	0.49	1	11/10/22 14:03	11/10/22 14:24	67-66-3	
Chloromethane	ND	ug/kg	4.9	0.79	1	11/10/22 14:03	11/10/22 14:24	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.9	0.72	1	11/10/22 14:03	11/10/22 14:24	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.9	0.59	1	11/10/22 14:03	11/10/22 14:24	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	9.8	1.8	1	11/10/22 14:03	11/10/22 14:24	96-12-8	
Dibromochloromethane	ND	ug/kg	4.9	0.64	1	11/10/22 14:03	11/10/22 14:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.9	0.53	1	11/10/22 14:03	11/10/22 14:24	106-93-4	
Dibromomethane	ND	ug/kg	4.9	0.59	1	11/10/22 14:03	11/10/22 14:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.9	0.61	1	11/10/22 14:03	11/10/22 14:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.9	0.71	1	11/10/22 14:03	11/10/22 14:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.9	0.80	1	11/10/22 14:03	11/10/22 14:24	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.9	1.2	1	11/10/22 14:03	11/10/22 14:24	75-71-8	
1,1-Dichloroethane	1.1J	ug/kg	4.9	0.38	1	11/10/22 14:03	11/10/22 14:24	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.9	0.39	1	11/10/22 14:03	11/10/22 14:24	107-06-2	
1,2-Dichloroethene (Total)	262	ug/kg	4.9	1.1	1	11/10/22 14:03	11/10/22 14:24	540-59-0	
1,1-Dichloroethene	2.3J	ug/kg	4.9	0.63	1	11/10/22 14:03	11/10/22 14:24	75-35-4	
cis-1,2-Dichloroethene	259	ug/kg	4.9	0.42	1	11/10/22 14:03	11/10/22 14:24	156-59-2	
trans-1,2-Dichloroethene	3.4J	ug/kg	4.9	0.67	1	11/10/22 14:03	11/10/22 14:24	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.9	0.96	1	11/10/22 14:03	11/10/22 14:24	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.9	0.68	1	11/10/22 14:03	11/10/22 14:24	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.9	0.47	1	11/10/22 14:03	11/10/22 14:24	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.9	0.88	1	11/10/22 14:03	11/10/22 14:24	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.9	0.52	1	11/10/22 14:03	11/10/22 14:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.9	0.45	1	11/10/22 14:03	11/10/22 14:24	10061-02-6	
Ethylbenzene	ND	ug/kg	4.9	0.45	1	11/10/22 14:03	11/10/22 14:24	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.9	0.84	1	11/10/22 14:03	11/10/22 14:24	87-68-3	
2-Hexanone	ND	ug/kg	19.7	2.4	1	11/10/22 14:03	11/10/22 14:24	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.9	0.56	1	11/10/22 14:03	11/10/22 14:24	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.9	0.68	1	11/10/22 14:03	11/10/22 14:24	99-87-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW10B-(43-45) **Lab ID: 60415168007** Collected: 11/02/22 12:20 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.9	2.7	1	11/10/22 14:03	11/10/22 14:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	3.1J	ug/kg	9.8	3.0	1	11/10/22 14:03	11/10/22 14:24	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.9	0.47	1	11/10/22 14:03	11/10/22 14:24	1634-04-4	
Naphthalene	ND	ug/kg	9.8	0.81	1	11/10/22 14:03	11/10/22 14:24	91-20-3	
n-Propylbenzene	ND	ug/kg	4.9	0.79	1	11/10/22 14:03	11/10/22 14:24	103-65-1	
Styrene	ND	ug/kg	4.9	0.58	1	11/10/22 14:03	11/10/22 14:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.9	1.0	1	11/10/22 14:03	11/10/22 14:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.9	0.98	1	11/10/22 14:03	11/10/22 14:24	79-34-5	
Tetrachloroethene	ND	ug/kg	4.9	0.41	1	11/10/22 14:03	11/10/22 14:24	127-18-4	
Toluene	ND	ug/kg	4.9	0.35	1	11/10/22 14:03	11/10/22 14:24	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.9	0.78	1	11/10/22 14:03	11/10/22 14:24	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.9	0.78	1	11/10/22 14:03	11/10/22 14:24	120-82-1	
1,1,1-Trichloroethane	1.0J	ug/kg	4.9	0.74	1	11/10/22 14:03	11/10/22 14:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.9	0.62	1	11/10/22 14:03	11/10/22 14:24	79-00-5	
Trichlorofluoromethane	ND	ug/kg	4.9	0.60	1	11/10/22 14:03	11/10/22 14:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.9	2.1	1	11/10/22 14:03	11/10/22 14:24	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.9	0.66	1	11/10/22 14:03	11/10/22 14:24	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.9	0.62	1	11/10/22 14:03	11/10/22 14:24	108-67-8	
Vinyl chloride	20.7	ug/kg	4.9	0.66	1	11/10/22 14:03	11/10/22 14:24	75-01-4	
Xylene (Total)	ND	ug/kg	4.9	1.1	1	11/10/22 14:03	11/10/22 14:24	1330-20-7	
Surrogates									
Toluene-d8 (S)	99	%	80-120		1	11/10/22 14:03	11/10/22 14:24	2037-26-5	
4-Bromofluorobenzene (S)	103	%	80-125		1	11/10/22 14:03	11/10/22 14:24	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1	11/10/22 14:03	11/10/22 14:24	2199-69-1	
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Trichloroethene	2900	ug/kg	307	26.9	1	11/11/22 09:28	11/11/22 14:43	79-01-6	
Surrogates									
Toluene-d8 (S)	101	%	80-120		1	11/11/22 09:28	11/11/22 14:43	2037-26-5	
4-Bromofluorobenzene (S)	101	%	83-119		1	11/11/22 09:28	11/11/22 14:43	460-00-4	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1	11/11/22 09:28	11/11/22 14:43	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	19.8	%	0.50	0.50	1		11/09/22 11:53		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW10A-(39-41) Lab ID: 60415168008 Collected: 11/02/22 15:15 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	33.4	ug/kg	20.3	16.5	1	11/09/22 13:20	11/09/22 17:59	67-64-1	
Benzene	1.9J	ug/kg	5.1	0.50	1	11/09/22 13:20	11/09/22 17:59	71-43-2	
Bromobenzene	ND	ug/kg	5.1	0.95	1	11/09/22 13:20	11/09/22 17:59	108-86-1	
Bromochloromethane	ND	ug/kg	5.1	0.61	1	11/09/22 13:20	11/09/22 17:59	74-97-5	
Bromodichloromethane	ND	ug/kg	5.1	0.61	1	11/09/22 13:20	11/09/22 17:59	75-27-4	
Bromoform	ND	ug/kg	5.1	0.58	1	11/09/22 13:20	11/09/22 17:59	75-25-2	
Bromomethane	ND	ug/kg	5.1	3.0	1	11/09/22 13:20	11/09/22 17:59	74-83-9	
2-Butanone (MEK)	5.5J	ug/kg	10.2	3.5	1	11/09/22 13:20	11/09/22 17:59	78-93-3	
n-Butylbenzene	ND	ug/kg	5.1	0.66	1	11/09/22 13:20	11/09/22 17:59	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.1	0.74	1	11/09/22 13:20	11/09/22 17:59	135-98-8	
tert-Butylbenzene	ND	ug/kg	25.4	0.90	1	11/09/22 13:20	11/09/22 17:59	98-06-6	
Carbon disulfide	ND	ug/kg	5.1	0.65	1	11/09/22 13:20	11/09/22 17:59	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.1	0.87	1	11/09/22 13:20	11/09/22 17:59	56-23-5	
Chlorobenzene	ND	ug/kg	5.1	0.64	1	11/09/22 13:20	11/09/22 17:59	108-90-7	
Chloroethane	ND	ug/kg	5.1	1.5	1	11/09/22 13:20	11/09/22 17:59	75-00-3	
Chloroform	ND	ug/kg	5.1	0.50	1	11/09/22 13:20	11/09/22 17:59	67-66-3	
Chloromethane	ND	ug/kg	5.1	0.81	1	11/09/22 13:20	11/09/22 17:59	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.1	0.74	1	11/09/22 13:20	11/09/22 17:59	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.1	0.61	1	11/09/22 13:20	11/09/22 17:59	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10.2	1.9	1	11/09/22 13:20	11/09/22 17:59	96-12-8	
Dibromochloromethane	ND	ug/kg	5.1	0.66	1	11/09/22 13:20	11/09/22 17:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.1	0.54	1	11/09/22 13:20	11/09/22 17:59	106-93-4	
Dibromomethane	ND	ug/kg	5.1	0.61	1	11/09/22 13:20	11/09/22 17:59	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.1	0.63	1	11/09/22 13:20	11/09/22 17:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.1	0.73	1	11/09/22 13:20	11/09/22 17:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.1	0.82	1	11/09/22 13:20	11/09/22 17:59	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.1	1.2	1	11/09/22 13:20	11/09/22 17:59	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.1	0.40	1	11/09/22 13:20	11/09/22 17:59	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.1	0.41	1	11/09/22 13:20	11/09/22 17:59	107-06-2	
1,2-Dichloroethene (Total)	303	ug/kg	5.1	1.1	1	11/09/22 13:20	11/09/22 17:59	540-59-0	
1,1-Dichloroethene	1.0J	ug/kg	5.1	0.65	1	11/09/22 13:20	11/09/22 17:59	75-35-4	
cis-1,2-Dichloroethene	300	ug/kg	5.1	0.44	1	11/09/22 13:20	11/09/22 17:59	156-59-2	
trans-1,2-Dichloroethene	2.9J	ug/kg	5.1	0.69	1	11/09/22 13:20	11/09/22 17:59	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.1	0.99	1	11/09/22 13:20	11/09/22 17:59	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.1	0.70	1	11/09/22 13:20	11/09/22 17:59	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.1	0.48	1	11/09/22 13:20	11/09/22 17:59	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.1	0.91	1	11/09/22 13:20	11/09/22 17:59	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.1	0.54	1	11/09/22 13:20	11/09/22 17:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.1	0.46	1	11/09/22 13:20	11/09/22 17:59	10061-02-6	
Ethylbenzene	ND	ug/kg	5.1	0.47	1	11/09/22 13:20	11/09/22 17:59	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.1	0.86	1	11/09/22 13:20	11/09/22 17:59	87-68-3	
2-Hexanone	ND	ug/kg	20.3	2.5	1	11/09/22 13:20	11/09/22 17:59	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.1	0.58	1	11/09/22 13:20	11/09/22 17:59	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.1	0.70	1	11/09/22 13:20	11/09/22 17:59	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW10A-(39-41) **Lab ID:** 60415168008 **Collected:** 11/02/22 15:15 **Received:** 11/08/22 15:30 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	5.1	2.8	1	11/09/22 13:20	11/09/22 17:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.2	3.1	1	11/09/22 13:20	11/09/22 17:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.1	0.49	1	11/09/22 13:20	11/09/22 17:59	1634-04-4	
Naphthalene	ND	ug/kg	10.2	0.83	1	11/09/22 13:20	11/09/22 17:59	91-20-3	
n-Propylbenzene	ND	ug/kg	5.1	0.82	1	11/09/22 13:20	11/09/22 17:59	103-65-1	
Styrene	ND	ug/kg	5.1	0.60	1	11/09/22 13:20	11/09/22 17:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.1	1.0	1	11/09/22 13:20	11/09/22 17:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.1	1.0	1	11/09/22 13:20	11/09/22 17:59	79-34-5	
Tetrachloroethene	0.94J	ug/kg	5.1	0.42	1	11/09/22 13:20	11/09/22 17:59	127-18-4	
Toluene	ND	ug/kg	5.1	0.36	1	11/09/22 13:20	11/09/22 17:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.1	0.81	1	11/09/22 13:20	11/09/22 17:59	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.1	0.81	1	11/09/22 13:20	11/09/22 17:59	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.1	0.76	1	11/09/22 13:20	11/09/22 17:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.1	0.64	1	11/09/22 13:20	11/09/22 17:59	79-00-5	
Trichlorofluoromethane	ND	ug/kg	5.1	0.62	1	11/09/22 13:20	11/09/22 17:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.1	2.2	1	11/09/22 13:20	11/09/22 17:59	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.1	0.68	1	11/09/22 13:20	11/09/22 17:59	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.1	0.64	1	11/09/22 13:20	11/09/22 17:59	108-67-8	
Vinyl chloride	16.8	ug/kg	5.1	0.68	1	11/09/22 13:20	11/09/22 17:59	75-01-4	
Xylene (Total)	ND	ug/kg	5.1	1.2	1	11/09/22 13:20	11/09/22 17:59	1330-20-7	
Surrogates									
Toluene-d8 (S)	98	%	80-120		1	11/09/22 13:20	11/09/22 17:59	2037-26-5	
4-Bromofluorobenzene (S)	103	%	80-125		1	11/09/22 13:20	11/09/22 17:59	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1	11/09/22 13:20	11/09/22 17:59	2199-69-1	
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Trichloroethene	2770	ug/kg	340	29.8	1	11/11/22 09:28	11/11/22 13:54	79-01-6	
Surrogates									
Toluene-d8 (S)	99	%	80-120		1	11/11/22 09:28	11/11/22 13:54	2037-26-5	
4-Bromofluorobenzene (S)	101	%	83-119		1	11/11/22 09:28	11/11/22 13:54	460-00-4	
1,2-Dichlorobenzene-d4 (S)	97	%	80-120		1	11/11/22 09:28	11/11/22 13:54	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	18.5	%	0.50	0.50	1		11/09/22 11:53		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW3B-(36-38) Lab ID: 60415168009 Collected: 11/03/22 08:35 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	18.5	15.0	1	11/10/22 10:16	11/10/22 11:10	67-64-1	
Benzene	1.0J	ug/kg	4.6	0.46	1	11/10/22 10:16	11/10/22 11:10	71-43-2	
Bromobenzene	ND	ug/kg	4.6	0.87	1	11/10/22 10:16	11/10/22 11:10	108-86-1	
Bromochloromethane	ND	ug/kg	4.6	0.56	1	11/10/22 10:16	11/10/22 11:10	74-97-5	
Bromodichloromethane	ND	ug/kg	4.6	0.56	1	11/10/22 10:16	11/10/22 11:10	75-27-4	
Bromoform	ND	ug/kg	4.6	0.53	1	11/10/22 10:16	11/10/22 11:10	75-25-2	
Bromomethane	ND	ug/kg	4.6	2.7	1	11/10/22 10:16	11/10/22 11:10	74-83-9	
2-Butanone (MEK)	ND	ug/kg	9.3	3.2	1	11/10/22 10:16	11/10/22 11:10	78-93-3	
n-Butylbenzene	ND	ug/kg	4.6	0.60	1	11/10/22 10:16	11/10/22 11:10	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.6	0.68	1	11/10/22 10:16	11/10/22 11:10	135-98-8	
tert-Butylbenzene	ND	ug/kg	23.2	0.82	1	11/10/22 10:16	11/10/22 11:10	98-06-6	
Carbon disulfide	ND	ug/kg	4.6	0.60	1	11/10/22 10:16	11/10/22 11:10	75-15-0	
Carbon tetrachloride	7.4	ug/kg	4.6	0.79	1	11/10/22 10:16	11/10/22 11:10	56-23-5	
Chlorobenzene	ND	ug/kg	4.6	0.58	1	11/10/22 10:16	11/10/22 11:10	108-90-7	
Chloroethane	ND	ug/kg	4.6	1.4	1	11/10/22 10:16	11/10/22 11:10	75-00-3	
Chloroform	6.2	ug/kg	4.6	0.46	1	11/10/22 10:16	11/10/22 11:10	67-66-3	
Chloromethane	ND	ug/kg	4.6	0.74	1	11/10/22 10:16	11/10/22 11:10	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.6	0.67	1	11/10/22 10:16	11/10/22 11:10	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.6	0.56	1	11/10/22 10:16	11/10/22 11:10	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	9.3	1.7	1	11/10/22 10:16	11/10/22 11:10	96-12-8	
Dibromochloromethane	ND	ug/kg	4.6	0.60	1	11/10/22 10:16	11/10/22 11:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.6	0.50	1	11/10/22 10:16	11/10/22 11:10	106-93-4	
Dibromomethane	ND	ug/kg	4.6	0.56	1	11/10/22 10:16	11/10/22 11:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.6	0.58	1	11/10/22 10:16	11/10/22 11:10	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.6	0.67	1	11/10/22 10:16	11/10/22 11:10	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.6	0.75	1	11/10/22 10:16	11/10/22 11:10	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.6	1.1	1	11/10/22 10:16	11/10/22 11:10	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.6	0.36	1	11/10/22 10:16	11/10/22 11:10	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.6	0.37	1	11/10/22 10:16	11/10/22 11:10	107-06-2	
1,2-Dichloroethene (Total)	66.1	ug/kg	4.6	1.0	1	11/10/22 10:16	11/10/22 11:10	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.6	0.59	1	11/10/22 10:16	11/10/22 11:10	75-35-4	
cis-1,2-Dichloroethene	66.1	ug/kg	4.6	0.40	1	11/10/22 10:16	11/10/22 11:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.6	0.63	1	11/10/22 10:16	11/10/22 11:10	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.6	0.91	1	11/10/22 10:16	11/10/22 11:10	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.6	0.64	1	11/10/22 10:16	11/10/22 11:10	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.6	0.44	1	11/10/22 10:16	11/10/22 11:10	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.6	0.83	1	11/10/22 10:16	11/10/22 11:10	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.6	0.49	1	11/10/22 10:16	11/10/22 11:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.6	0.42	1	11/10/22 10:16	11/10/22 11:10	10061-02-6	
Ethylbenzene	ND	ug/kg	4.6	0.43	1	11/10/22 10:16	11/10/22 11:10	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.6	0.79	1	11/10/22 10:16	11/10/22 11:10	87-68-3	
2-Hexanone	ND	ug/kg	18.5	2.3	1	11/10/22 10:16	11/10/22 11:10	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.6	0.53	1	11/10/22 10:16	11/10/22 11:10	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.6	0.64	1	11/10/22 10:16	11/10/22 11:10	99-87-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW3B-(36-38) **Lab ID: 60415168009** Collected: 11/03/22 08:35 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.6	2.5	1	11/10/22 10:16	11/10/22 11:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	9.3	2.8	1	11/10/22 10:16	11/10/22 11:10	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.6	0.45	1	11/10/22 10:16	11/10/22 11:10	1634-04-4	
Naphthalene	ND	ug/kg	9.3	0.76	1	11/10/22 10:16	11/10/22 11:10	91-20-3	
n-Propylbenzene	ND	ug/kg	4.6	0.74	1	11/10/22 10:16	11/10/22 11:10	103-65-1	
Styrene	ND	ug/kg	4.6	0.55	1	11/10/22 10:16	11/10/22 11:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.6	0.95	1	11/10/22 10:16	11/10/22 11:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.6	0.93	1	11/10/22 10:16	11/10/22 11:10	79-34-5	
Tetrachloroethene	1.5J	ug/kg	4.6	0.38	1	11/10/22 10:16	11/10/22 11:10	127-18-4	
Toluene	ND	ug/kg	4.6	0.33	1	11/10/22 10:16	11/10/22 11:10	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.6	0.74	1	11/10/22 10:16	11/10/22 11:10	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.6	0.74	1	11/10/22 10:16	11/10/22 11:10	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.6	0.69	1	11/10/22 10:16	11/10/22 11:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.6	0.58	1	11/10/22 10:16	11/10/22 11:10	79-00-5	
Trichloroethene	108	ug/kg	4.6	0.67	1	11/10/22 10:16	11/10/22 11:10	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.6	0.57	1	11/10/22 10:16	11/10/22 11:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.6	2.0	1	11/10/22 10:16	11/10/22 11:10	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.6	0.62	1	11/10/22 10:16	11/10/22 11:10	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.6	0.58	1	11/10/22 10:16	11/10/22 11:10	108-67-8	
Vinyl chloride	7.6	ug/kg	4.6	0.62	1	11/10/22 10:16	11/10/22 11:10	75-01-4	
Xylene (Total)	ND	ug/kg	4.6	1.1	1	11/10/22 10:16	11/10/22 11:10	1330-20-7	
Surrogates									
Toluene-d8 (S)	98	%	80-120		1	11/10/22 10:16	11/10/22 11:10	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-125		1	11/10/22 10:16	11/10/22 11:10	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1	11/10/22 10:16	11/10/22 11:10	2199-69-1	

Percent Moisture

Analytical Method: ASTM D2974

Pace Analytical Services - Kansas City

Percent Moisture	17.6	%	0.50	0.50	1		11/09/22 11:53		
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW14-(59-61) Lab ID: 60415168010 Collected: 11/03/22 12:20 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	19.9	16.2	1	11/09/22 13:20	11/09/22 18:16	67-64-1	
Benzene	ND	ug/kg	5.0	0.49	1	11/09/22 13:20	11/09/22 18:16	71-43-2	
Bromobenzene	ND	ug/kg	5.0	0.94	1	11/09/22 13:20	11/09/22 18:16	108-86-1	
Bromochloromethane	ND	ug/kg	5.0	0.60	1	11/09/22 13:20	11/09/22 18:16	74-97-5	
Bromodichloromethane	ND	ug/kg	5.0	0.60	1	11/09/22 13:20	11/09/22 18:16	75-27-4	
Bromoform	ND	ug/kg	5.0	0.57	1	11/09/22 13:20	11/09/22 18:16	75-25-2	
Bromomethane	ND	ug/kg	5.0	2.9	1	11/09/22 13:20	11/09/22 18:16	74-83-9	
2-Butanone (MEK)	ND	ug/kg	10	3.4	1	11/09/22 13:20	11/09/22 18:16	78-93-3	
n-Butylbenzene	ND	ug/kg	5.0	0.65	1	11/09/22 13:20	11/09/22 18:16	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	0.73	1	11/09/22 13:20	11/09/22 18:16	135-98-8	
tert-Butylbenzene	ND	ug/kg	24.9	0.88	1	11/09/22 13:20	11/09/22 18:16	98-06-6	
Carbon disulfide	ND	ug/kg	5.0	0.64	1	11/09/22 13:20	11/09/22 18:16	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.0	0.85	1	11/09/22 13:20	11/09/22 18:16	56-23-5	
Chlorobenzene	ND	ug/kg	5.0	0.63	1	11/09/22 13:20	11/09/22 18:16	108-90-7	
Chloroethane	ND	ug/kg	5.0	1.5	1	11/09/22 13:20	11/09/22 18:16	75-00-3	
Chloroform	ND	ug/kg	5.0	0.49	1	11/09/22 13:20	11/09/22 18:16	67-66-3	
Chloromethane	ND	ug/kg	5.0	0.80	1	11/09/22 13:20	11/09/22 18:16	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.0	0.73	1	11/09/22 13:20	11/09/22 18:16	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.0	0.60	1	11/09/22 13:20	11/09/22 18:16	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10	1.8	1	11/09/22 13:20	11/09/22 18:16	96-12-8	
Dibromochloromethane	ND	ug/kg	5.0	0.64	1	11/09/22 13:20	11/09/22 18:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	0.53	1	11/09/22 13:20	11/09/22 18:16	106-93-4	
Dibromomethane	ND	ug/kg	5.0	0.60	1	11/09/22 13:20	11/09/22 18:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.0	0.62	1	11/09/22 13:20	11/09/22 18:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.0	0.72	1	11/09/22 13:20	11/09/22 18:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.0	0.81	1	11/09/22 13:20	11/09/22 18:16	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.0	1.2	1	11/09/22 13:20	11/09/22 18:16	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.0	0.39	1	11/09/22 13:20	11/09/22 18:16	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	0.40	1	11/09/22 13:20	11/09/22 18:16	107-06-2	
1,2-Dichloroethene (Total)	1.3J	ug/kg	5.0	1.1	1	11/09/22 13:20	11/09/22 18:16	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.0	0.64	1	11/09/22 13:20	11/09/22 18:16	75-35-4	
cis-1,2-Dichloroethene	1.3J	ug/kg	5.0	0.43	1	11/09/22 13:20	11/09/22 18:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	0.68	1	11/09/22 13:20	11/09/22 18:16	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.0	0.98	1	11/09/22 13:20	11/09/22 18:16	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.0	0.69	1	11/09/22 13:20	11/09/22 18:16	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.0	0.47	1	11/09/22 13:20	11/09/22 18:16	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.0	0.90	1	11/09/22 13:20	11/09/22 18:16	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.0	0.53	1	11/09/22 13:20	11/09/22 18:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.0	0.46	1	11/09/22 13:20	11/09/22 18:16	10061-02-6	
Ethylbenzene	ND	ug/kg	5.0	0.46	1	11/09/22 13:20	11/09/22 18:16	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	0.85	1	11/09/22 13:20	11/09/22 18:16	87-68-3	
2-Hexanone	ND	ug/kg	19.9	2.5	1	11/09/22 13:20	11/09/22 18:16	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	0.57	1	11/09/22 13:20	11/09/22 18:16	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.0	0.69	1	11/09/22 13:20	11/09/22 18:16	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW14-(59-61) **Lab ID: 60415168010** Collected: 11/03/22 12:20 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	5.0	2.7	1	11/09/22 13:20	11/09/22 18:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10	3.0	1	11/09/22 13:20	11/09/22 18:16	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.0	0.48	1	11/09/22 13:20	11/09/22 18:16	1634-04-4	
Naphthalene	ND	ug/kg	10	0.82	1	11/09/22 13:20	11/09/22 18:16	91-20-3	
n-Propylbenzene	ND	ug/kg	5.0	0.80	1	11/09/22 13:20	11/09/22 18:16	103-65-1	
Styrene	ND	ug/kg	5.0	0.59	1	11/09/22 13:20	11/09/22 18:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	1.0	1	11/09/22 13:20	11/09/22 18:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1.0	1	11/09/22 13:20	11/09/22 18:16	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	0.41	1	11/09/22 13:20	11/09/22 18:16	127-18-4	
Toluene	0.76J	ug/kg	5.0	0.35	1	11/09/22 13:20	11/09/22 18:16	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	0.79	1	11/09/22 13:20	11/09/22 18:16	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	0.79	1	11/09/22 13:20	11/09/22 18:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.0	0.75	1	11/09/22 13:20	11/09/22 18:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.0	0.63	1	11/09/22 13:20	11/09/22 18:16	79-00-5	
Trichloroethene	ND	ug/kg	5.0	0.72	1	11/09/22 13:20	11/09/22 18:16	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	0.61	1	11/09/22 13:20	11/09/22 18:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.0	2.1	1	11/09/22 13:20	11/09/22 18:16	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	0.67	1	11/09/22 13:20	11/09/22 18:16	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	0.63	1	11/09/22 13:20	11/09/22 18:16	108-67-8	
Vinyl chloride	ND	ug/kg	5.0	0.66	1	11/09/22 13:20	11/09/22 18:16	75-01-4	
Xylene (Total)	ND	ug/kg	5.0	1.1	1	11/09/22 13:20	11/09/22 18:16	1330-20-7	
Surrogates									
Toluene-d8 (S)	98	%	80-120		1	11/09/22 13:20	11/09/22 18:16	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-125		1	11/09/22 13:20	11/09/22 18:16	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1	11/09/22 13:20	11/09/22 18:16	2199-69-1	

Percent Moisture

Analytical Method: ASTM D2974

Pace Analytical Services - Kansas City

Percent Moisture	19.9	%	0.50	0.50	1	11/09/22 11:53
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW13-(22-24) Lab ID: 60415168011 Collected: 11/03/22 16:05 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	18.2	14.8	1	11/09/22 13:20	11/09/22 18:32	67-64-1	
Benzene	ND	ug/kg	4.6	0.45	1	11/09/22 13:20	11/09/22 18:32	71-43-2	
Bromobenzene	ND	ug/kg	4.6	0.86	1	11/09/22 13:20	11/09/22 18:32	108-86-1	
Bromochloromethane	ND	ug/kg	4.6	0.55	1	11/09/22 13:20	11/09/22 18:32	74-97-5	
Bromodichloromethane	ND	ug/kg	4.6	0.55	1	11/09/22 13:20	11/09/22 18:32	75-27-4	
Bromoform	ND	ug/kg	4.6	0.52	1	11/09/22 13:20	11/09/22 18:32	75-25-2	
Bromomethane	ND	ug/kg	4.6	2.7	1	11/09/22 13:20	11/09/22 18:32	74-83-9	
2-Butanone (MEK)	ND	ug/kg	9.1	3.1	1	11/09/22 13:20	11/09/22 18:32	78-93-3	
n-Butylbenzene	ND	ug/kg	4.6	0.59	1	11/09/22 13:20	11/09/22 18:32	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.6	0.67	1	11/09/22 13:20	11/09/22 18:32	135-98-8	
tert-Butylbenzene	ND	ug/kg	22.8	0.80	1	11/09/22 13:20	11/09/22 18:32	98-06-6	
Carbon disulfide	ND	ug/kg	4.6	0.59	1	11/09/22 13:20	11/09/22 18:32	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.6	0.78	1	11/09/22 13:20	11/09/22 18:32	56-23-5	
Chlorobenzene	ND	ug/kg	4.6	0.57	1	11/09/22 13:20	11/09/22 18:32	108-90-7	
Chloroethane	ND	ug/kg	4.6	1.4	1	11/09/22 13:20	11/09/22 18:32	75-00-3	
Chloroform	ND	ug/kg	4.6	0.45	1	11/09/22 13:20	11/09/22 18:32	67-66-3	
Chloromethane	ND	ug/kg	4.6	0.73	1	11/09/22 13:20	11/09/22 18:32	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.6	0.66	1	11/09/22 13:20	11/09/22 18:32	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.6	0.55	1	11/09/22 13:20	11/09/22 18:32	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	9.1	1.7	1	11/09/22 13:20	11/09/22 18:32	96-12-8	
Dibromochloromethane	ND	ug/kg	4.6	0.59	1	11/09/22 13:20	11/09/22 18:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.6	0.49	1	11/09/22 13:20	11/09/22 18:32	106-93-4	
Dibromomethane	ND	ug/kg	4.6	0.55	1	11/09/22 13:20	11/09/22 18:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.6	0.57	1	11/09/22 13:20	11/09/22 18:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.6	0.66	1	11/09/22 13:20	11/09/22 18:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.6	0.74	1	11/09/22 13:20	11/09/22 18:32	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.6	1.1	1	11/09/22 13:20	11/09/22 18:32	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.6	0.36	1	11/09/22 13:20	11/09/22 18:32	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.6	0.36	1	11/09/22 13:20	11/09/22 18:32	107-06-2	
1,2-Dichloroethene (Total)	14.4	ug/kg	4.6	1.0	1	11/09/22 13:20	11/09/22 18:32	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.6	0.58	1	11/09/22 13:20	11/09/22 18:32	75-35-4	
cis-1,2-Dichloroethene	13.6	ug/kg	4.6	0.39	1	11/09/22 13:20	11/09/22 18:32	156-59-2	
trans-1,2-Dichloroethene	0.74J	ug/kg	4.6	0.62	1	11/09/22 13:20	11/09/22 18:32	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.6	0.89	1	11/09/22 13:20	11/09/22 18:32	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.6	0.63	1	11/09/22 13:20	11/09/22 18:32	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.6	0.43	1	11/09/22 13:20	11/09/22 18:32	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.6	0.82	1	11/09/22 13:20	11/09/22 18:32	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.6	0.48	1	11/09/22 13:20	11/09/22 18:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.6	0.42	1	11/09/22 13:20	11/09/22 18:32	10061-02-6	
Ethylbenzene	ND	ug/kg	4.6	0.42	1	11/09/22 13:20	11/09/22 18:32	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.6	0.78	1	11/09/22 13:20	11/09/22 18:32	87-68-3	
2-Hexanone	ND	ug/kg	18.2	2.3	1	11/09/22 13:20	11/09/22 18:32	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.6	0.52	1	11/09/22 13:20	11/09/22 18:32	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.6	0.63	1	11/09/22 13:20	11/09/22 18:32	99-87-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW13-(22-24) **Lab ID:** 60415168011 **Collected:** 11/03/22 16:05 **Received:** 11/08/22 15:30 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.6	2.5	1	11/09/22 13:20	11/09/22 18:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	9.1	2.8	1	11/09/22 13:20	11/09/22 18:32	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.6	0.44	1	11/09/22 13:20	11/09/22 18:32	1634-04-4	
Naphthalene	ND	ug/kg	9.1	0.75	1	11/09/22 13:20	11/09/22 18:32	91-20-3	
n-Propylbenzene	ND	ug/kg	4.6	0.73	1	11/09/22 13:20	11/09/22 18:32	103-65-1	
Styrene	ND	ug/kg	4.6	0.54	1	11/09/22 13:20	11/09/22 18:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.6	0.93	1	11/09/22 13:20	11/09/22 18:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.6	0.91	1	11/09/22 13:20	11/09/22 18:32	79-34-5	
Tetrachloroethene	ND	ug/kg	4.6	0.38	1	11/09/22 13:20	11/09/22 18:32	127-18-4	
Toluene	0.58J	ug/kg	4.6	0.32	1	11/09/22 13:20	11/09/22 18:32	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.6	0.73	1	11/09/22 13:20	11/09/22 18:32	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.6	0.73	1	11/09/22 13:20	11/09/22 18:32	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.6	0.68	1	11/09/22 13:20	11/09/22 18:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.6	0.57	1	11/09/22 13:20	11/09/22 18:32	79-00-5	
Trichloroethene	11.7	ug/kg	4.6	0.66	1	11/09/22 13:20	11/09/22 18:32	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.6	0.56	1	11/09/22 13:20	11/09/22 18:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.6	1.9	1	11/09/22 13:20	11/09/22 18:32	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.6	0.61	1	11/09/22 13:20	11/09/22 18:32	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.6	0.57	1	11/09/22 13:20	11/09/22 18:32	108-67-8	
Vinyl chloride	ND	ug/kg	4.6	0.61	1	11/09/22 13:20	11/09/22 18:32	75-01-4	
Xylene (Total)	ND	ug/kg	4.6	1.0	1	11/09/22 13:20	11/09/22 18:32	1330-20-7	
Surrogates									
Toluene-d8 (S)	96	%	80-120		1	11/09/22 13:20	11/09/22 18:32	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-125		1	11/09/22 13:20	11/09/22 18:32	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1	11/09/22 13:20	11/09/22 18:32	2199-69-1	

Percent Moisture

Analytical Method: ASTM D2974

Pace Analytical Services - Kansas City

Percent Moisture	9.4	%	0.50	0.50	1		11/09/22 11:53		
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW12-(39-41) Lab ID: 60415168012 Collected: 11/04/22 09:30 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	18.0	14.5	1	11/09/22 13:20	11/09/22 18:48	67-64-1	
Benzene	ND	ug/kg	4.5	0.44	1	11/09/22 13:20	11/09/22 18:48	71-43-2	
Bromobenzene	ND	ug/kg	4.5	0.84	1	11/09/22 13:20	11/09/22 18:48	108-86-1	
Bromochloromethane	ND	ug/kg	4.5	0.54	1	11/09/22 13:20	11/09/22 18:48	74-97-5	
Bromodichloromethane	ND	ug/kg	4.5	0.54	1	11/09/22 13:20	11/09/22 18:48	75-27-4	
Bromoform	ND	ug/kg	4.5	0.52	1	11/09/22 13:20	11/09/22 18:48	75-25-2	
Bromomethane	ND	ug/kg	4.5	2.6	1	11/09/22 13:20	11/09/22 18:48	74-83-9	
2-Butanone (MEK)	ND	ug/kg	9.0	3.1	1	11/09/22 13:20	11/09/22 18:48	78-93-3	
n-Butylbenzene	ND	ug/kg	4.5	0.58	1	11/09/22 13:20	11/09/22 18:48	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.5	0.66	1	11/09/22 13:20	11/09/22 18:48	135-98-8	
tert-Butylbenzene	ND	ug/kg	22.4	0.79	1	11/09/22 13:20	11/09/22 18:48	98-06-6	
Carbon disulfide	ND	ug/kg	4.5	0.58	1	11/09/22 13:20	11/09/22 18:48	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.5	0.77	1	11/09/22 13:20	11/09/22 18:48	56-23-5	
Chlorobenzene	ND	ug/kg	4.5	0.56	1	11/09/22 13:20	11/09/22 18:48	108-90-7	
Chloroethane	ND	ug/kg	4.5	1.3	1	11/09/22 13:20	11/09/22 18:48	75-00-3	
Chloroform	ND	ug/kg	4.5	0.44	1	11/09/22 13:20	11/09/22 18:48	67-66-3	
Chloromethane	ND	ug/kg	4.5	0.72	1	11/09/22 13:20	11/09/22 18:48	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.5	0.65	1	11/09/22 13:20	11/09/22 18:48	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.5	0.54	1	11/09/22 13:20	11/09/22 18:48	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	9.0	1.6	1	11/09/22 13:20	11/09/22 18:48	96-12-8	
Dibromochloromethane	ND	ug/kg	4.5	0.58	1	11/09/22 13:20	11/09/22 18:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.5	0.48	1	11/09/22 13:20	11/09/22 18:48	106-93-4	
Dibromomethane	ND	ug/kg	4.5	0.54	1	11/09/22 13:20	11/09/22 18:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.5	0.56	1	11/09/22 13:20	11/09/22 18:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.5	0.65	1	11/09/22 13:20	11/09/22 18:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.5	0.73	1	11/09/22 13:20	11/09/22 18:48	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.5	1.1	1	11/09/22 13:20	11/09/22 18:48	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.5	0.35	1	11/09/22 13:20	11/09/22 18:48	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.5	0.36	1	11/09/22 13:20	11/09/22 18:48	107-06-2	
1,2-Dichloroethene (Total)	9.5	ug/kg	4.5	1.0	1	11/09/22 13:20	11/09/22 18:48	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.5	0.57	1	11/09/22 13:20	11/09/22 18:48	75-35-4	
cis-1,2-Dichloroethene	6.5	ug/kg	4.5	0.39	1	11/09/22 13:20	11/09/22 18:48	156-59-2	
trans-1,2-Dichloroethene	3.0J	ug/kg	4.5	0.61	1	11/09/22 13:20	11/09/22 18:48	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.5	0.88	1	11/09/22 13:20	11/09/22 18:48	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.5	0.62	1	11/09/22 13:20	11/09/22 18:48	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.5	0.43	1	11/09/22 13:20	11/09/22 18:48	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.5	0.81	1	11/09/22 13:20	11/09/22 18:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.5	0.48	1	11/09/22 13:20	11/09/22 18:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.5	0.41	1	11/09/22 13:20	11/09/22 18:48	10061-02-6	
Ethylbenzene	ND	ug/kg	4.5	0.41	1	11/09/22 13:20	11/09/22 18:48	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.5	0.76	1	11/09/22 13:20	11/09/22 18:48	87-68-3	
2-Hexanone	ND	ug/kg	18.0	2.2	1	11/09/22 13:20	11/09/22 18:48	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.5	0.51	1	11/09/22 13:20	11/09/22 18:48	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.5	0.62	1	11/09/22 13:20	11/09/22 18:48	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW12-(39-41) **Lab ID:** 60415168012 **Collected:** 11/04/22 09:30 **Received:** 11/08/22 15:30 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.5	2.5	1	11/09/22 13:20	11/09/22 18:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	9.0	2.7	1	11/09/22 13:20	11/09/22 18:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.5	0.43	1	11/09/22 13:20	11/09/22 18:48	1634-04-4	
Naphthalene	ND	ug/kg	9.0	0.74	1	11/09/22 13:20	11/09/22 18:48	91-20-3	
n-Propylbenzene	ND	ug/kg	4.5	0.72	1	11/09/22 13:20	11/09/22 18:48	103-65-1	
Styrene	ND	ug/kg	4.5	0.53	1	11/09/22 13:20	11/09/22 18:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.5	0.92	1	11/09/22 13:20	11/09/22 18:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.5	0.90	1	11/09/22 13:20	11/09/22 18:48	79-34-5	
Tetrachloroethene	ND	ug/kg	4.5	0.37	1	11/09/22 13:20	11/09/22 18:48	127-18-4	
Toluene	0.32J	ug/kg	4.5	0.32	1	11/09/22 13:20	11/09/22 18:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.5	0.72	1	11/09/22 13:20	11/09/22 18:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.5	0.72	1	11/09/22 13:20	11/09/22 18:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.5	0.67	1	11/09/22 13:20	11/09/22 18:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.5	0.57	1	11/09/22 13:20	11/09/22 18:48	79-00-5	
Trichloroethene	49.1	ug/kg	4.5	0.65	1	11/09/22 13:20	11/09/22 18:48	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.5	0.55	1	11/09/22 13:20	11/09/22 18:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.5	1.9	1	11/09/22 13:20	11/09/22 18:48	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.5	0.60	1	11/09/22 13:20	11/09/22 18:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.5	0.56	1	11/09/22 13:20	11/09/22 18:48	108-67-8	
Vinyl chloride	ND	ug/kg	4.5	0.60	1	11/09/22 13:20	11/09/22 18:48	75-01-4	
Xylene (Total)	ND	ug/kg	4.5	1.0	1	11/09/22 13:20	11/09/22 18:48	1330-20-7	
Surrogates									
Toluene-d8 (S)	99	%	80-120		1	11/09/22 13:20	11/09/22 18:48	2037-26-5	
4-Bromofluorobenzene (S)	106	%	80-125		1	11/09/22 13:20	11/09/22 18:48	460-00-4	
1,2-Dichlorobenzene-d4 (S)	105	%	80-120		1	11/09/22 13:20	11/09/22 18:48	2199-69-1	

Percent Moisture

Analytical Method: ASTM D2974

Pace Analytical Services - Kansas City

Percent Moisture	12.4	%	0.50	0.50	1	11/09/22 11:53
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW9-(55-57) Lab ID: 60415168013 Collected: 11/04/22 12:15 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	20.9	16.9	1	11/09/22 13:20	11/09/22 19:04	67-64-1	
Benzene	ND	ug/kg	5.2	0.51	1	11/09/22 13:20	11/09/22 19:04	71-43-2	
Bromobenzene	ND	ug/kg	5.2	0.98	1	11/09/22 13:20	11/09/22 19:04	108-86-1	
Bromochloromethane	ND	ug/kg	5.2	0.63	1	11/09/22 13:20	11/09/22 19:04	74-97-5	
Bromodichloromethane	ND	ug/kg	5.2	0.63	1	11/09/22 13:20	11/09/22 19:04	75-27-4	
Bromoform	ND	ug/kg	5.2	0.60	1	11/09/22 13:20	11/09/22 19:04	75-25-2	
Bromomethane	ND	ug/kg	5.2	3.1	1	11/09/22 13:20	11/09/22 19:04	74-83-9	
2-Butanone (MEK)	ND	ug/kg	10.4	3.6	1	11/09/22 13:20	11/09/22 19:04	78-93-3	
n-Butylbenzene	ND	ug/kg	5.2	0.68	1	11/09/22 13:20	11/09/22 19:04	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.2	0.76	1	11/09/22 13:20	11/09/22 19:04	135-98-8	
tert-Butylbenzene	ND	ug/kg	26.1	0.92	1	11/09/22 13:20	11/09/22 19:04	98-06-6	
Carbon disulfide	ND	ug/kg	5.2	0.67	1	11/09/22 13:20	11/09/22 19:04	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.2	0.90	1	11/09/22 13:20	11/09/22 19:04	56-23-5	
Chlorobenzene	ND	ug/kg	5.2	0.65	1	11/09/22 13:20	11/09/22 19:04	108-90-7	
Chloroethane	ND	ug/kg	5.2	1.6	1	11/09/22 13:20	11/09/22 19:04	75-00-3	
Chloroform	ND	ug/kg	5.2	0.51	1	11/09/22 13:20	11/09/22 19:04	67-66-3	
Chloromethane	ND	ug/kg	5.2	0.83	1	11/09/22 13:20	11/09/22 19:04	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.2	0.76	1	11/09/22 13:20	11/09/22 19:04	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.2	0.63	1	11/09/22 13:20	11/09/22 19:04	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10.4	1.9	1	11/09/22 13:20	11/09/22 19:04	96-12-8	
Dibromochloromethane	ND	ug/kg	5.2	0.67	1	11/09/22 13:20	11/09/22 19:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.2	0.56	1	11/09/22 13:20	11/09/22 19:04	106-93-4	
Dibromomethane	ND	ug/kg	5.2	0.63	1	11/09/22 13:20	11/09/22 19:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.2	0.65	1	11/09/22 13:20	11/09/22 19:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.2	0.75	1	11/09/22 13:20	11/09/22 19:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.2	0.85	1	11/09/22 13:20	11/09/22 19:04	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.2	1.2	1	11/09/22 13:20	11/09/22 19:04	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.2	0.41	1	11/09/22 13:20	11/09/22 19:04	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.2	0.42	1	11/09/22 13:20	11/09/22 19:04	107-06-2	
1,2-Dichloroethene (Total)	1.2J	ug/kg	5.2	1.2	1	11/09/22 13:20	11/09/22 19:04	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.2	0.67	1	11/09/22 13:20	11/09/22 19:04	75-35-4	
cis-1,2-Dichloroethene	1.2J	ug/kg	5.2	0.45	1	11/09/22 13:20	11/09/22 19:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.2	0.71	1	11/09/22 13:20	11/09/22 19:04	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.2	1.0	1	11/09/22 13:20	11/09/22 19:04	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.2	0.72	1	11/09/22 13:20	11/09/22 19:04	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.2	0.50	1	11/09/22 13:20	11/09/22 19:04	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.2	0.94	1	11/09/22 13:20	11/09/22 19:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.2	0.55	1	11/09/22 13:20	11/09/22 19:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.2	0.48	1	11/09/22 13:20	11/09/22 19:04	10061-02-6	
Ethylbenzene	ND	ug/kg	5.2	0.48	1	11/09/22 13:20	11/09/22 19:04	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.2	0.89	1	11/09/22 13:20	11/09/22 19:04	87-68-3	
2-Hexanone	ND	ug/kg	20.9	2.6	1	11/09/22 13:20	11/09/22 19:04	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.2	0.60	1	11/09/22 13:20	11/09/22 19:04	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.2	0.72	1	11/09/22 13:20	11/09/22 19:04	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW9-(55-57) **Lab ID: 60415168013** Collected: 11/04/22 12:15 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	5.2	2.9	1	11/09/22 13:20	11/09/22 19:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.4	3.2	1	11/09/22 13:20	11/09/22 19:04	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.2	0.50	1	11/09/22 13:20	11/09/22 19:04	1634-04-4	
Naphthalene	ND	ug/kg	10.4	0.86	1	11/09/22 13:20	11/09/22 19:04	91-20-3	
n-Propylbenzene	ND	ug/kg	5.2	0.84	1	11/09/22 13:20	11/09/22 19:04	103-65-1	
Styrene	ND	ug/kg	5.2	0.62	1	11/09/22 13:20	11/09/22 19:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.2	1.1	1	11/09/22 13:20	11/09/22 19:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.2	1.0	1	11/09/22 13:20	11/09/22 19:04	79-34-5	
Tetrachloroethene	ND	ug/kg	5.2	0.43	1	11/09/22 13:20	11/09/22 19:04	127-18-4	
Toluene	0.45J	ug/kg	5.2	0.37	1	11/09/22 13:20	11/09/22 19:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.2	0.83	1	11/09/22 13:20	11/09/22 19:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.2	0.83	1	11/09/22 13:20	11/09/22 19:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.2	0.78	1	11/09/22 13:20	11/09/22 19:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.2	0.66	1	11/09/22 13:20	11/09/22 19:04	79-00-5	
Trichloroethene	1.3J	ug/kg	5.2	0.76	1	11/09/22 13:20	11/09/22 19:04	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.2	0.64	1	11/09/22 13:20	11/09/22 19:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.2	2.2	1	11/09/22 13:20	11/09/22 19:04	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.2	0.70	1	11/09/22 13:20	11/09/22 19:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.2	0.65	1	11/09/22 13:20	11/09/22 19:04	108-67-8	
Vinyl chloride	ND	ug/kg	5.2	0.70	1	11/09/22 13:20	11/09/22 19:04	75-01-4	
Xylene (Total)	ND	ug/kg	5.2	1.2	1	11/09/22 13:20	11/09/22 19:04	1330-20-7	
Surrogates									
Toluene-d8 (S)	99	%	80-120		1	11/09/22 13:20	11/09/22 19:04	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-125		1	11/09/22 13:20	11/09/22 19:04	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1	11/09/22 13:20	11/09/22 19:04	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City									
Percent Moisture	16.5	%	0.50	0.50	1		11/09/22 11:53		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW12-(39-41)-FD Lab ID: 60415168014 Collected: 11/04/22 09:31 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	17.6	14.3	1	11/09/22 13:20	11/09/22 19:20	67-64-1	
Benzene	ND	ug/kg	4.4	0.43	1	11/09/22 13:20	11/09/22 19:20	71-43-2	
Bromobenzene	ND	ug/kg	4.4	0.83	1	11/09/22 13:20	11/09/22 19:20	108-86-1	
Bromochloromethane	ND	ug/kg	4.4	0.53	1	11/09/22 13:20	11/09/22 19:20	74-97-5	
Bromodichloromethane	ND	ug/kg	4.4	0.53	1	11/09/22 13:20	11/09/22 19:20	75-27-4	
Bromoform	ND	ug/kg	4.4	0.51	1	11/09/22 13:20	11/09/22 19:20	75-25-2	
Bromomethane	ND	ug/kg	4.4	2.6	1	11/09/22 13:20	11/09/22 19:20	74-83-9	
2-Butanone (MEK)	ND	ug/kg	8.8	3.0	1	11/09/22 13:20	11/09/22 19:20	78-93-3	
n-Butylbenzene	ND	ug/kg	4.4	0.57	1	11/09/22 13:20	11/09/22 19:20	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.4	0.64	1	11/09/22 13:20	11/09/22 19:20	135-98-8	
tert-Butylbenzene	ND	ug/kg	22.0	0.78	1	11/09/22 13:20	11/09/22 19:20	98-06-6	
Carbon disulfide	ND	ug/kg	4.4	0.57	1	11/09/22 13:20	11/09/22 19:20	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.4	0.75	1	11/09/22 13:20	11/09/22 19:20	56-23-5	
Chlorobenzene	ND	ug/kg	4.4	0.55	1	11/09/22 13:20	11/09/22 19:20	108-90-7	
Chloroethane	ND	ug/kg	4.4	1.3	1	11/09/22 13:20	11/09/22 19:20	75-00-3	
Chloroform	ND	ug/kg	4.4	0.43	1	11/09/22 13:20	11/09/22 19:20	67-66-3	
Chloromethane	ND	ug/kg	4.4	0.70	1	11/09/22 13:20	11/09/22 19:20	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.4	0.64	1	11/09/22 13:20	11/09/22 19:20	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.4	0.53	1	11/09/22 13:20	11/09/22 19:20	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	8.8	1.6	1	11/09/22 13:20	11/09/22 19:20	96-12-8	
Dibromochloromethane	ND	ug/kg	4.4	0.57	1	11/09/22 13:20	11/09/22 19:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.4	0.47	1	11/09/22 13:20	11/09/22 19:20	106-93-4	
Dibromomethane	ND	ug/kg	4.4	0.53	1	11/09/22 13:20	11/09/22 19:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.4	0.55	1	11/09/22 13:20	11/09/22 19:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.4	0.63	1	11/09/22 13:20	11/09/22 19:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.4	0.71	1	11/09/22 13:20	11/09/22 19:20	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.4	1.0	1	11/09/22 13:20	11/09/22 19:20	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.4	0.34	1	11/09/22 13:20	11/09/22 19:20	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.4	0.35	1	11/09/22 13:20	11/09/22 19:20	107-06-2	
1,2-Dichloroethene (Total)	2.6J	ug/kg	4.4	0.98	1	11/09/22 13:20	11/09/22 19:20	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.4	0.56	1	11/09/22 13:20	11/09/22 19:20	75-35-4	
cis-1,2-Dichloroethene	1.9J	ug/kg	4.4	0.38	1	11/09/22 13:20	11/09/22 19:20	156-59-2	
trans-1,2-Dichloroethene	0.73J	ug/kg	4.4	0.60	1	11/09/22 13:20	11/09/22 19:20	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.4	0.86	1	11/09/22 13:20	11/09/22 19:20	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.4	0.61	1	11/09/22 13:20	11/09/22 19:20	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.4	0.42	1	11/09/22 13:20	11/09/22 19:20	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.4	0.79	1	11/09/22 13:20	11/09/22 19:20	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.4	0.47	1	11/09/22 13:20	11/09/22 19:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.4	0.40	1	11/09/22 13:20	11/09/22 19:20	10061-02-6	
Ethylbenzene	ND	ug/kg	4.4	0.41	1	11/09/22 13:20	11/09/22 19:20	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.4	0.75	1	11/09/22 13:20	11/09/22 19:20	87-68-3	
2-Hexanone	ND	ug/kg	17.6	2.2	1	11/09/22 13:20	11/09/22 19:20	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.4	0.50	1	11/09/22 13:20	11/09/22 19:20	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.4	0.61	1	11/09/22 13:20	11/09/22 19:20	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW12-(39-41)-FD **Lab ID:** 60415168014 **Collected:** 11/04/22 09:31 **Received:** 11/08/22 15:30 **Matrix:** Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.4	2.4	1	11/09/22 13:20	11/09/22 19:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	8.8	2.7	1	11/09/22 13:20	11/09/22 19:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.4	0.42	1	11/09/22 13:20	11/09/22 19:20	1634-04-4	
Naphthalene	ND	ug/kg	8.8	0.72	1	11/09/22 13:20	11/09/22 19:20	91-20-3	
n-Propylbenzene	ND	ug/kg	4.4	0.71	1	11/09/22 13:20	11/09/22 19:20	103-65-1	
Styrene	ND	ug/kg	4.4	0.52	1	11/09/22 13:20	11/09/22 19:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.4	0.90	1	11/09/22 13:20	11/09/22 19:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.4	0.88	1	11/09/22 13:20	11/09/22 19:20	79-34-5	
Tetrachloroethene	ND	ug/kg	4.4	0.36	1	11/09/22 13:20	11/09/22 19:20	127-18-4	
Toluene	0.33J	ug/kg	4.4	0.31	1	11/09/22 13:20	11/09/22 19:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.4	0.70	1	11/09/22 13:20	11/09/22 19:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.4	0.70	1	11/09/22 13:20	11/09/22 19:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.4	0.66	1	11/09/22 13:20	11/09/22 19:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.4	0.55	1	11/09/22 13:20	11/09/22 19:20	79-00-5	
Trichloroethene	10.0	ug/kg	4.4	0.64	1	11/09/22 13:20	11/09/22 19:20	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.4	0.54	1	11/09/22 13:20	11/09/22 19:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.4	1.9	1	11/09/22 13:20	11/09/22 19:20	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.4	0.59	1	11/09/22 13:20	11/09/22 19:20	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.4	0.55	1	11/09/22 13:20	11/09/22 19:20	108-67-8	
Vinyl chloride	ND	ug/kg	4.4	0.59	1	11/09/22 13:20	11/09/22 19:20	75-01-4	
Xylene (Total)	ND	ug/kg	4.4	1.0	1	11/09/22 13:20	11/09/22 19:20	1330-20-7	
Surrogates									
Toluene-d8 (S)	98	%	80-120		1	11/09/22 13:20	11/09/22 19:20	2037-26-5	
4-Bromofluorobenzene (S)	103	%	80-125		1	11/09/22 13:20	11/09/22 19:20	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1	11/09/22 13:20	11/09/22 19:20	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City									
Percent Moisture	12.3	%	0.50	0.50	1		11/09/22 11:53		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW8B-(55-57) Lab ID: 60415168015 Collected: 11/02/22 09:45 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	19.6	ug/kg	18.7	15.2	1	11/10/22 10:16	11/10/22 10:54	67-64-1	
Benzene	3.8J	ug/kg	4.7	0.46	1	11/10/22 10:16	11/10/22 10:54	71-43-2	
Bromobenzene	ND	ug/kg	4.7	0.88	1	11/10/22 10:16	11/10/22 10:54	108-86-1	
Bromochloromethane	ND	ug/kg	4.7	0.56	1	11/10/22 10:16	11/10/22 10:54	74-97-5	
Bromodichloromethane	ND	ug/kg	4.7	0.56	1	11/10/22 10:16	11/10/22 10:54	75-27-4	
Bromoform	ND	ug/kg	4.7	0.54	1	11/10/22 10:16	11/10/22 10:54	75-25-2	
Bromomethane	ND	ug/kg	4.7	2.8	1	11/10/22 10:16	11/10/22 10:54	74-83-9	
2-Butanone (MEK)	4.9J	ug/kg	9.4	3.2	1	11/10/22 10:16	11/10/22 10:54	78-93-3	
n-Butylbenzene	ND	ug/kg	4.7	0.61	1	11/10/22 10:16	11/10/22 10:54	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.7	0.68	1	11/10/22 10:16	11/10/22 10:54	135-98-8	
tert-Butylbenzene	ND	ug/kg	23.4	0.83	1	11/10/22 10:16	11/10/22 10:54	98-06-6	
Carbon disulfide	ND	ug/kg	4.7	0.60	1	11/10/22 10:16	11/10/22 10:54	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.7	0.80	1	11/10/22 10:16	11/10/22 10:54	56-23-5	
Chlorobenzene	ND	ug/kg	4.7	0.59	1	11/10/22 10:16	11/10/22 10:54	108-90-7	
Chloroethane	ND	ug/kg	4.7	1.4	1	11/10/22 10:16	11/10/22 10:54	75-00-3	
Chloroform	ND	ug/kg	4.7	0.46	1	11/10/22 10:16	11/10/22 10:54	67-66-3	
Chloromethane	ND	ug/kg	4.7	0.75	1	11/10/22 10:16	11/10/22 10:54	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.7	0.68	1	11/10/22 10:16	11/10/22 10:54	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.7	0.56	1	11/10/22 10:16	11/10/22 10:54	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	9.4	1.7	1	11/10/22 10:16	11/10/22 10:54	96-12-8	
Dibromochloromethane	ND	ug/kg	4.7	0.60	1	11/10/22 10:16	11/10/22 10:54	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.7	0.50	1	11/10/22 10:16	11/10/22 10:54	106-93-4	
Dibromomethane	ND	ug/kg	4.7	0.56	1	11/10/22 10:16	11/10/22 10:54	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.7	0.59	1	11/10/22 10:16	11/10/22 10:54	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.7	0.67	1	11/10/22 10:16	11/10/22 10:54	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.7	0.76	1	11/10/22 10:16	11/10/22 10:54	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	4.7	1.1	1	11/10/22 10:16	11/10/22 10:54	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.7	0.37	1	11/10/22 10:16	11/10/22 10:54	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.7	0.37	1	11/10/22 10:16	11/10/22 10:54	107-06-2	
1,2-Dichloroethene (Total)	127	ug/kg	4.7	1.0	1	11/10/22 10:16	11/10/22 10:54	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.7	0.60	1	11/10/22 10:16	11/10/22 10:54	75-35-4	
cis-1,2-Dichloroethene	125	ug/kg	4.7	0.40	1	11/10/22 10:16	11/10/22 10:54	156-59-2	
trans-1,2-Dichloroethene	1.8J	ug/kg	4.7	0.64	1	11/10/22 10:16	11/10/22 10:54	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.7	0.92	1	11/10/22 10:16	11/10/22 10:54	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.7	0.65	1	11/10/22 10:16	11/10/22 10:54	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.7	0.44	1	11/10/22 10:16	11/10/22 10:54	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.7	0.84	1	11/10/22 10:16	11/10/22 10:54	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.7	0.50	1	11/10/22 10:16	11/10/22 10:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.7	0.43	1	11/10/22 10:16	11/10/22 10:54	10061-02-6	
Ethylbenzene	0.52J	ug/kg	4.7	0.43	1	11/10/22 10:16	11/10/22 10:54	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.7	0.80	1	11/10/22 10:16	11/10/22 10:54	87-68-3	
2-Hexanone	ND	ug/kg	18.7	2.3	1	11/10/22 10:16	11/10/22 10:54	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.7	0.53	1	11/10/22 10:16	11/10/22 10:54	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.7	0.64	1	11/10/22 10:16	11/10/22 10:54	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: MW8B-(55-57) **Lab ID: 60415168015** Collected: 11/02/22 09:45 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	ND	ug/kg	4.7	2.6	1	11/10/22 10:16	11/10/22 10:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	9.4	2.8	1	11/10/22 10:16	11/10/22 10:54	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.7	0.45	1	11/10/22 10:16	11/10/22 10:54	1634-04-4	
Naphthalene	ND	ug/kg	9.4	0.77	1	11/10/22 10:16	11/10/22 10:54	91-20-3	
n-Propylbenzene	ND	ug/kg	4.7	0.75	1	11/10/22 10:16	11/10/22 10:54	103-65-1	
Styrene	ND	ug/kg	4.7	0.55	1	11/10/22 10:16	11/10/22 10:54	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.7	0.96	1	11/10/22 10:16	11/10/22 10:54	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.7	0.94	1	11/10/22 10:16	11/10/22 10:54	79-34-5	
Tetrachloroethene	ND	ug/kg	4.7	0.39	1	11/10/22 10:16	11/10/22 10:54	127-18-4	
Toluene	1.8J	ug/kg	4.7	0.33	1	11/10/22 10:16	11/10/22 10:54	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.7	0.75	1	11/10/22 10:16	11/10/22 10:54	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.7	0.75	1	11/10/22 10:16	11/10/22 10:54	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.7	0.70	1	11/10/22 10:16	11/10/22 10:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.7	0.59	1	11/10/22 10:16	11/10/22 10:54	79-00-5	
Trichlorofluoromethane	ND	ug/kg	4.7	0.58	1	11/10/22 10:16	11/10/22 10:54	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.7	2.0	1	11/10/22 10:16	11/10/22 10:54	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.7	0.63	1	11/10/22 10:16	11/10/22 10:54	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.7	0.59	1	11/10/22 10:16	11/10/22 10:54	108-67-8	
Vinyl chloride	1.6J	ug/kg	4.7	0.62	1	11/10/22 10:16	11/10/22 10:54	75-01-4	
Xylene (Total)	ND	ug/kg	4.7	1.1	1	11/10/22 10:16	11/10/22 10:54	1330-20-7	
Surrogates									
Toluene-d8 (S)	98	%	80-120		1	11/10/22 10:16	11/10/22 10:54	2037-26-5	
4-Bromofluorobenzene (S)	107	%	80-125		1	11/10/22 10:16	11/10/22 10:54	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1	11/10/22 10:16	11/10/22 10:54	2199-69-1	
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Trichloroethene	6090	ug/kg	324	28.4	1	11/11/22 09:28	11/11/22 14:59	79-01-6	
Surrogates									
Toluene-d8 (S)	103	%	80-120		1	11/11/22 09:28	11/11/22 14:59	2037-26-5	
4-Bromofluorobenzene (S)	102	%	83-119		1	11/11/22 09:28	11/11/22 14:59	460-00-4	
1,2-Dichlorobenzene-d4 (S)	97	%	80-120		1	11/11/22 09:28	11/11/22 14:59	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	18.4	%	0.50	0.50	1		11/09/22 11:53		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: TRIP BLANK Lab ID: 60415168016 Collected: 11/04/22 18:00 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City									
Acetone	ND	ug/kg	20.0	16.2	1	11/10/22 10:16	11/10/22 10:38	67-64-1	
Benzene	ND	ug/kg	5.0	0.49	1	11/10/22 10:16	11/10/22 10:38	71-43-2	
Bromobenzene	ND	ug/kg	5.0	0.94	1	11/10/22 10:16	11/10/22 10:38	108-86-1	
Bromochloromethane	ND	ug/kg	5.0	0.60	1	11/10/22 10:16	11/10/22 10:38	74-97-5	
Bromodichloromethane	ND	ug/kg	5.0	0.60	1	11/10/22 10:16	11/10/22 10:38	75-27-4	
Bromoform	ND	ug/kg	5.0	0.58	1	11/10/22 10:16	11/10/22 10:38	75-25-2	
Bromomethane	ND	ug/kg	5.0	2.9	1	11/10/22 10:16	11/10/22 10:38	74-83-9	
2-Butanone (MEK)	ND	ug/kg	10.0	3.4	1	11/10/22 10:16	11/10/22 10:38	78-93-3	
n-Butylbenzene	ND	ug/kg	5.0	0.65	1	11/10/22 10:16	11/10/22 10:38	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	0.73	1	11/10/22 10:16	11/10/22 10:38	135-98-8	
tert-Butylbenzene	ND	ug/kg	25.0	0.88	1	11/10/22 10:16	11/10/22 10:38	98-06-6	
Carbon disulfide	ND	ug/kg	5.0	0.64	1	11/10/22 10:16	11/10/22 10:38	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.0	0.86	1	11/10/22 10:16	11/10/22 10:38	56-23-5	
Chlorobenzene	ND	ug/kg	5.0	0.63	1	11/10/22 10:16	11/10/22 10:38	108-90-7	
Chloroethane	ND	ug/kg	5.0	1.5	1	11/10/22 10:16	11/10/22 10:38	75-00-3	
Chloroform	ND	ug/kg	5.0	0.49	1	11/10/22 10:16	11/10/22 10:38	67-66-3	
Chloromethane	ND	ug/kg	5.0	0.80	1	11/10/22 10:16	11/10/22 10:38	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.0	0.73	1	11/10/22 10:16	11/10/22 10:38	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.0	0.60	1	11/10/22 10:16	11/10/22 10:38	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10.0	1.8	1	11/10/22 10:16	11/10/22 10:38	96-12-8	
Dibromochloromethane	ND	ug/kg	5.0	0.65	1	11/10/22 10:16	11/10/22 10:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	0.54	1	11/10/22 10:16	11/10/22 10:38	106-93-4	
Dibromomethane	ND	ug/kg	5.0	0.60	1	11/10/22 10:16	11/10/22 10:38	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.0	0.62	1	11/10/22 10:16	11/10/22 10:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.0	0.72	1	11/10/22 10:16	11/10/22 10:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.0	0.81	1	11/10/22 10:16	11/10/22 10:38	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.0	1.2	1	11/10/22 10:16	11/10/22 10:38	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.0	0.39	1	11/10/22 10:16	11/10/22 10:38	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	0.40	1	11/10/22 10:16	11/10/22 10:38	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.0	1.1	1	11/10/22 10:16	11/10/22 10:38	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.0	0.64	1	11/10/22 10:16	11/10/22 10:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.0	0.43	1	11/10/22 10:16	11/10/22 10:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	0.68	1	11/10/22 10:16	11/10/22 10:38	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.0	0.98	1	11/10/22 10:16	11/10/22 10:38	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.0	0.69	1	11/10/22 10:16	11/10/22 10:38	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.0	0.48	1	11/10/22 10:16	11/10/22 10:38	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.0	0.90	1	11/10/22 10:16	11/10/22 10:38	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.0	0.53	1	11/10/22 10:16	11/10/22 10:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.0	0.46	1	11/10/22 10:16	11/10/22 10:38	10061-02-6	
Ethylbenzene	ND	ug/kg	5.0	0.46	1	11/10/22 10:16	11/10/22 10:38	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	0.85	1	11/10/22 10:16	11/10/22 10:38	87-68-3	
2-Hexanone	ND	ug/kg	20.0	2.5	1	11/10/22 10:16	11/10/22 10:38	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	0.57	1	11/10/22 10:16	11/10/22 10:38	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.0	0.69	1	11/10/22 10:16	11/10/22 10:38	99-87-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: TRIP BLANK **Lab ID: 60415168016** Collected: 11/04/22 18:00 Received: 11/08/22 15:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA									
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030									
Pace Analytical Services - Kansas City									
Methylene Chloride	4.0J	ug/kg	5.0	2.7	1	11/10/22 10:16	11/10/22 10:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.0	3.0	1	11/10/22 10:16	11/10/22 10:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.0	0.48	1	11/10/22 10:16	11/10/22 10:38	1634-04-4	
Naphthalene	ND	ug/kg	10.0	0.82	1	11/10/22 10:16	11/10/22 10:38	91-20-3	
n-Propylbenzene	ND	ug/kg	5.0	0.80	1	11/10/22 10:16	11/10/22 10:38	103-65-1	
Styrene	ND	ug/kg	5.0	0.59	1	11/10/22 10:16	11/10/22 10:38	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	1.0	1	11/10/22 10:16	11/10/22 10:38	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1.0	1	11/10/22 10:16	11/10/22 10:38	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	0.41	1	11/10/22 10:16	11/10/22 10:38	127-18-4	
Toluene	ND	ug/kg	5.0	0.35	1	11/10/22 10:16	11/10/22 10:38	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	0.80	1	11/10/22 10:16	11/10/22 10:38	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	0.80	1	11/10/22 10:16	11/10/22 10:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.0	0.75	1	11/10/22 10:16	11/10/22 10:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.0	0.63	1	11/10/22 10:16	11/10/22 10:38	79-00-5	
Trichloroethene	ND	ug/kg	5.0	0.72	1	11/10/22 10:16	11/10/22 10:38	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	0.61	1	11/10/22 10:16	11/10/22 10:38	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.0	2.1	1	11/10/22 10:16	11/10/22 10:38	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	0.67	1	11/10/22 10:16	11/10/22 10:38	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	0.63	1	11/10/22 10:16	11/10/22 10:38	108-67-8	
Vinyl chloride	ND	ug/kg	5.0	0.67	1	11/10/22 10:16	11/10/22 10:38	75-01-4	
Xylene (Total)	ND	ug/kg	5.0	1.1	1	11/10/22 10:16	11/10/22 10:38	1330-20-7	
Surrogates									
Toluene-d8 (S)	101	%	80-120		1	11/10/22 10:16	11/10/22 10:38	2037-26-5	
4-Bromofluorobenzene (S)	103	%	80-125		1	11/10/22 10:16	11/10/22 10:38	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1	11/10/22 10:16	11/10/22 10:38	2199-69-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: RINSATE		Lab ID: 60415168017		Collected: 11/04/22 12:00		Received: 11/08/22 15:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/14/22 22:59	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/14/22 22:59	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/14/22 22:59	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/14/22 22:59	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/14/22 22:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/14/22 22:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/14/22 22:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/14/22 22:59	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/14/22 22:59	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/14/22 22:59	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/14/22 22:59	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/14/22 22:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/14/22 22:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/14/22 22:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/14/22 22:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/14/22 22:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/14/22 22:59	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/14/22 22:59	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/14/22 22:59	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/14/22 22:59	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/14/22 22:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/14/22 22:59	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/14/22 22:59	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/14/22 22:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/14/22 22:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/14/22 22:59	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/14/22 22:59	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/14/22 22:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/14/22 22:59	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	0.22	1		11/14/22 22:59	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/14/22 22:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		11/14/22 22:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/14/22 22:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/14/22 22:59	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/14/22 22:59	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/14/22 22:59	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/14/22 22:59	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/14/22 22:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/14/22 22:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/14/22 22:59	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/14/22 22:59	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/14/22 22:59	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/14/22 22:59	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/14/22 22:59	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/14/22 22:59	75-09-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60415168

Sample: RINSATE		Lab ID: 60415168017		Collected: 11/04/22 12:00		Received: 11/08/22 15:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/14/22 22:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/14/22 22:59	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/14/22 22:59	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/14/22 22:59	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/14/22 22:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/14/22 22:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/14/22 22:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/14/22 22:59	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/14/22 22:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/14/22 22:59	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/14/22 22:59	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/14/22 22:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/14/22 22:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		11/14/22 22:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/14/22 22:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/14/22 22:59	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/14/22 22:59	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/14/22 22:59	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/14/22 22:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/14/22 22:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		11/14/22 22:59	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		11/14/22 22:59	2199-69-1	
Toluene-d8 (S)	101	%	80-120		1		11/14/22 22:59	2037-26-5	
Preservation pH	1.0		0.10		1		11/14/22 22:59		

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

QC Batch:	817481	Analysis Method:	EPA 8260B
QC Batch Method:	EPA 5035A/5030	Analysis Description:	8260 MSV 5035A Volatile Organics
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60415168001, 60415168002, 60415168003, 60415168004, 60415168008, 60415168010, 60415168011, 60415168012, 60415168013, 60415168014		

METHOD BLANK: 3251144

Matrix: Solid

Associated Lab Samples: 60415168001, 60415168002, 60415168003, 60415168004, 60415168008, 60415168010, 60415168011, 60415168012, 60415168013, 60415168014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	1.0	11/09/22 13:56	
1,1,1-Trichloroethane	ug/kg	ND	5.0	0.75	11/09/22 13:56	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	1.0	11/09/22 13:56	
1,1,2-Trichloroethane	ug/kg	ND	5.0	0.63	11/09/22 13:56	
1,1-Dichloroethane	ug/kg	ND	5.0	0.39	11/09/22 13:56	
1,1-Dichloroethene	ug/kg	ND	5.0	0.64	11/09/22 13:56	
1,1-Dichloropropene	ug/kg	ND	5.0	0.90	11/09/22 13:56	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	0.80	11/09/22 13:56	
1,2,3-Trichloropropane	ug/kg	ND	5.0	2.1	11/09/22 13:56	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	0.80	11/09/22 13:56	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	0.67	11/09/22 13:56	
1,2-Dibromo-3-chloropropane	ug/kg	ND	10.0	1.8	11/09/22 13:56	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	0.54	11/09/22 13:56	
1,2-Dichlorobenzene	ug/kg	ND	5.0	0.62	11/09/22 13:56	
1,2-Dichloroethane	ug/kg	ND	5.0	0.40	11/09/22 13:56	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	1.1	11/09/22 13:56	
1,2-Dichloropropane	ug/kg	ND	5.0	0.98	11/09/22 13:56	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	0.63	11/09/22 13:56	
1,3-Dichlorobenzene	ug/kg	ND	5.0	0.72	11/09/22 13:56	
1,3-Dichloropropane	ug/kg	ND	5.0	0.69	11/09/22 13:56	
1,4-Dichlorobenzene	ug/kg	ND	5.0	0.81	11/09/22 13:56	
2,2-Dichloropropane	ug/kg	ND	5.0	0.48	11/09/22 13:56	
2-Butanone (MEK)	ug/kg	ND	10.0	3.4	11/09/22 13:56	
2-Chlorotoluene	ug/kg	ND	5.0	0.73	11/09/22 13:56	
2-Hexanone	ug/kg	ND	20.0	2.5	11/09/22 13:56	
4-Chlorotoluene	ug/kg	ND	5.0	0.60	11/09/22 13:56	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	3.0	11/09/22 13:56	
Acetone	ug/kg	ND	20.0	16.2	11/09/22 13:56	
Benzene	ug/kg	ND	5.0	0.49	11/09/22 13:56	
Bromobenzene	ug/kg	ND	5.0	0.94	11/09/22 13:56	
Bromochloromethane	ug/kg	ND	5.0	0.60	11/09/22 13:56	
Bromodichloromethane	ug/kg	ND	5.0	0.60	11/09/22 13:56	
Bromoform	ug/kg	ND	5.0	0.58	11/09/22 13:56	
Bromomethane	ug/kg	ND	5.0	2.9	11/09/22 13:56	
Carbon disulfide	ug/kg	ND	5.0	0.64	11/09/22 13:56	
Carbon tetrachloride	ug/kg	ND	5.0	0.86	11/09/22 13:56	
Chlorobenzene	ug/kg	ND	5.0	0.63	11/09/22 13:56	
Chloroethane	ug/kg	ND	5.0	1.5	11/09/22 13:56	
Chloroform	ug/kg	ND	5.0	0.49	11/09/22 13:56	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

METHOD BLANK: 3251144

Matrix: Solid

Associated Lab Samples: 60415168001, 60415168002, 60415168003, 60415168004, 60415168008, 60415168010, 60415168011, 60415168012, 60415168013, 60415168014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloromethane	ug/kg	ND	5.0	0.80	11/09/22 13:56	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	0.43	11/09/22 13:56	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	0.53	11/09/22 13:56	
Dibromochloromethane	ug/kg	ND	5.0	0.65	11/09/22 13:56	
Dibromomethane	ug/kg	ND	5.0	0.60	11/09/22 13:56	
Dichlorodifluoromethane	ug/kg	ND	5.0	1.2	11/09/22 13:56	
Ethylbenzene	ug/kg	ND	5.0	0.46	11/09/22 13:56	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	0.85	11/09/22 13:56	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	0.57	11/09/22 13:56	
Methyl-tert-butyl ether	ug/kg	ND	5.0	0.48	11/09/22 13:56	
Methylene Chloride	ug/kg	ND	5.0	2.7	11/09/22 13:56	
n-Butylbenzene	ug/kg	ND	5.0	0.65	11/09/22 13:56	
n-Propylbenzene	ug/kg	ND	5.0	0.80	11/09/22 13:56	
Naphthalene	ug/kg	ND	10.0	0.82	11/09/22 13:56	
p-Isopropyltoluene	ug/kg	ND	5.0	0.69	11/09/22 13:56	
sec-Butylbenzene	ug/kg	ND	5.0	0.73	11/09/22 13:56	
Styrene	ug/kg	ND	5.0	0.59	11/09/22 13:56	
tert-Butylbenzene	ug/kg	ND	25.0	0.88	11/09/22 13:56	
Tetrachloroethene	ug/kg	ND	5.0	0.41	11/09/22 13:56	
Toluene	ug/kg	ND	5.0	0.35	11/09/22 13:56	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	0.68	11/09/22 13:56	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	0.46	11/09/22 13:56	
Trichloroethene	ug/kg	ND	5.0	0.72	11/09/22 13:56	
Trichlorofluoromethane	ug/kg	ND	5.0	0.61	11/09/22 13:56	
Vinyl chloride	ug/kg	ND	5.0	0.67	11/09/22 13:56	
Xylene (Total)	ug/kg	ND	5.0	1.1	11/09/22 13:56	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		11/09/22 13:56	
4-Bromofluorobenzene (S)	%	105	80-125		11/09/22 13:56	
Toluene-d8 (S)	%	101	80-120		11/09/22 13:56	

LABORATORY CONTROL SAMPLE: 3251145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	100	93.3	93	80-125	
1,1,1-Trichloroethane	ug/kg	100	91.2	91	80-125	
1,1,2,2-Tetrachloroethane	ug/kg	100	101	101	70-125	
1,1,2-Trichloroethane	ug/kg	100	91.9	92	80-125	
1,1-Dichloroethane	ug/kg	100	87.0	87	75-120	
1,1-Dichloroethene	ug/kg	100	85.8	86	70-125	
1,1-Dichloropropene	ug/kg	100	88.3	88	80-125	
1,2,3-Trichlorobenzene	ug/kg	100	93.9	94	75-135	
1,2,3-Trichloropropane	ug/kg	100	99.8	100	70-125	
1,2,4-Trichlorobenzene	ug/kg	100	97.9	98	70-135	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

LABORATORY CONTROL SAMPLE: 3251145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	100	90.9	91	80-125	
1,2-Dibromo-3-chloropropane	ug/kg	100	112	112	70-135	
1,2-Dibromoethane (EDB)	ug/kg	100	94.2	94	80-125	
1,2-Dichlorobenzene	ug/kg	100	91.5	92	80-120	
1,2-Dichloroethane	ug/kg	100	89.0	89	75-125	
1,2-Dichloroethene (Total)	ug/kg	200	172	86	80-120	
1,2-Dichloropropane	ug/kg	100	87.1	87	80-120	
1,3,5-Trimethylbenzene	ug/kg	100	92.1	92	80-125	
1,3-Dichlorobenzene	ug/kg	100	91.4	91	80-120	
1,3-Dichloropropane	ug/kg	100	91.3	91	80-125	
1,4-Dichlorobenzene	ug/kg	100	91.7	92	80-120	
2,2-Dichloropropane	ug/kg	100	94.6	95	75-125	
2-Butanone (MEK)	ug/kg	500	476	95	45-155	
2-Chlorotoluene	ug/kg	100	89.9	90	75-120	
2-Hexanone	ug/kg	500	474	95	60-145	
4-Chlorotoluene	ug/kg	100	91.3	91	80-120	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	454	91	65-135	
Acetone	ug/kg	500	421	84	25-170	
Benzene	ug/kg	100	85.5	86	80-120	
Bromobenzene	ug/kg	100	94.3	94	80-120	
Bromochloromethane	ug/kg	100	92.1	92	75-125	
Bromodichloromethane	ug/kg	100	94.0	94	80-120	
Bromoform	ug/kg	100	99.5	99	75-130	
Bromomethane	ug/kg	100	77.7	78	40-140	
Carbon disulfide	ug/kg	100	86.6	87	60-130	
Carbon tetrachloride	ug/kg	100	92.3	92	80-125	
Chlorobenzene	ug/kg	100	87.9	88	80-120	
Chloroethane	ug/kg	100	80.9	81	55-130	
Chloroform	ug/kg	100	85.5	86	80-120	
Chloromethane	ug/kg	100	76.8	77	40-130	
cis-1,2-Dichloroethene	ug/kg	100	86.3	86	80-120	
cis-1,3-Dichloropropene	ug/kg	100	97.4	97	80-125	
Dibromochloromethane	ug/kg	100	94.5	95	80-125	
Dibromomethane	ug/kg	100	91.9	92	80-120	
Dichlorodifluoromethane	ug/kg	100	70.5	70	15-150	
Ethylbenzene	ug/kg	100	87.5	88	80-125	
Hexachloro-1,3-butadiene	ug/kg	100	94.2	94	70-135	
Isopropylbenzene (Cumene)	ug/kg	100	87.9	88	80-130	
Methyl-tert-butyl ether	ug/kg	100	95.5	96	75-125	
Methylene Chloride	ug/kg	100	79.9	80	70-125	
n-Butylbenzene	ug/kg	100	90.6	91	80-125	
n-Propylbenzene	ug/kg	100	89.9	90	80-120	
Naphthalene	ug/kg	100	98.8	99	75-130	
p-Isopropyltoluene	ug/kg	100	92.0	92	80-125	
sec-Butylbenzene	ug/kg	100	90.6	91	80-125	
Styrene	ug/kg	100	90.1	90	80-130	
tert-Butylbenzene	ug/kg	100	90.9	91	80-125	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

LABORATORY CONTROL SAMPLE: 3251145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/kg	100	87.0	87	75-135	
Toluene	ug/kg	100	83.8	84	80-120	
trans-1,2-Dichloroethene	ug/kg	100	85.5	86	80-120	
trans-1,3-Dichloropropene	ug/kg	100	97.0	97	80-120	
Trichloroethene	ug/kg	100	87.2	87	80-120	
Trichlorofluoromethane	ug/kg	100	82.6	83	60-130	
Vinyl chloride	ug/kg	100	76.6	77	40-135	
Xylene (Total)	ug/kg	300	263	88	80-125	
1,2-Dichlorobenzene-d4 (S)	%			103	80-120	
4-Bromofluorobenzene (S)	%			103	80-125	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3251146 3251147

Parameter	Units	60415063002	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result										
1,1,1,2-Tetrachloroethane	ug/kg	ND	117	117	106	95.3	91	81	80-125	11	35	
1,1,1-Trichloroethane	ug/kg	ND	117	117	116	108	99	92	80-125	6	35	
1,1,2,2-Tetrachloroethane	ug/kg	ND	117	117	101	92.9	86	79	70-125	8	35	
1,1,2-Trichloroethane	ug/kg	ND	117	117	98.0	93.0	84	79	80-125	5	35	M1
1,1-Dichloroethane	ug/kg	ND	117	117	102	97.5	87	83	75-120	4	35	
1,1-Dichloroethene	ug/kg	ND	117	117	99.7	102	85	87	70-125	2	35	
1,1-Dichloropropene	ug/kg	ND	117	117	110	107	94	91	80-125	3	35	
1,2,3-Trichlorobenzene	ug/kg	ND	117	117	94.0	81.7	80	70	75-135	14	50	M1
1,2,3-Trichloropropane	ug/kg	ND	117	117	100	93.2	86	79	70-125	7	35	
1,2,4-Trichlorobenzene	ug/kg	ND	117	117	94.1	83.1	80	71	70-135	12	50	
1,2,4-Trimethylbenzene	ug/kg	ND	117	117	101	91.7	86	78	80-125	10	35	M1
1,2-Dibromo-3-chloropropane	ug/kg	ND	117	117	110	103	94	88	70-135	6	35	
1,2-Dibromoethane (EDB)	ug/kg	ND	117	117	98.9	93.5	84	80	80-125	6	50	
1,2-Dichlorobenzene	ug/kg	ND	117	117	94.3	83.6	80	71	80-120	12	35	M1
1,2-Dichloroethane	ug/kg	ND	117	117	95.7	88.8	82	76	75-125	7	35	
1,2-Dichloroethene (Total)	ug/kg	ND	235	235	212	203	90	87	80-120	4	35	
1,2-Dichloropropane	ug/kg	ND	117	117	96.3	92.4	82	79	80-120	4	35	M1
1,3,5-Trimethylbenzene	ug/kg	ND	117	117	105	96.1	90	82	80-125	9	35	
1,3-Dichlorobenzene	ug/kg	ND	117	117	95.4	84.2	81	72	80-120	13	37	M1
1,3-Dichloropropane	ug/kg	ND	117	117	98.4	90.4	84	77	80-125	8	35	M1
1,4-Dichlorobenzene	ug/kg	ND	117	117	96.6	84.7	82	72	80-120	13	35	M1
2,2-Dichloropropane	ug/kg	ND	117	117	117	112	100	95	75-125	5	35	
2-Butanone (MEK)	ug/kg	ND	586	586	465	488	79	83	45-155	5	35	
2-Chlorotoluene	ug/kg	ND	117	117	98.2	90.1	84	77	75-120	9	35	
2-Hexanone	ug/kg	ND	586	586	512	487	87	83	60-145	5	35	
4-Chlorotoluene	ug/kg	ND	117	117	98.5	89.6	84	76	80-120	10	35	M1
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	586	586	496	481	85	82	65-135	3	35	
Acetone	ug/kg	ND	586	586	414	402	71	69	25-170	3	35	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3251146 3251147											
Parameter	Units	60415063002		MS		MSD		MS		MSD	
		Result	Conc.	Spike	Conc.	Result	Conc.	% Rec	% Rec	% Rec	Max
								Limits	RPD	RPD	Qual
Benzene	ug/kg	ND	117	117	103	91.6	88	78	80-120	11	35 M1
Bromobenzene	ug/kg	ND	117	117	98.7	87.8	84	75	80-120	12	35 M1
Bromochloromethane	ug/kg	ND	117	117	107	91.8	91	78	75-125	15	35
Bromodichloromethane	ug/kg	ND	117	117	102	97.8	87	83	80-120	4	35
Bromoform	ug/kg	ND	117	117	103	96.7	88	82	75-130	6	35
Bromomethane	ug/kg	ND	117	117	77.8	80.4	66	68	40-140	3	35
Carbon disulfide	ug/kg	ND	117	117	94.8	95.1	81	81	60-130	0	35
Carbon tetrachloride	ug/kg	ND	117	117	118	112	101	96	80-125	5	35
Chlorobenzene	ug/kg	ND	117	117	98.1	88.8	84	76	80-120	10	35 M1
Chloroethane	ug/kg	ND	117	117	87.1	88.0	74	75	55-130	1	35
Chloroform	ug/kg	ND	117	117	103	93.1	88	79	80-120	10	35 M1
Chloromethane	ug/kg	ND	117	117	66.1	65.4	56	56	40-130	1	35
cis-1,2-Dichloroethene	ug/kg	ND	117	117	108	95.7	92	82	80-120	12	35
cis-1,3-Dichloropropene	ug/kg	ND	117	117	104	99.8	89	85	80-125	4	35
Dibromochloromethane	ug/kg	ND	117	117	99.2	93.1	85	79	80-125	6	35 M1
Dibromomethane	ug/kg	ND	117	117	94.4	91.4	81	78	80-120	3	35 M1
Dichlorodifluoromethane	ug/kg	ND	117	117	48.4	48.8	41	42	15-150	1	35
Ethylbenzene	ug/kg	ND	117	117	103	96.7	88	83	80-125	6	35
Hexachloro-1,3-butadiene	ug/kg	ND	117	117	99.4	97.3	85	83	70-135	2	45
Isopropylbenzene (Cumene)	ug/kg	ND	117	117	106	101	91	86	80-130	6	35
Methyl-tert-butyl ether	ug/kg	ND	117	117	100	97.5	86	83	75-125	3	42
Methylene Chloride	ug/kg	ND	117	117	85.6	82.3	72	69	70-125	4	35 M1
n-Butylbenzene	ug/kg	ND	117	117	101	94.3	86	80	80-125	7	35
n-Propylbenzene	ug/kg	ND	117	117	101	95.3	86	81	80-120	6	35
Naphthalene	ug/kg	ND	117	117	93.2	88.2	79	75	75-130	6	63
p-Isopropyltoluene	ug/kg	ND	117	117	104	94.0	89	80	80-125	10	35
sec-Butylbenzene	ug/kg	ND	117	117	105	98.9	89	84	80-125	6	35
Styrene	ug/kg	ND	117	117	99.7	89.4	85	76	80-130	11	35 M1
tert-Butylbenzene	ug/kg	ND	117	117	105	99.2	89	85	80-125	5	35
Tetrachloroethene	ug/kg	ND	117	117	102	99.2	87	85	75-135	2	35
Toluene	ug/kg	ND	117	117	99.4	92.2	85	79	80-120	8	35 M1
trans-1,2-Dichloroethene	ug/kg	ND	117	117	104	107	88	91	80-120	3	35
trans-1,3-Dichloropropene	ug/kg	ND	117	117	105	96.6	89	82	80-120	8	35
Trichloroethene	ug/kg	ND	117	117	98.6	97.8	84	83	80-120	1	35
Trichlorofluoromethane	ug/kg	ND	117	117	92.3	95.7	79	82	60-130	4	35
Vinyl chloride	ug/kg	ND	117	117	80.5	82.7	69	71	40-135	3	35
Xylene (Total)	ug/kg	ND	352	352	313	289	89	82	80-125	8	35
1,2-Dichlorobenzene-d4 (S)	%						102	102	80-120		
4-Bromofluorobenzene (S)	%						100	99	80-125		
Toluene-d8 (S)	%						100	99	80-120		

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

QC Batch: 817580

Analysis Method: EPA 8260B

QC Batch Method: EPA 5035A/5030

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60415168006, 60415168009, 60415168015, 60415168016

METHOD BLANK: 3251513

Matrix: Solid

Associated Lab Samples: 60415168006, 60415168009, 60415168015, 60415168016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	1.0	11/10/22 09:41	
1,1,1-Trichloroethane	ug/kg	ND	5.0	0.75	11/10/22 09:41	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	1.0	11/10/22 09:41	
1,1,2-Trichloroethane	ug/kg	ND	5.0	0.63	11/10/22 09:41	
1,1-Dichloroethane	ug/kg	ND	5.0	0.39	11/10/22 09:41	
1,1-Dichloroethene	ug/kg	ND	5.0	0.64	11/10/22 09:41	
1,1-Dichloropropene	ug/kg	ND	5.0	0.90	11/10/22 09:41	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	0.80	11/10/22 09:41	
1,2,3-Trichloropropane	ug/kg	ND	5.0	2.1	11/10/22 09:41	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	0.80	11/10/22 09:41	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	0.67	11/10/22 09:41	
1,2-Dibromo-3-chloropropane	ug/kg	ND	10.0	1.8	11/10/22 09:41	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	0.54	11/10/22 09:41	
1,2-Dichlorobenzene	ug/kg	ND	5.0	0.62	11/10/22 09:41	
1,2-Dichloroethane	ug/kg	ND	5.0	0.40	11/10/22 09:41	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	1.1	11/10/22 09:41	
1,2-Dichloropropane	ug/kg	ND	5.0	0.98	11/10/22 09:41	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	0.63	11/10/22 09:41	
1,3-Dichlorobenzene	ug/kg	ND	5.0	0.72	11/10/22 09:41	
1,3-Dichloropropane	ug/kg	ND	5.0	0.69	11/10/22 09:41	
1,4-Dichlorobenzene	ug/kg	ND	5.0	0.81	11/10/22 09:41	
2,2-Dichloropropane	ug/kg	ND	5.0	0.48	11/10/22 09:41	
2-Butanone (MEK)	ug/kg	ND	10.0	3.4	11/10/22 09:41	
2-Chlorotoluene	ug/kg	ND	5.0	0.73	11/10/22 09:41	
2-Hexanone	ug/kg	ND	20.0	2.5	11/10/22 09:41	
4-Chlorotoluene	ug/kg	ND	5.0	0.60	11/10/22 09:41	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	3.0	11/10/22 09:41	
Acetone	ug/kg	ND	20.0	16.2	11/10/22 09:41	
Benzene	ug/kg	ND	5.0	0.49	11/10/22 09:41	
Bromobenzene	ug/kg	ND	5.0	0.94	11/10/22 09:41	
Bromochloromethane	ug/kg	ND	5.0	0.60	11/10/22 09:41	
Bromodichloromethane	ug/kg	ND	5.0	0.60	11/10/22 09:41	
Bromoform	ug/kg	ND	5.0	0.58	11/10/22 09:41	
Bromomethane	ug/kg	ND	5.0	2.9	11/10/22 09:41	
Carbon disulfide	ug/kg	ND	5.0	0.64	11/10/22 09:41	
Carbon tetrachloride	ug/kg	ND	5.0	0.86	11/10/22 09:41	
Chlorobenzene	ug/kg	ND	5.0	0.63	11/10/22 09:41	
Chloroethane	ug/kg	ND	5.0	1.5	11/10/22 09:41	
Chloroform	ug/kg	ND	5.0	0.49	11/10/22 09:41	
Chloromethane	ug/kg	ND	5.0	0.80	11/10/22 09:41	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

METHOD BLANK: 3251513

Matrix: Solid

Associated Lab Samples: 60415168006, 60415168009, 60415168015, 60415168016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	ND	5.0	0.43	11/10/22 09:41	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	0.53	11/10/22 09:41	
Dibromochloromethane	ug/kg	ND	5.0	0.65	11/10/22 09:41	
Dibromomethane	ug/kg	ND	5.0	0.60	11/10/22 09:41	
Dichlorodifluoromethane	ug/kg	ND	5.0	1.2	11/10/22 09:41	
Ethylbenzene	ug/kg	ND	5.0	0.46	11/10/22 09:41	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	0.85	11/10/22 09:41	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	0.57	11/10/22 09:41	
Methyl-tert-butyl ether	ug/kg	ND	5.0	0.48	11/10/22 09:41	
Methylene Chloride	ug/kg	ND	5.0	2.7	11/10/22 09:41	
n-Butylbenzene	ug/kg	ND	5.0	0.65	11/10/22 09:41	
n-Propylbenzene	ug/kg	ND	5.0	0.80	11/10/22 09:41	
Naphthalene	ug/kg	ND	10.0	0.82	11/10/22 09:41	
p-Isopropyltoluene	ug/kg	ND	5.0	0.69	11/10/22 09:41	
sec-Butylbenzene	ug/kg	ND	5.0	0.73	11/10/22 09:41	
Styrene	ug/kg	ND	5.0	0.59	11/10/22 09:41	
tert-Butylbenzene	ug/kg	ND	25.0	0.88	11/10/22 09:41	
Tetrachloroethene	ug/kg	ND	5.0	0.41	11/10/22 09:41	
Toluene	ug/kg	ND	5.0	0.35	11/10/22 09:41	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	0.68	11/10/22 09:41	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	0.46	11/10/22 09:41	
Trichloroethene	ug/kg	ND	5.0	0.72	11/10/22 09:41	
Trichlorofluoromethane	ug/kg	ND	5.0	0.61	11/10/22 09:41	
Vinyl chloride	ug/kg	ND	5.0	0.67	11/10/22 09:41	
Xylene (Total)	ug/kg	ND	5.0	1.1	11/10/22 09:41	
1,2-Dichlorobenzene-d4 (S)	%	99	80-120		11/10/22 09:41	
4-Bromofluorobenzene (S)	%	101	80-125		11/10/22 09:41	
Toluene-d8 (S)	%	100	80-120		11/10/22 09:41	

LABORATORY CONTROL SAMPLE: 3251514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	100	97.9	98	80-125	
1,1,1-Trichloroethane	ug/kg	100	98.6	99	80-125	
1,1,2,2-Tetrachloroethane	ug/kg	100	97.4	97	70-125	
1,1,2-Trichloroethane	ug/kg	100	91.9	92	80-125	
1,1-Dichloroethane	ug/kg	100	95.9	96	75-120	
1,1-Dichloroethene	ug/kg	100	93.5	94	70-125	
1,1-Dichloropropene	ug/kg	100	97.1	97	80-125	
1,2,3-Trichlorobenzene	ug/kg	100	95.8	96	75-135	
1,2,3-Trichloropropane	ug/kg	100	95.3	95	70-125	
1,2,4-Trichlorobenzene	ug/kg	100	96.8	97	70-135	
1,2,4-Trimethylbenzene	ug/kg	100	94.7	95	80-125	
1,2-Dibromo-3-chloropropane	ug/kg	100	105	105	70-135	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

LABORATORY CONTROL SAMPLE: 3251514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	100	94.0	94	80-125	
1,2-Dichlorobenzene	ug/kg	100	92.4	92	80-120	
1,2-Dichloroethane	ug/kg	100	89.5	90	75-125	
1,2-Dichloroethene (Total)	ug/kg	200	191	95	80-120	
1,2-Dichloropropane	ug/kg	100	92.2	92	80-120	
1,3,5-Trimethylbenzene	ug/kg	100	96.8	97	80-125	
1,3-Dichlorobenzene	ug/kg	100	93.6	94	80-120	
1,3-Dichloropropane	ug/kg	100	91.9	92	80-125	
1,4-Dichlorobenzene	ug/kg	100	93.0	93	80-120	
2,2-Dichloropropane	ug/kg	100	104	104	75-125	
2-Butanone (MEK)	ug/kg	500	486	97	45-155	
2-Chlorotoluene	ug/kg	100	89.3	89	75-120	
2-Hexanone	ug/kg	500	470	94	60-145	
4-Chlorotoluene	ug/kg	100	94.6	95	80-120	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	438	88	65-135	
Acetone	ug/kg	500	443	89	25-170	
Benzene	ug/kg	100	90.5	90	80-120	
Bromobenzene	ug/kg	100	92.5	93	80-120	
Bromochloromethane	ug/kg	100	92.2	92	75-125	
Bromodichloromethane	ug/kg	100	96.8	97	80-120	
Bromoform	ug/kg	100	97.4	97	75-130	
Bromomethane	ug/kg	100	81.2	81	40-140	
Carbon disulfide	ug/kg	100	95.2	95	60-130	
Carbon tetrachloride	ug/kg	100	102	102	80-125	
Chlorobenzene	ug/kg	100	91.4	91	80-120	
Chloroethane	ug/kg	100	85.9	86	55-130	
Chloroform	ug/kg	100	88.7	89	80-120	
Chloromethane	ug/kg	100	79.6	80	40-130	
cis-1,2-Dichloroethene	ug/kg	100	91.9	92	80-120	
cis-1,3-Dichloropropene	ug/kg	100	99.0	99	80-125	
Dibromochloromethane	ug/kg	100	95.4	95	80-125	
Dibromomethane	ug/kg	100	91.5	92	80-120	
Dichlorodifluoromethane	ug/kg	100	70.3	70	15-150	
Ethylbenzene	ug/kg	100	93.9	94	80-125	
Hexachloro-1,3-butadiene	ug/kg	100	102	102	70-135	
Isopropylbenzene (Cumene)	ug/kg	100	95.1	95	80-130	
Methyl-tert-butyl ether	ug/kg	100	98.7	99	75-125	
Methylene Chloride	ug/kg	100	81.6	82	70-125	
n-Butylbenzene	ug/kg	100	95.0	95	80-125	
n-Propylbenzene	ug/kg	100	91.8	92	80-120	
Naphthalene	ug/kg	100	95.0	95	75-130	
p-Isopropyltoluene	ug/kg	100	96.8	97	80-125	
sec-Butylbenzene	ug/kg	100	96.0	96	80-125	
Styrene	ug/kg	100	93.0	93	80-130	
tert-Butylbenzene	ug/kg	100	96.9	97	80-125	
Tetrachloroethene	ug/kg	100	95.1	95	75-135	
Toluene	ug/kg	100	90.4	90	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

LABORATORY CONTROL SAMPLE: 3251514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	ug/kg	100	98.9	99	80-120	
trans-1,3-Dichloropropene	ug/kg	100	99.7	100	80-120	
Trichloroethene	ug/kg	100	92.2	92	80-120	
Trichlorofluoromethane	ug/kg	100	92.9	93	60-130	
Vinyl chloride	ug/kg	100	81.6	82	40-135	
Xylene (Total)	ug/kg	300	280	93	80-125	
1,2-Dichlorobenzene-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			102	80-125	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

QC Batch: 817748

Analysis Method: EPA 8260B

QC Batch Method: EPA 5035A/5030

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60415168007

METHOD BLANK: 3252164

Matrix: Solid

Associated Lab Samples: 60415168007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	1.0	11/10/22 09:41	
1,1,1-Trichloroethane	ug/kg	ND	5.0	0.75	11/10/22 09:41	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	1.0	11/10/22 09:41	
1,1,2-Trichloroethane	ug/kg	ND	5.0	0.63	11/10/22 09:41	
1,1-Dichloroethane	ug/kg	ND	5.0	0.39	11/10/22 09:41	
1,1-Dichloroethene	ug/kg	ND	5.0	0.64	11/10/22 09:41	
1,1-Dichloropropene	ug/kg	ND	5.0	0.90	11/10/22 09:41	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	0.80	11/10/22 09:41	
1,2,3-Trichloropropane	ug/kg	ND	5.0	2.1	11/10/22 09:41	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	0.80	11/10/22 09:41	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	0.67	11/10/22 09:41	
1,2-Dibromo-3-chloropropane	ug/kg	ND	10.0	1.8	11/10/22 09:41	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	0.54	11/10/22 09:41	
1,2-Dichlorobenzene	ug/kg	ND	5.0	0.62	11/10/22 09:41	
1,2-Dichloroethane	ug/kg	ND	5.0	0.40	11/10/22 09:41	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	1.1	11/10/22 09:41	
1,2-Dichloropropane	ug/kg	ND	5.0	0.98	11/10/22 09:41	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	0.63	11/10/22 09:41	
1,3-Dichlorobenzene	ug/kg	ND	5.0	0.72	11/10/22 09:41	
1,3-Dichloropropane	ug/kg	ND	5.0	0.69	11/10/22 09:41	
1,4-Dichlorobenzene	ug/kg	ND	5.0	0.81	11/10/22 09:41	
2,2-Dichloropropane	ug/kg	ND	5.0	0.48	11/10/22 09:41	
2-Butanone (MEK)	ug/kg	ND	10.0	3.4	11/10/22 09:41	
2-Chlorotoluene	ug/kg	ND	5.0	0.73	11/10/22 09:41	
2-Hexanone	ug/kg	ND	20.0	2.5	11/10/22 09:41	
4-Chlorotoluene	ug/kg	ND	5.0	0.60	11/10/22 09:41	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	3.0	11/10/22 09:41	
Acetone	ug/kg	ND	20.0	16.2	11/10/22 09:41	
Benzene	ug/kg	ND	5.0	0.49	11/10/22 09:41	
Bromobenzene	ug/kg	ND	5.0	0.94	11/10/22 09:41	
Bromochloromethane	ug/kg	ND	5.0	0.60	11/10/22 09:41	
Bromodichloromethane	ug/kg	ND	5.0	0.60	11/10/22 09:41	
Bromoform	ug/kg	ND	5.0	0.58	11/10/22 09:41	
Bromomethane	ug/kg	ND	5.0	2.9	11/10/22 09:41	
Carbon disulfide	ug/kg	ND	5.0	0.64	11/10/22 09:41	
Carbon tetrachloride	ug/kg	ND	5.0	0.86	11/10/22 09:41	
Chlorobenzene	ug/kg	ND	5.0	0.63	11/10/22 09:41	
Chloroethane	ug/kg	ND	5.0	1.5	11/10/22 09:41	
Chloroform	ug/kg	ND	5.0	0.49	11/10/22 09:41	
Chloromethane	ug/kg	ND	5.0	0.80	11/10/22 09:41	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

METHOD BLANK: 3252164

Matrix: Solid

Associated Lab Samples: 60415168007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	ND	5.0	0.43	11/10/22 09:41	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	0.53	11/10/22 09:41	
Dibromochloromethane	ug/kg	ND	5.0	0.65	11/10/22 09:41	
Dibromomethane	ug/kg	ND	5.0	0.60	11/10/22 09:41	
Dichlorodifluoromethane	ug/kg	ND	5.0	1.2	11/10/22 09:41	
Ethylbenzene	ug/kg	ND	5.0	0.46	11/10/22 09:41	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	0.85	11/10/22 09:41	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	0.57	11/10/22 09:41	
Methyl-tert-butyl ether	ug/kg	ND	5.0	0.48	11/10/22 09:41	
Methylene Chloride	ug/kg	ND	5.0	2.7	11/10/22 09:41	
n-Butylbenzene	ug/kg	ND	5.0	0.65	11/10/22 09:41	
n-Propylbenzene	ug/kg	ND	5.0	0.80	11/10/22 09:41	
Naphthalene	ug/kg	ND	10.0	0.82	11/10/22 09:41	
p-Isopropyltoluene	ug/kg	ND	5.0	0.69	11/10/22 09:41	
sec-Butylbenzene	ug/kg	ND	5.0	0.73	11/10/22 09:41	
Styrene	ug/kg	ND	5.0	0.59	11/10/22 09:41	
tert-Butylbenzene	ug/kg	ND	25.0	0.88	11/10/22 09:41	
Tetrachloroethene	ug/kg	ND	5.0	0.41	11/10/22 09:41	
Toluene	ug/kg	ND	5.0	0.35	11/10/22 09:41	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	0.68	11/10/22 09:41	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	0.46	11/10/22 09:41	
Trichlorofluoromethane	ug/kg	ND	5.0	0.61	11/10/22 09:41	
Vinyl chloride	ug/kg	ND	5.0	0.67	11/10/22 09:41	
Xylene (Total)	ug/kg	ND	5.0	1.1	11/10/22 09:41	
1,2-Dichlorobenzene-d4 (S)	%	99	80-120		11/10/22 09:41	
4-Bromofluorobenzene (S)	%	101	80-125		11/10/22 09:41	
Toluene-d8 (S)	%	100	80-120		11/10/22 09:41	

LABORATORY CONTROL SAMPLE: 3252165

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	100	97.9	98	80-125	
1,1,1-Trichloroethane	ug/kg	100	98.6	99	80-125	
1,1,2,2-Tetrachloroethane	ug/kg	100	97.4	97	70-125	
1,1,2-Trichloroethane	ug/kg	100	91.9	92	80-125	
1,1-Dichloroethane	ug/kg	100	95.9	96	75-120	
1,1-Dichloroethene	ug/kg	100	93.5	94	70-125	
1,1-Dichloropropene	ug/kg	100	97.1	97	80-125	
1,2,3-Trichlorobenzene	ug/kg	100	95.8	96	75-135	
1,2,3-Trichloropropane	ug/kg	100	95.3	95	70-125	
1,2,4-Trichlorobenzene	ug/kg	100	96.8	97	70-135	
1,2,4-Trimethylbenzene	ug/kg	100	94.7	95	80-125	
1,2-Dibromo-3-chloropropane	ug/kg	100	105	105	70-135	
1,2-Dibromoethane (EDB)	ug/kg	100	94.0	94	80-125	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

LABORATORY CONTROL SAMPLE: 3252165

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	ug/kg	100	92.4	92	80-120	
1,2-Dichloroethane	ug/kg	100	89.5	90	75-125	
1,2-Dichloroethene (Total)	ug/kg	200	191	95	80-120	
1,2-Dichloropropane	ug/kg	100	92.2	92	80-120	
1,3,5-Trimethylbenzene	ug/kg	100	96.8	97	80-125	
1,3-Dichlorobenzene	ug/kg	100	93.6	94	80-120	
1,3-Dichloropropane	ug/kg	100	91.9	92	80-125	
1,4-Dichlorobenzene	ug/kg	100	93.0	93	80-120	
2,2-Dichloropropane	ug/kg	100	104	104	75-125	
2-Butanone (MEK)	ug/kg	500	486	97	45-155	
2-Chlorotoluene	ug/kg	100	89.3	89	75-120	
2-Hexanone	ug/kg	500	470	94	60-145	
4-Chlorotoluene	ug/kg	100	94.6	95	80-120	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	438	88	65-135	
Acetone	ug/kg	500	443	89	25-170	
Benzene	ug/kg	100	90.5	90	80-120	
Bromobenzene	ug/kg	100	92.5	93	80-120	
Bromochloromethane	ug/kg	100	92.2	92	75-125	
Bromodichloromethane	ug/kg	100	96.8	97	80-120	
Bromoform	ug/kg	100	97.4	97	75-130	
Bromomethane	ug/kg	100	81.2	81	40-140	
Carbon disulfide	ug/kg	100	95.2	95	60-130	
Carbon tetrachloride	ug/kg	100	102	102	80-125	
Chlorobenzene	ug/kg	100	91.4	91	80-120	
Chloroethane	ug/kg	100	85.9	86	55-130	
Chloroform	ug/kg	100	88.7	89	80-120	
Chloromethane	ug/kg	100	79.6	80	40-130	
cis-1,2-Dichloroethene	ug/kg	100	91.9	92	80-120	
cis-1,3-Dichloropropene	ug/kg	100	99.0	99	80-125	
Dibromochloromethane	ug/kg	100	95.4	95	80-125	
Dibromomethane	ug/kg	100	91.5	92	80-120	
Dichlorodifluoromethane	ug/kg	100	70.3	70	15-150	
Ethylbenzene	ug/kg	100	93.9	94	80-125	
Hexachloro-1,3-butadiene	ug/kg	100	102	102	70-135	
Isopropylbenzene (Cumene)	ug/kg	100	95.1	95	80-130	
Methyl-tert-butyl ether	ug/kg	100	98.7	99	75-125	
Methylene Chloride	ug/kg	100	81.6	82	70-125	
n-Butylbenzene	ug/kg	100	95.0	95	80-125	
n-Propylbenzene	ug/kg	100	91.8	92	80-120	
Naphthalene	ug/kg	100	95.0	95	75-130	
p-Isopropyltoluene	ug/kg	100	96.8	97	80-125	
sec-Butylbenzene	ug/kg	100	96.0	96	80-125	
Styrene	ug/kg	100	93.0	93	80-130	
tert-Butylbenzene	ug/kg	100	96.9	97	80-125	
Tetrachloroethene	ug/kg	100	95.1	95	75-135	
Toluene	ug/kg	100	90.4	90	80-120	
trans-1,2-Dichloroethene	ug/kg	100	98.9	99	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

LABORATORY CONTROL SAMPLE: 3252165

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,3-Dichloropropene	ug/kg	100	99.7	100	80-120	
Trichlorofluoromethane	ug/kg	100	92.9	93	60-130	
Vinyl chloride	ug/kg	100	81.6	82	40-135	
Xylene (Total)	ug/kg	300	280	93	80-125	
1,2-Dichlorobenzene-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			102	80-125	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

QC Batch: 817809

Analysis Method: EPA 8260B

QC Batch Method: EPA 5035A/5030B

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60415168004, 60415168005, 60415168006, 60415168007, 60415168008, 60415168015

METHOD BLANK: 3252503

Matrix: Solid

Associated Lab Samples: 60415168004, 60415168005, 60415168006, 60415168007, 60415168008, 60415168015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	250	20.2	11/11/22 09:19	
1,1,1-Trichloroethane	ug/kg	ND	250	20.8	11/11/22 09:19	
1,1,2,2-Tetrachloroethane	ug/kg	ND	250	21.2	11/11/22 09:19	
1,1,2-Trichloroethane	ug/kg	ND	250	31.3	11/11/22 09:19	
1,1-Dichloroethane	ug/kg	ND	250	89.3	11/11/22 09:19	
1,1-Dichloroethene	ug/kg	ND	250	25.6	11/11/22 09:19	
1,1-Dichloropropene	ug/kg	ND	250	22.2	11/11/22 09:19	
1,2,3-Trichlorobenzene	ug/kg	ND	250	72.3	11/11/22 09:19	
1,2,3-Trichloropropane	ug/kg	ND	250	28.1	11/11/22 09:19	
1,2,4-Trichlorobenzene	ug/kg	ND	250	56.2	11/11/22 09:19	
1,2,4-Trimethylbenzene	ug/kg	ND	250	29.5	11/11/22 09:19	
1,2-Dibromo-3-chloropropane	ug/kg	ND	500	55.9	11/11/22 09:19	
1,2-Dibromoethane (EDB)	ug/kg	ND	250	18.3	11/11/22 09:19	
1,2-Dichlorobenzene	ug/kg	ND	250	38.5	11/11/22 09:19	
1,2-Dichloroethane	ug/kg	ND	250	17.7	11/11/22 09:19	
1,2-Dichloroethene (Total)	ug/kg	ND	250	42.1	11/11/22 09:19	
1,2-Dichloropropane	ug/kg	ND	250	18.6	11/11/22 09:19	
1,3,5-Trimethylbenzene	ug/kg	ND	250	35.7	11/11/22 09:19	
1,3-Dichlorobenzene	ug/kg	ND	250	37.7	11/11/22 09:19	
1,3-Dichloropropane	ug/kg	ND	250	19.3	11/11/22 09:19	
1,4-Dichlorobenzene	ug/kg	ND	250	38.2	11/11/22 09:19	
2,2-Dichloropropane	ug/kg	ND	250	20.2	11/11/22 09:19	
2-Butanone (MEK)	ug/kg	ND	500	114	11/11/22 09:19	
2-Chlorotoluene	ug/kg	ND	250	27.7	11/11/22 09:19	
2-Hexanone	ug/kg	ND	1000	97.2	11/11/22 09:19	
4-Chlorotoluene	ug/kg	ND	250	35.3	11/11/22 09:19	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	500	91.8	11/11/22 09:19	
Acetone	ug/kg	ND	1000	217	11/11/22 09:19	
Benzene	ug/kg	ND	250	21.0	11/11/22 09:19	
Bromobenzene	ug/kg	ND	250	30.1	11/11/22 09:19	
Bromochloromethane	ug/kg	ND	250	26.7	11/11/22 09:19	
Bromodichloromethane	ug/kg	ND	250	18.9	11/11/22 09:19	
Bromoform	ug/kg	ND	250	15.1	11/11/22 09:19	
Bromomethane	ug/kg	ND	250	146	11/11/22 09:19	
Carbon disulfide	ug/kg	ND	250	26.3	11/11/22 09:19	
Carbon tetrachloride	ug/kg	ND	250	23.6	11/11/22 09:19	
Chlorobenzene	ug/kg	ND	250	24.8	11/11/22 09:19	
Chloroethane	ug/kg	ND	250	38.2	11/11/22 09:19	
Chloroform	ug/kg	ND	250	20.1	11/11/22 09:19	
Chloromethane	ug/kg	ND	250	61.0	11/11/22 09:19	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

METHOD BLANK: 3252503

Matrix: Solid

Associated Lab Samples: 60415168004, 60415168005, 60415168006, 60415168007, 60415168008, 60415168015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	ND	250	23.3	11/11/22 09:19	
cis-1,3-Dichloropropene	ug/kg	ND	250	20.6	11/11/22 09:19	
Dibromochloromethane	ug/kg	ND	250	21.2	11/11/22 09:19	
Dibromomethane	ug/kg	ND	250	25.5	11/11/22 09:19	
Dichlorodifluoromethane	ug/kg	ND	250	39.5	11/11/22 09:19	
Ethylbenzene	ug/kg	ND	250	26.1	11/11/22 09:19	
Hexachloro-1,3-butadiene	ug/kg	ND	250	63.6	11/11/22 09:19	
Isopropylbenzene (Cumene)	ug/kg	ND	250	34.9	11/11/22 09:19	
Methyl-tert-butyl ether	ug/kg	ND	250	24.9	11/11/22 09:19	
Methylene Chloride	ug/kg	ND	250	234	11/11/22 09:19	
n-Butylbenzene	ug/kg	ND	250	45.6	11/11/22 09:19	
n-Propylbenzene	ug/kg	ND	250	36.5	11/11/22 09:19	
Naphthalene	ug/kg	ND	500	68.6	11/11/22 09:19	
p-Isopropyltoluene	ug/kg	ND	250	37.6	11/11/22 09:19	
sec-Butylbenzene	ug/kg	ND	250	38.0	11/11/22 09:19	
Styrene	ug/kg	ND	250	42.4	11/11/22 09:19	
tert-Butylbenzene	ug/kg	ND	1250	31.8	11/11/22 09:19	
Tetrachloroethene	ug/kg	ND	250	22.5	11/11/22 09:19	
Toluene	ug/kg	ND	250	23.0	11/11/22 09:19	
trans-1,2-Dichloroethene	ug/kg	ND	250	18.9	11/11/22 09:19	
trans-1,3-Dichloropropene	ug/kg	ND	250	17.9	11/11/22 09:19	
Trichloroethene	ug/kg	ND	250	21.9	11/11/22 09:19	
Trichlorofluoromethane	ug/kg	ND	250	26.3	11/11/22 09:19	
Vinyl chloride	ug/kg	ND	250	25.5	11/11/22 09:19	
Xylene (Total)	ug/kg	ND	250	82.1	11/11/22 09:19	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		11/11/22 09:19	
4-Bromofluorobenzene (S)	%	103	83-119		11/11/22 09:19	
Toluene-d8 (S)	%	102	80-120		11/11/22 09:19	

METHOD BLANK: 3253656

Matrix: Solid

Associated Lab Samples: 60415168004, 60415168005, 60415168006, 60415168007, 60415168008, 60415168015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	250	20.2	11/14/22 10:21	
1,1,1-Trichloroethane	ug/kg	ND	250	20.8	11/14/22 10:21	
1,1,2,2-Tetrachloroethane	ug/kg	ND	250	21.2	11/14/22 10:21	
1,1,2-Trichloroethane	ug/kg	ND	250	31.3	11/14/22 10:21	
1,1-Dichloroethane	ug/kg	ND	250	89.3	11/14/22 10:21	
1,1-Dichloroethene	ug/kg	ND	250	25.6	11/14/22 10:21	
1,1-Dichloropropene	ug/kg	ND	250	22.2	11/14/22 10:21	
1,2,3-Trichlorobenzene	ug/kg	86.4J	250	72.3	11/14/22 10:21	
1,2,3-Trichloropropane	ug/kg	ND	250	28.1	11/14/22 10:21	
1,2,4-Trichlorobenzene	ug/kg	ND	250	56.2	11/14/22 10:21	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

METHOD BLANK: 3253656

Matrix: Solid

Associated Lab Samples: 60415168004, 60415168005, 60415168006, 60415168007, 60415168008, 60415168015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	ND	250	29.5	11/14/22 10:21	
1,2-Dibromo-3-chloropropane	ug/kg	ND	500	55.9	11/14/22 10:21	
1,2-Dibromoethane (EDB)	ug/kg	ND	250	18.3	11/14/22 10:21	
1,2-Dichlorobenzene	ug/kg	ND	250	38.5	11/14/22 10:21	
1,2-Dichloroethane	ug/kg	ND	250	17.7	11/14/22 10:21	
1,2-Dichloroethene (Total)	ug/kg	ND	250	42.1	11/14/22 10:21	
1,2-Dichloropropane	ug/kg	ND	250	18.6	11/14/22 10:21	
1,3,5-Trimethylbenzene	ug/kg	ND	250	35.7	11/14/22 10:21	
1,3-Dichlorobenzene	ug/kg	ND	250	37.7	11/14/22 10:21	
1,3-Dichloropropane	ug/kg	ND	250	19.3	11/14/22 10:21	
1,4-Dichlorobenzene	ug/kg	ND	250	38.2	11/14/22 10:21	
2,2-Dichloropropane	ug/kg	ND	250	20.2	11/14/22 10:21	
2-Butanone (MEK)	ug/kg	ND	500	114	11/14/22 10:21	
2-Chlorotoluene	ug/kg	ND	250	27.7	11/14/22 10:21	
2-Hexanone	ug/kg	ND	1000	97.2	11/14/22 10:21	
4-Chlorotoluene	ug/kg	ND	250	35.3	11/14/22 10:21	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	500	91.8	11/14/22 10:21	
Acetone	ug/kg	ND	1000	217	11/14/22 10:21	
Benzene	ug/kg	ND	250	21.0	11/14/22 10:21	
Bromobenzene	ug/kg	ND	250	30.1	11/14/22 10:21	
Bromochloromethane	ug/kg	ND	250	26.7	11/14/22 10:21	
Bromodichloromethane	ug/kg	ND	250	18.9	11/14/22 10:21	
Bromoform	ug/kg	ND	250	15.1	11/14/22 10:21	
Bromomethane	ug/kg	ND	250	146	11/14/22 10:21	
Carbon disulfide	ug/kg	ND	250	26.3	11/14/22 10:21	
Carbon tetrachloride	ug/kg	ND	250	23.6	11/14/22 10:21	
Chlorobenzene	ug/kg	ND	250	24.8	11/14/22 10:21	
Chloroethane	ug/kg	ND	250	38.2	11/14/22 10:21	
Chloroform	ug/kg	ND	250	20.1	11/14/22 10:21	
Chloromethane	ug/kg	ND	250	61.0	11/14/22 10:21	
cis-1,2-Dichloroethene	ug/kg	ND	250	23.3	11/14/22 10:21	
cis-1,3-Dichloropropene	ug/kg	ND	250	20.6	11/14/22 10:21	
Dibromochloromethane	ug/kg	ND	250	21.2	11/14/22 10:21	
Dibromomethane	ug/kg	ND	250	25.5	11/14/22 10:21	
Dichlorodifluoromethane	ug/kg	ND	250	39.5	11/14/22 10:21	
Ethylbenzene	ug/kg	ND	250	26.1	11/14/22 10:21	
Hexachloro-1,3-butadiene	ug/kg	ND	250	63.6	11/14/22 10:21	
Isopropylbenzene (Cumene)	ug/kg	ND	250	34.9	11/14/22 10:21	
Methyl-tert-butyl ether	ug/kg	ND	250	24.9	11/14/22 10:21	
Methylene Chloride	ug/kg	ND	250	234	11/14/22 10:21	
n-Butylbenzene	ug/kg	ND	250	45.6	11/14/22 10:21	
n-Propylbenzene	ug/kg	ND	250	36.5	11/14/22 10:21	
Naphthalene	ug/kg	ND	500	68.6	11/14/22 10:21	
p-Isopropyltoluene	ug/kg	ND	250	37.6	11/14/22 10:21	
sec-Butylbenzene	ug/kg	ND	250	38.0	11/14/22 10:21	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

METHOD BLANK: 3253656

Matrix: Solid

Associated Lab Samples: 60415168004, 60415168005, 60415168006, 60415168007, 60415168008, 60415168015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Styrene	ug/kg	ND	250	42.4	11/14/22 10:21	
tert-Butylbenzene	ug/kg	ND	1250	31.8	11/14/22 10:21	
Tetrachloroethene	ug/kg	ND	250	22.5	11/14/22 10:21	
Toluene	ug/kg	ND	250	23.0	11/14/22 10:21	
trans-1,2-Dichloroethene	ug/kg	ND	250	18.9	11/14/22 10:21	
trans-1,3-Dichloropropene	ug/kg	ND	250	17.9	11/14/22 10:21	
Trichloroethene	ug/kg	ND	250	21.9	11/14/22 10:21	
Trichlorofluoromethane	ug/kg	ND	250	26.3	11/14/22 10:21	
Vinyl chloride	ug/kg	ND	250	25.5	11/14/22 10:21	
Xylene (Total)	ug/kg	ND	250	82.1	11/14/22 10:21	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		11/14/22 10:21	
4-Bromofluorobenzene (S)	%	103	83-119		11/14/22 10:21	
Toluene-d8 (S)	%	101	80-120		11/14/22 10:21	

LABORATORY CONTROL SAMPLE: 3252504

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	5000	4770	95	80-119	
1,1,1-Trichloroethane	ug/kg	5000	4790	96	77-121	
1,1,2,2-Tetrachloroethane	ug/kg	5000	4810	96	74-116	
1,1,2-Trichloroethane	ug/kg	5000	4490	90	76-115	
1,1-Dichloroethane	ug/kg	5000	4220	84	77-120	
1,1-Dichloroethene	ug/kg	5000	4170	83	66-129	
1,1-Dichloropropene	ug/kg	5000	4690	94	79-121	
1,2,3-Trichlorobenzene	ug/kg	5000	4970	99	80-120	
1,2,3-Trichloropropane	ug/kg	5000	4770	95	74-118	
1,2,4-Trichlorobenzene	ug/kg	5000	4990	100	75-120	
1,2,4-Trimethylbenzene	ug/kg	5000	4720	94	77-116	
1,2-Dibromo-3-chloropropane	ug/kg	5000	5320	106	74-121	
1,2-Dibromoethane (EDB)	ug/kg	5000	4510	90	80-117	
1,2-Dichlorobenzene	ug/kg	5000	4540	91	48-146	
1,2-Dichloroethane	ug/kg	5000	4060	81	74-110	
1,2-Dichloroethene (Total)	ug/kg	10000	8940	89	79-120	
1,2-Dichloropropane	ug/kg	5000	4010	80	79-115	
1,3,5-Trimethylbenzene	ug/kg	5000	4660	93	76-115	
1,3-Dichlorobenzene	ug/kg	5000	4630	93	76-115	
1,3-Dichloropropane	ug/kg	5000	4360	87	75-111	
1,4-Dichlorobenzene	ug/kg	5000	4630	93	73-119	
2,2-Dichloropropane	ug/kg	5000	5000	100	76-121	
2-Butanone (MEK)	ug/kg	25000	20800	83	70-116	
2-Chlorotoluene	ug/kg	5000	4630	93	78-117	
2-Hexanone	ug/kg	25000	23700	95	71-117	
4-Chlorotoluene	ug/kg	5000	4700	94	77-115	
4-Methyl-2-pentanone (MIBK)	ug/kg	25000	18400	74	73-116	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

LABORATORY CONTROL SAMPLE: 3252504

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acetone	ug/kg	25000	21400	86	60-125	
Benzene	ug/kg	5000	4350	87	73-117	
Bromobenzene	ug/kg	5000	4650	93	79-115	
Bromochloromethane	ug/kg	5000	4530	91	76-116	
Bromodichloromethane	ug/kg	5000	4280	86	80-120	
Bromoform	ug/kg	5000	4570	91	77-127	
Bromomethane	ug/kg	5000	3640	73	29-165	
Carbon disulfide	ug/kg	5000	4150	83	54-133	
Carbon tetrachloride	ug/kg	5000	5050	101	78-126	
Chlorobenzene	ug/kg	5000	4500	90	63-130	
Chloroethane	ug/kg	5000	3790	76	31-170	
Chloroform	ug/kg	5000	4280	86	80-118	
Chloromethane	ug/kg	5000	3370	67	10-168	
cis-1,2-Dichloroethene	ug/kg	5000	4540	91	80-117	
cis-1,3-Dichloropropene	ug/kg	5000	4330	87	80-120	
Dibromochloromethane	ug/kg	5000	4580	92	78-122	
Dibromomethane	ug/kg	5000	4030	81	78-119	
Dichlorodifluoromethane	ug/kg	5000	2800	56	10-206	
Ethylbenzene	ug/kg	5000	4650	93	73-121	
Hexachloro-1,3-butadiene	ug/kg	5000	5210	104	75-129	
Isopropylbenzene (Cumene)	ug/kg	5000	4590	92	74-115	
Methyl-tert-butyl ether	ug/kg	5000	4120	82	73-129	
Methylene Chloride	ug/kg	5000	3540	71	70-128	
n-Butylbenzene	ug/kg	5000	4830	97	78-123	
n-Propylbenzene	ug/kg	5000	4810	96	77-120	
Naphthalene	ug/kg	5000	4850	97	76-120	
p-Isopropyltoluene	ug/kg	5000	4720	94	78-117	
sec-Butylbenzene	ug/kg	5000	4900	98	83-126	
Styrene	ug/kg	5000	4570	91	80-117	
tert-Butylbenzene	ug/kg	5000	4860	97	79-117	
Tetrachloroethene	ug/kg	5000	4620	92	72-122	
Toluene	ug/kg	5000	4440	89	77-119	
trans-1,2-Dichloroethene	ug/kg	5000	4400	88	75-123	
trans-1,3-Dichloropropene	ug/kg	5000	4810	96	79-124	
Trichloroethene	ug/kg	5000	4210	84	82-128	
Trichlorofluoromethane	ug/kg	5000	4150	83	56-129	
Vinyl chloride	ug/kg	5000	3560	71	36-176	
Xylene (Total)	ug/kg	15000	13700	91	76-119	
1,2-Dichlorobenzene-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			104	83-119	
Toluene-d8 (S)	%			101	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

LABORATORY CONTROL SAMPLE: 3253657

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	5000	5070	101	80-119	
1,1,1-Trichloroethane	ug/kg	5000	5060	101	77-121	
1,1,2,2-Tetrachloroethane	ug/kg	5000	5070	101	74-116	
1,1,2-Trichloroethane	ug/kg	5000	4800	96	76-115	
1,1-Dichloroethane	ug/kg	5000	4660	93	77-120	
1,1-Dichloroethene	ug/kg	5000	4690	94	66-129	
1,1-Dichloropropene	ug/kg	5000	4890	98	79-121	
1,2,3-Trichlorobenzene	ug/kg	5000	4950	99	80-120	
1,2,3-Trichloropropane	ug/kg	5000	5100	102	74-118	
1,2,4-Trichlorobenzene	ug/kg	5000	5120	102	75-120	
1,2,4-Trimethylbenzene	ug/kg	5000	4740	95	77-116	
1,2-Dibromo-3-chloropropane	ug/kg	5000	5580	112	74-121	
1,2-Dibromoethane (EDB)	ug/kg	5000	4850	97	80-117	
1,2-Dichlorobenzene	ug/kg	5000	4710	94	48-146	
1,2-Dichloroethane	ug/kg	5000	4560	91	74-110	
1,2-Dichloroethene (Total)	ug/kg	10000	9410	94	79-120	
1,2-Dichloropropane	ug/kg	5000	4670	93	79-115	
1,3,5-Trimethylbenzene	ug/kg	5000	4900	98	76-115	
1,3-Dichlorobenzene	ug/kg	5000	4750	95	76-115	
1,3-Dichloropropane	ug/kg	5000	4710	94	75-111	
1,4-Dichlorobenzene	ug/kg	5000	4730	95	73-119	
2,2-Dichloropropane	ug/kg	5000	4990	100	76-121	
2-Butanone (MEK)	ug/kg	25000	22400	89	70-116	
2-Chlorotoluene	ug/kg	5000	4730	95	78-117	
2-Hexanone	ug/kg	25000	23100	92	71-117	
4-Chlorotoluene	ug/kg	5000	4850	97	77-115	
4-Methyl-2-pentanone (MIBK)	ug/kg	25000	22500	90	73-116	
Acetone	ug/kg	25000	20200	81	60-125	
Benzene	ug/kg	5000	4670	93	73-117	
Bromobenzene	ug/kg	5000	4850	97	79-115	
Bromochloromethane	ug/kg	5000	4750	95	76-116	
Bromodichloromethane	ug/kg	5000	5060	101	80-120	
Bromoform	ug/kg	5000	5260	105	77-127	
Bromomethane	ug/kg	5000	4580	92	29-165	
Carbon disulfide	ug/kg	5000	4690	94	54-133	
Carbon tetrachloride	ug/kg	5000	5180	104	78-126	
Chlorobenzene	ug/kg	5000	4770	95	63-130	
Chloroethane	ug/kg	5000	4690	94	31-170	
Chloroform	ug/kg	5000	4540	91	80-118	
Chloromethane	ug/kg	5000	4510	90	10-168	
cis-1,2-Dichloroethene	ug/kg	5000	4710	94	80-117	
cis-1,3-Dichloropropene	ug/kg	5000	5040	101	80-120	
Dibromochloromethane	ug/kg	5000	4940	99	78-122	
Dibromomethane	ug/kg	5000	4740	95	78-119	
Dichlorodifluoromethane	ug/kg	5000	4420	88	10-206	
Ethylbenzene	ug/kg	5000	4840	97	73-121	
Hexachloro-1,3-butadiene	ug/kg	5000	5180	104	75-129	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

LABORATORY CONTROL SAMPLE: 3253657

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Isopropylbenzene (Cumene)	ug/kg	5000	4850	97	74-115	
Methyl-tert-butyl ether	ug/kg	5000	4740	95	73-129	
Methylene Chloride	ug/kg	5000	3990	80	70-128	
n-Butylbenzene	ug/kg	5000	4780	96	78-123	
n-Propylbenzene	ug/kg	5000	4870	97	77-120	
Naphthalene	ug/kg	5000	5090	102	76-120	
p-Isopropyltoluene	ug/kg	5000	4900	98	78-117	
sec-Butylbenzene	ug/kg	5000	4870	97	83-126	
Styrene	ug/kg	5000	4770	95	80-117	
tert-Butylbenzene	ug/kg	5000	4790	96	79-117	
Tetrachloroethene	ug/kg	5000	4880	98	72-122	
Toluene	ug/kg	5000	4610	92	77-119	
trans-1,2-Dichloroethene	ug/kg	5000	4700	94	75-123	
trans-1,3-Dichloropropene	ug/kg	5000	4930	99	79-124	
Trichloroethene	ug/kg	5000	4730	95	82-128	
Trichlorofluoromethane	ug/kg	5000	5000	100	56-129	
Vinyl chloride	ug/kg	5000	4630	93	36-176	
Xylene (Total)	ug/kg	15000	14300	95	76-119	
1,2-Dichlorobenzene-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			100	83-119	
Toluene-d8 (S)	%			99	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

QC Batch: 818090

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60415168017

METHOD BLANK: 3253747

Matrix: Water

Associated Lab Samples: 60415168017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.084	11/14/22 19:50	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/14/22 19:50	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/14/22 19:50	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/14/22 19:50	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/14/22 19:50	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/14/22 19:50	
1,1-Dichloropropene	ug/L	ND	1.0	0.14	11/14/22 19:50	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.93	11/14/22 19:50	
1,2,3-Trichloropropane	ug/L	ND	2.5	0.41	11/14/22 19:50	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.73	11/14/22 19:50	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	0.32	11/14/22 19:50	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.5	0.78	11/14/22 19:50	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.20	11/14/22 19:50	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.12	11/14/22 19:50	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/14/22 19:50	
1,2-Dichloroethene (Total)	ug/L	ND	1.0	0.22	11/14/22 19:50	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/14/22 19:50	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	0.090	11/14/22 19:50	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.13	11/14/22 19:50	
1,3-Dichloropropane	ug/L	ND	1.0	0.10	11/14/22 19:50	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.13	11/14/22 19:50	
2,2-Dichloropropane	ug/L	ND	1.0	0.16	11/14/22 19:50	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/14/22 19:50	
2-Chlorotoluene	ug/L	ND	1.0	0.11	11/14/22 19:50	
2-Hexanone	ug/L	ND	10.0	1.1	11/14/22 19:50	
4-Chlorotoluene	ug/L	ND	1.0	0.15	11/14/22 19:50	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/14/22 19:50	
Acetone	ug/L	ND	10.0	2.5	11/14/22 19:50	
Benzene	ug/L	ND	1.0	0.14	11/14/22 19:50	
Bromobenzene	ug/L	ND	1.0	0.088	11/14/22 19:50	
Bromochloromethane	ug/L	ND	1.0	0.20	11/14/22 19:50	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/14/22 19:50	
Bromoform	ug/L	ND	1.0	0.68	11/14/22 19:50	
Bromomethane	ug/L	ND	5.0	0.46	11/14/22 19:50	
Carbon disulfide	ug/L	ND	5.0	0.98	11/14/22 19:50	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/14/22 19:50	
Chlorobenzene	ug/L	ND	1.0	0.089	11/14/22 19:50	
Chloroethane	ug/L	ND	1.0	0.37	11/14/22 19:50	
Chloroform	ug/L	0.25J	1.0	0.22	11/14/22 19:50	
Chloromethane	ug/L	ND	1.0	0.28	11/14/22 19:50	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

METHOD BLANK: 3253747

Matrix: Water

Associated Lab Samples: 60415168017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/14/22 19:50	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/14/22 19:50	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/14/22 19:50	
Dibromomethane	ug/L	ND	1.0	0.11	11/14/22 19:50	
Dichlorodifluoromethane	ug/L	ND	1.0	0.20	11/14/22 19:50	
Ethylbenzene	ug/L	ND	1.0	0.12	11/14/22 19:50	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	0.42	11/14/22 19:50	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.097	11/14/22 19:50	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.13	11/14/22 19:50	
Methylene Chloride	ug/L	ND	1.0	0.39	11/14/22 19:50	
n-Butylbenzene	ug/L	ND	1.0	0.15	11/14/22 19:50	
n-Propylbenzene	ug/L	ND	1.0	0.12	11/14/22 19:50	
Naphthalene	ug/L	ND	10.0	0.82	11/14/22 19:50	
p-Isopropyltoluene	ug/L	ND	1.0	0.13	11/14/22 19:50	
sec-Butylbenzene	ug/L	ND	1.0	0.11	11/14/22 19:50	
Styrene	ug/L	ND	1.0	0.12	11/14/22 19:50	
tert-Butylbenzene	ug/L	ND	1.0	0.12	11/14/22 19:50	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/14/22 19:50	
Toluene	ug/L	ND	1.0	0.25	11/14/22 19:50	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/14/22 19:50	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/14/22 19:50	
Trichloroethene	ug/L	ND	1.0	0.21	11/14/22 19:50	
Trichlorofluoromethane	ug/L	ND	1.0	0.16	11/14/22 19:50	
Vinyl chloride	ug/L	ND	1.0	0.17	11/14/22 19:50	
Xylene (Total)	ug/L	ND	3.0	0.28	11/14/22 19:50	
1,2-Dichlorobenzene-d4 (S)	%	96	80-120		11/14/22 19:50	
4-Bromofluorobenzene (S)	%	100	80-120		11/14/22 19:50	
Toluene-d8 (S)	%	97	80-120		11/14/22 19:50	

LABORATORY CONTROL SAMPLE: 3253748

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	16.3	81	80-120	
1,1,1-Trichloroethane	ug/L	20	19.5	97	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	19.6	98	80-120	
1,1,2-Trichloroethane	ug/L	20	20.1	101	80-120	
1,1-Dichloroethane	ug/L	20	19.1	95	75-120	
1,1-Dichloroethene	ug/L	20	18.2	91	75-120	
1,1-Dichloropropene	ug/L	20	20.1	101	75-125	
1,2,3-Trichlorobenzene	ug/L	20	20.0	100	60-135	
1,2,3-Trichloropropane	ug/L	20	19.5	98	75-120	
1,2,4-Trichlorobenzene	ug/L	20	18.8	94	65-130	
1,2,4-Trimethylbenzene	ug/L	20	19.7	99	80-120	
1,2-Dibromo-3-chloropropane	ug/L	20	20.6	103	65-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

LABORATORY CONTROL SAMPLE: 3253748

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	19.6	98	80-120	
1,2-Dichlorobenzene	ug/L	20	18.6	93	80-120	
1,2-Dichloroethane	ug/L	20	18.7	93	80-120	
1,2-Dichloroethene (Total)	ug/L	40	37.1	93	80-120	
1,2-Dichloropropane	ug/L	20	19.3	97	80-120	
1,3,5-Trimethylbenzene	ug/L	20	19.1	95	75-120	
1,3-Dichlorobenzene	ug/L	20	19.6	98	80-120	
1,3-Dichloropropane	ug/L	20	19.6	98	80-120	
1,4-Dichlorobenzene	ug/L	20	18.9	95	80-120	
2,2-Dichloropropane	ug/L	20	18.0	90	55-135	
2-Butanone (MEK)	ug/L	100	122	122	50-155	
2-Chlorotoluene	ug/L	20	19.8	99	80-120	
2-Hexanone	ug/L	100	119	119	55-145	
4-Chlorotoluene	ug/L	20	19.7	98	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	97.6	98	70-130	
Acetone	ug/L	100	135	135	35-160	
Benzene	ug/L	20	19.5	98	80-120	
Bromobenzene	ug/L	20	19.2	96	80-120	
Bromochloromethane	ug/L	20	18.9	94	80-120	
Bromodichloromethane	ug/L	20	18.3	91	80-120	
Bromoform	ug/L	20	17.8	89	60-130	
Bromomethane	ug/L	20	21.4	107	50-140	
Carbon disulfide	ug/L	20	18.7	94	75-125	
Carbon tetrachloride	ug/L	20	19.6	98	70-130	
Chlorobenzene	ug/L	20	19.0	95	80-120	
Chloroethane	ug/L	20	20.5	103	70-130	
Chloroform	ug/L	20	17.4	87	75-120	
Chloromethane	ug/L	20	22.2	111	45-145	
cis-1,2-Dichloroethene	ug/L	20	18.6	93	80-120	
cis-1,3-Dichloropropene	ug/L	20	20.1	101	75-125	
Dibromochloromethane	ug/L	20	15.3	77	75-125	
Dibromomethane	ug/L	20	20.4	102	80-120	
Dichlorodifluoromethane	ug/L	20	22.8	114	25-180	
Ethylbenzene	ug/L	20	19.3	97	80-120	
Hexachloro-1,3-butadiene	ug/L	20	18.9	95	65-125	
Isopropylbenzene (Cumene)	ug/L	20	20.1	100	80-125	
Methyl-tert-butyl ether	ug/L	20	18.3	91	75-125	
Methylene Chloride	ug/L	20	18.7	94	70-140	
n-Butylbenzene	ug/L	20	19.3	96	70-125	
n-Propylbenzene	ug/L	20	18.9	94	80-120	
Naphthalene	ug/L	20	16.7	84	60-140	
p-Isopropyltoluene	ug/L	20	19.7	98	80-120	
sec-Butylbenzene	ug/L	20	19.6	98	80-120	
Styrene	ug/L	20	19.0	95	80-120	
tert-Butylbenzene	ug/L	20	19.6	98	80-120	
Tetrachloroethene	ug/L	20	18.3	92	80-125	
Toluene	ug/L	20	19.6	98	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

LABORATORY CONTROL SAMPLE: 3253748

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	ug/L	20	18.5	93	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.5	98	75-125	
Trichloroethene	ug/L	20	19.5	98	80-125	
Trichlorofluoromethane	ug/L	20	20.5	102	75-125	
Vinyl chloride	ug/L	20	21.0	105	65-140	
Xylene (Total)	ug/L	60	58.7	98	80-120	
1,2-Dichlorobenzene-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			103	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3253749 3253750

Parameter	Units	60415502006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	17.3	16.4	87	82	80-120	6	15	
1,1,1-Trichloroethane	ug/L	ND	20	20	21.5	21.4	108	107	75-125	1	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	18.3	19.4	91	97	80-120	6	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.7	18.5	98	93	80-120	6	20	
1,1-Dichloroethane	ug/L	ND	20	20	20.5	20.4	100	100	75-120	0	15	
1,1-Dichloroethene	ug/L	ND	20	20	21.1	20.1	106	100	75-120	5	25	
1,1-Dichloropropene	ug/L	ND	20	20	21.4	21.9	107	109	75-125	2	20	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	16.0	18.7	80	93	60-135	16	25	
1,2,3-Trichloropropane	ug/L	ND	20	20	17.0	18.6	85	93	75-120	9	20	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	16.1	18.5	81	93	65-130	14	25	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	18.1	19.5	90	98	80-120	8	20	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	17.7	19.7	88	98	65-130	11	25	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	18.9	17.9	95	90	80-120	5	20	
1,2-Dichlorobenzene	ug/L	ND	20	20	17.9	18.7	90	93	80-120	4	20	
1,2-Dichloroethane	ug/L	ND	20	20	19.0	18.6	95	93	80-120	2	25	
1,2-Dichloroethene (Total)	ug/L	3.8	40	40	45.5	43.1	104	98	80-120	6	20	
1,2-Dichloropropane	ug/L	ND	20	20	19.0	18.9	95	94	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	18.2	19.5	91	98	75-120	7	20	
1,3-Dichlorobenzene	ug/L	ND	20	20	18.1	19.1	91	96	80-120	5	20	
1,3-Dichloropropane	ug/L	ND	20	20	18.6	18.7	93	94	80-120	1	20	
1,4-Dichlorobenzene	ug/L	ND	20	20	17.7	18.6	89	93	80-120	5	20	
2,2-Dichloropropane	ug/L	ND	20	20	16.3	16.5	81	82	55-135	1	30	
2-Butanone (MEK)	ug/L	ND	100	100	88.3	83.1	88	83	50-155	6	25	
2-Chlorotoluene	ug/L	ND	20	20	18.8	20.5	94	103	80-120	9	20	
2-Hexanone	ug/L	ND	100	100	78.7	84.4	79	84	55-145	7	20	
4-Chlorotoluene	ug/L	ND	20	20	18.5	20.7	92	104	80-120	12	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	83.8	88.2	84	88	70-130	5	20	
Acetone	ug/L	ND	100	100	75.4	68.3	75	68	35-160	10	25	
Benzene	ug/L	ND	20	20	19.8	19.7	99	98	80-120	0	25	
Bromobenzene	ug/L	ND	20	20	18.2	19.1	91	96	80-120	5	15	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3253749 3253750											
Parameter	Units	60415502006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Bromochloromethane	ug/L	ND	20	20	20.3	20.2	101	101	80-120	0	20
Bromodichloromethane	ug/L	ND	20	20	19.0	19.9	95	100	80-120	5	15
Bromoform	ug/L	ND	20	20	17.5	17.7	88	89	60-130	1	20
Bromomethane	ug/L	ND	20	20	17.4	22.7	87	114	50-140	26	45
Carbon disulfide	ug/L	ND	20	20	20.9	21.3	104	107	75-125	2	25
Carbon tetrachloride	ug/L	ND	20	20	21.9	21.2	110	106	70-130	3	20
Chlorobenzene	ug/L	ND	20	20	18.4	19.1	92	95	80-120	3	20
Chloroethane	ug/L	ND	20	20	21.9	20.9	110	104	70-130	5	20
Chloroform	ug/L	ND	20	20	18.9	17.8	93	88	75-120	6	20
Chloromethane	ug/L	ND	20	20	19.9	22.3	100	112	45-145	12	30
cis-1,2-Dichloroethene	ug/L	3.8	20	20	25.2	23.5	107	99	80-120	7	20
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.4	19.5	92	98	75-125	6	20
Dibromochloromethane	ug/L	ND	20	20	14.6	15.2	73	76	75-125	4	20 M1
Dibromomethane	ug/L	ND	20	20	19.5	19.5	97	98	80-120	0	20
Dichlorodifluoromethane	ug/L	ND	20	20	21.0	22.1	105	110	25-180	5	25
Ethylbenzene	ug/L	ND	20	20	20.0	19.6	100	98	80-120	2	25
Hexachloro-1,3-butadiene	ug/L	ND	20	20	17.4	19.7	87	99	65-125	12	30
Isopropylbenzene (Cumene)	ug/L	ND	20	20	20.3	20.3	101	101	80-125	0	20
Methyl-tert-butyl ether	ug/L	ND	20	20	18.8	18.9	94	94	75-125	1	30
Methylene Chloride	ug/L	ND	20	20	21.0	20.7	105	104	70-140	1	25
n-Butylbenzene	ug/L	ND	20	20	18.0	19.7	90	98	70-125	9	25
n-Propylbenzene	ug/L	ND	20	20	18.0	19.2	90	96	80-120	7	20
Naphthalene	ug/L	ND	20	20	14.7	16.0	73	80	60-140	8	25
p-Isopropyltoluene	ug/L	ND	20	20	18.5	19.6	92	98	80-120	6	20
sec-Butylbenzene	ug/L	ND	20	20	19.2	20.6	96	103	80-120	7	20
Styrene	ug/L	ND	20	20	18.1	19.0	91	95	80-120	5	30
tert-Butylbenzene	ug/L	ND	20	20	18.7	20.4	94	102	80-120	9	20
Tetrachloroethene	ug/L	28.4	20	20	50.6	47.6	111	96	80-125	6	25
Toluene	ug/L	ND	20	20	19.1	20.0	96	100	80-120	5	25
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.3	19.5	101	98	80-120	4	20
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.7	17.9	89	90	75-125	1	15
Trichloroethene	ug/L	117	20	20	137	132	100	76	80-125	4	20 M1
Trichlorofluoromethane	ug/L	ND	20	20	22.2	22.5	111	113	75-125	1	20
Vinyl chloride	ug/L	ND	20	20	21.0	22.3	105	111	65-140	6	25
Xylene (Total)	ug/L	ND	60	60	58.5	61.2	97	102	80-120	4	30
1,2-Dichlorobenzene-d4 (S)	%						96	99	80-120		
4-Bromofluorobenzene (S)	%						98	104	80-120		
Toluene-d8 (S)	%						97	101	80-120		
Preservation pH		1.0			1.0	1.0				0	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60415168

QC Batch:	817440	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60415168001, 60415168002, 60415168003, 60415168004, 60415168005, 60415168006, 60415168007, 60415168008, 60415168009, 60415168010, 60415168011, 60415168012, 60415168013, 60415168014, 60415168015		

METHOD BLANK:	3250943	Matrix:	Solid
Associated Lab Samples:	60415168001, 60415168002, 60415168003, 60415168004, 60415168005, 60415168006, 60415168007, 60415168008, 60415168009, 60415168010, 60415168011, 60415168012, 60415168013, 60415168014, 60415168015		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	0.50	11/09/22 11:53	

SAMPLE DUPLICATE: 3250944

Parameter	Units	60415168001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.0	13.6	3	20	

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QUALIFIERS

Project: CLINTON ENGINES

Pace Project No.: 60415168

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CLINTON ENGINES

Pace Project No.: 60415168

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60415168001	MW5B-(21-23)	EPA 5035A/5030	817481	EPA 8260B	817492
60415168002	MW6B-(18.20)	EPA 5035A/5030	817481	EPA 8260B	817492
60415168003	MW6B-(50-52)	EPA 5035A/5030	817481	EPA 8260B	817492
60415168004	MW2B-(55-57)	EPA 5035A/5030	817481	EPA 8260B	817492
60415168006	MW8B-(14-16)	EPA 5035A/5030	817580	EPA 8260B	817651
60415168007	MW10B-(43-45)	EPA 5035A/5030	817748	EPA 8260B	817755
60415168008	MW10A-(39-41)	EPA 5035A/5030	817481	EPA 8260B	817492
60415168009	MW3B-(36-38)	EPA 5035A/5030	817580	EPA 8260B	817651
60415168010	MW14-(59-61)	EPA 5035A/5030	817481	EPA 8260B	817492
60415168011	MW13-(22-24)	EPA 5035A/5030	817481	EPA 8260B	817492
60415168012	MW12-(39-41)	EPA 5035A/5030	817481	EPA 8260B	817492
60415168013	MW9-(55-57)	EPA 5035A/5030	817481	EPA 8260B	817492
60415168014	MW12-(39-41)-FD	EPA 5035A/5030	817481	EPA 8260B	817492
60415168015	MW8B-(55-57)	EPA 5035A/5030	817580	EPA 8260B	817651
60415168016	TRIP BLANK	EPA 5035A/5030	817580	EPA 8260B	817651
60415168004	MW2B-(55-57)	EPA 5035A/5030B	817809	EPA 8260B	817883
60415168005	MW1B-(19-21)	EPA 5035A/5030B	817809	EPA 8260B	818063
60415168006	MW8B-(14-16)	EPA 5035A/5030B	817809	EPA 8260B	817883
60415168007	MW10B-(43-45)	EPA 5035A/5030B	817809	EPA 8260B	817883
60415168008	MW10A-(39-41)	EPA 5035A/5030B	817809	EPA 8260B	817883
60415168015	MW8B-(55-57)	EPA 5035A/5030B	817809	EPA 8260B	817883
60415168017	RINSATE	EPA 5030B/8260	818090		
60415168001	MW5B-(21-23)	ASTM D2974	817440		
60415168002	MW6B-(18.20)	ASTM D2974	817440		
60415168003	MW6B-(50-52)	ASTM D2974	817440		
60415168004	MW2B-(55-57)	ASTM D2974	817440		
60415168005	MW1B-(19-21)	ASTM D2974	817440		
60415168006	MW8B-(14-16)	ASTM D2974	817440		
60415168007	MW10B-(43-45)	ASTM D2974	817440		
60415168008	MW10A-(39-41)	ASTM D2974	817440		
60415168009	MW3B-(36-38)	ASTM D2974	817440		
60415168010	MW14-(59-61)	ASTM D2974	817440		
60415168011	MW13-(22-24)	ASTM D2974	817440		
60415168012	MW12-(39-41)	ASTM D2974	817440		
60415168013	MW9-(55-57)	ASTM D2974	817440		
60415168014	MW12-(39-41)-FD	ASTM D2974	817440		
60415168015	MW8B-(55-57)	ASTM D2974	817440		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-LENE-0009_Sample

Revision: 2

Effective Date: 01/12/2021

WO#: 60415168

Client Name: TetraTech EMICourier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☒ Other ☐Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☒Custody Seal on Cooler/Box Present: Yes ☐ No ☒ Seals intact: Yes ☐ No ☒Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☒ None ☐ Other ☐Thermometer Used: T299 Type of Ice: Wet Blue ☐ None ☐Cooler Temperature (°C): As-read 1.8 Corr. Factor 0.0 Corrected 1.8

Date and initials of person examining contents:

AF 11/8

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>SLWT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

Client Notification/ Resolution:

Copy COC to Client? Y / N

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately. Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>.

Section A

Required Client Information:

Company: TETRA TECH EMI
Address: 415 Oak Street
Kansas City, MO 64106
Email: paulina.tinoco@tetratech.com
Phone: 816-412-1779
Requested Due Date: 11/18/22

Section B

Required Project Information:

Report To: Paulina Tinoco
Copy To:
Project Name: Clinton Engines
Purchase Order #:
Project #:

Section C

Invoice Information:

Attention:
Company Name:
Address:
Pace Project Manager: jamie.church@pacelabs.com
Pace Quote:
Pace Profile #: 15191, line 5

Section D

Regulatory Agency

State / Location: IA

Section E

Requested Analysis Filtered (Y/N)

Y/N

Section F

Sample Conditions

Received on: 11/8/22
Temp in C: 17.8
Sealed (Y/N): Y
Cooler (Y/N): N
Samples Intact (Y/N): N

ITEM #	MATRIX	CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES								Analyses Test	Y/N	8260 VOCs	Trip Blank	8260 VOCs w/5035 kit	Trip Blank	Residual Chlorine (Y/N)	60415168
				START	END			H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other									
															DATE								
1	MW103 - (19-21)	MW5B - (21-23)	SL	10/12/22	1700		4	Unpreserved							1			X					
2	MW6B - (18-20)			11/1/22	1100																		
3	MW6B - (50-52)			11/1/22	1130																		
4	MW2B - (55-57)			11/1/22	1432																		
5	MW1B - (19-21)			11/1/22	1630																		
6	MW8B - (14-16)			11/2/22	0930																		
7	MW10B - (43-45)			11/2/22	1220																		
8	MW10A - (39-41)			11/2/22	1515																		
9	MW3B - (36-38)			11/3/22	0835																		
10	MW14 - (59-64)			11/3/22	1220																		
11	MW13 - (22-24)			11/3/22	1605																		
12	MW12 - (39-41)			11/4/22	0930																		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
	Paulina Tinoco/TT		11/8/22		1530		MT		11/8/22		1530		Y N	

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER: Paulina Tinoco		DATE Signed: 11/8/22	
SIGNATURE of SAMPLER: [Signature]			

1072

Tetra Tech EML

19191-5

Client:

Profile #

Site:

Notes

Clinton Engines

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	SL							✓						✓	✓															
2							✓	✓						✓	✓															
3							✓	✓						✓	✓															
4							✓	✓						✓	✓															
5							✓	✓						✓	✓															
6							✓	✓						✓	✓															
7							✓	✓						✓	✓															
8							✓	✓						✓	✓															
9							✓	✓						✓	✓															
10							✓	✓						✓	✓															
11							✓	✓						✓	✓															
12							✓	✓						✓	✓															

Container Codes

Glass			Plastic			Misc.		
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NaOH plastic	I	Wipe/Swab	
DG9H	40mL HCl amber vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Collform Na Thiosulfate	
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag	
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter	
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes	
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NaOH plastic	R	Terracore Kit	
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can	
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic			
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic			
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	Matrix		
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic	WT	Water	
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	SL	Solid	
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	NAL	Non-aqueous Liquid	
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	OL	Oil	
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	WP	Wipe	
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	DW	Drinking Water	
				BP4U	125mL unpreserved plastic			
				BP4N	125mL HNO3 plastic			
				BP4S	125mL H2SO4 plastic			
				WPDU	16oz unpreserved plastic			

Work Order Number:

6045168

$\alpha + \beta$

Client:

Profile #

Site:

Notes

Work Order Number:

DATA VERIFICATION REPORT

Prepared by: Ellen McEntee
Date: December 29, 2022
Site Name/Job Number: Clinton Engines / 103G65210190.009.03
Laboratory: Pace National - Mt. Juliet

Data Package or SDG Number: 60416115

Sample Designations/Names:

MW1B-SG	MW2B-SG	MW3B-SG	MW4B-SG	MW8B-SG	MW9-SG
MW10-SG	MW11-SG	MW13-SG	MW14-SG	MW101-SG	MW102-SG
MW103-SG	MW104-SG				

Matrices: Soil Gas
Analytical Parameters: VOCs by TO-15

Data Package Element	Usable	Rejected	NA	Description of Affected Data (note specific samples and analytical parameters affected)
Chain of custody	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The chain of custody was completed appropriately.
Data package completeness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The data package contains all the required elements.
Sample preservation, storage, and holding times	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The samples were received on 11/10/2022; the samples arrived in good condition. All samples were analyzed within the recommended holding times.
Method and field blank contamination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Method Blank R3859938-2: Propylene was detected in the method blank associated with samples MW3B-SG, MW14-SG, MW13-SG, and MW9-SG at a concentration less than the reporting limit (RL). The associated results were either detected at greater than ten times the blank concentration, or non-detect and were not qualified.</p> <p>Method Blank R3861498-3: Propylene was detected in the method blank associated with samples MW103-SG, MW104-SG, MW101-SG, MW102-SG, MW8B-SG, MW1B-SG, MW11-SG, MW4B-SG, MW2B-SG, and MW10-SG at a concentration less than the RL. The associated results were either detected at greater than ten times the blank concentration, or non-detect and were not qualified.</p>

Data Package Element	Usable	Rejected	NA	Description of Affected Data (note specific samples and analytical parameters affected)
Surrogate spikes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Surrogate spikes were within QC limits for all samples.
Matrix spikes/matrix spike duplicates (MS/MSD)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	MS/MSDs are not required for method TO-15.
Laboratory control samples/Laboratory control sample duplicates (LCS/LCSD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Laboratory control samples were performed and all analytes were within control limits.
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Summary Results are usable as reported by the laboratory. No qualifications of the results are recommended.				

December 28, 2022

Kaitlyn Mitchell
Tetra Tech EMI
415 Oak
Kansas City, MO 64106

RE: Project: CLINTON ENGINES
Pace Project No.: 60416115

Dear Kaitlyn Mitchell:

Enclosed are the analytical results for sample(s) received by the laboratory on November 10, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace National - Mt. Juliet

REV-1, 12/28/22: Sample receipt date and time updated.

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

Sincerely,



Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122

Alabama Certification #: 40660

Alaska Certification #: 17-026

Arizona Certification #: AZ0612

Arkansas Certification #: 88-0469

California Certification #: 2932

Canada Certification #: 1461.01

Colorado Certification #: TN00003

Connecticut Certification #: PH-0197

DOD Certification #: #1461.01

EPA# TN00003

Florida Certification #: E87487

Georgia DW Certification #: 923

Georgia Certification: NELAP

Idaho Certification #: TN00003

Illinois Certification #: 200008

Indiana Certification #: C-TN-01

Iowa Certification #: 364

Kansas Certification #: E-10277

Kentucky UST Certification #: 16

Kentucky Certification #: 90010

Louisiana Certification #: AI30792

Louisiana DW Certification #: LA180010

Maine Certification #: TN0002

Maryland Certification #: 324

Massachusetts Certification #: M-TN003

Michigan Certification #: 9958

Minnesota Certification #: 047-999-395

Mississippi Certification #: TN00003

Missouri Certification #: 340

Montana Certification #: CERT0086

Nebraska Certification #: NE-OS-15-05

Nevada Certification #: TN-03-2002-34

New Hampshire Certification #: 2975

New Jersey Certification #: TN002

New Mexico DW Certification

New York Certification #: 11742

North Carolina Aquatic Toxicity Certification #: 41

North Carolina Drinking Water Certification #: 21704

North Carolina Environmental Certificate #: 375

North Dakota Certification #: R-140

Ohio VAP Certification #: CL0069

Oklahoma Certification #: 9915

Oregon Certification #: TN200002

Pennsylvania Certification #: 68-02979

Rhode Island Certification #: LAO00356

South Carolina Certification #: 84004

South Dakota Certification

Tennessee DW/Chem/Micro Certification #: 2006

Texas Certification #: T 104704245-17-14

Texas Mold Certification #: LAB0152

USDA Soil Permit #: P330-15-00234

Utah Certification #: TN00003

Vermont Dept. of Health: ID# VT-2006

Virginia Certification #: VT2006

Virginia Certification #: 460132

Washington Certification #: C847

West Virginia Certification #: 233

Wisconsin Certification #: 998093910

Wyoming UST Certification #: via A2LA 2926.01

A2LA-ISO 17025 Certification #: 1461.01

A2LA-ISO 17025 Certification #: 1461.02

AIHA-LAP/LLC EMLAP Certification #: 100789

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CLINTON ENGINES

Pace Project No.: 60416115

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60416115001	MW3B-SG	Air	11/03/22 17:52	11/10/22 09:00
60416115002	MW14-SG	Air	11/03/22 18:17	11/10/22 09:00
60416115003	MW13-SG	Air	11/03/22 18:49	11/10/22 09:00
60416115004	MW9-SG	Air	11/04/22 10:35	11/10/22 09:00
60416115005	MW103-SG	Air	10/26/22 15:04	11/10/22 09:00
60416115006	MW104-SG	Air	10/27/22 08:47	11/10/22 09:00
60416115007	MW101-SG	Air	10/29/22 09:46	11/10/22 09:00
60416115008	MW102-SG	Air	10/30/22 15:10	11/10/22 09:00
60416115009	MW8B-SG	Air	11/02/22 14:10	11/10/22 09:00
60416115010	MW1B-SG	Air	11/02/22 15:43	11/10/22 09:00
60416115011	MW11-SG	Air	11/03/22 14:10	11/10/22 09:00
60416115012	MW4B-SG	Air	11/03/22 14:53	11/10/22 09:00
60416115013	MW2B-SG	Air	11/03/22 16:55	11/10/22 09:00
60416115014	MW10-SG	Air	11/03/22 17:23	11/10/22 09:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CLINTON ENGINES

Pace Project No.: 60416115

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60416115001	MW3B-SG	TO-15	FKG	70	PAN
60416115002	MW14-SG	TO-15	FKG	70	PAN
60416115003	MW13-SG	TO-15	FKG, SDS	70	PAN
60416115004	MW9-SG	TO-15	FKG	70	PAN
60416115005	MW103-SG	TO-15	CEP, DBB	70	PAN
60416115006	MW104-SG	TO-15	CEP	70	PAN
60416115007	MW101-SG	TO-15	CEP	70	PAN
60416115008	MW102-SG	TO-15	CEP	70	PAN
60416115009	MW8B-SG	TO-15	CEP	70	PAN
60416115010	MW1B-SG	TO-15	CEP	70	PAN
60416115011	MW11-SG	TO-15	CEP	70	PAN
60416115012	MW4B-SG	TO-15	CEP	70	PAN
60416115013	MW2B-SG	TO-15	CEP, SDS	70	PAN
60416115014	MW10-SG	TO-15	CEP	70	PAN

PAN = Pace National - Mt. Juliet

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW3B-SG		Lab ID: 60416115001		Collected: 11/03/22 17:52		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	4380	ug/m3	826	164	1	11/11/22 16:18	11/11/22 16:18	8006-61-9	
Acetone	16.9	ug/m3	2.97	1.39	1	11/11/22 16:18	11/11/22 16:18	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/11/22 16:18	11/11/22 16:18	107-05-1	
Benzene	27.0	ug/m3	0.639	0.228	1	11/11/22 16:18	11/11/22 16:18	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/11/22 16:18	11/11/22 16:18	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/11/22 16:18	11/11/22 16:18	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/11/22 16:18	11/11/22 16:18	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/11/22 16:18	11/11/22 16:18	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/11/22 16:18	11/11/22 16:18	106-99-0	
Carbon disulfide	4.26	ug/m3	0.622	0.317	1	11/11/22 16:18	11/11/22 16:18	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/11/22 16:18	11/11/22 16:18	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/11/22 16:18	11/11/22 16:18	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/11/22 16:18	11/11/22 16:18	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/11/22 16:18	11/11/22 16:18	67-66-3	
Chloromethane	ND	ug/m3	0.413	0.213	1	11/11/22 16:18	11/11/22 16:18	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/11/22 16:18	11/11/22 16:18	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.259	1	11/11/22 16:18	11/11/22 16:18	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/11/22 16:18	11/11/22 16:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/11/22 16:18	11/11/22 16:18	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/11/22 16:18	11/11/22 16:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/11/22 16:18	11/11/22 16:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.20	0.335	1	11/11/22 16:18	11/11/22 16:18	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/11/22 16:18	11/11/22 16:18	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/11/22 16:18	11/11/22 16:18	75-34-3	
1,1-Dichloroethene	0.725J	ug/m3	0.793	0.302	1	11/11/22 16:18	11/11/22 16:18	75-35-4	J
cis-1,2-Dichloroethene	21.0	ug/m3	0.793	0.311	1	11/11/22 16:18	11/11/22 16:18	156-59-2	
trans-1,2-Dichloroethene	13.9	ug/m3	0.793	0.267	1	11/11/22 16:18	11/11/22 16:18	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/11/22 16:18	11/11/22 16:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/11/22 16:18	11/11/22 16:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/11/22 16:18	11/11/22 16:18	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/11/22 16:18	11/11/22 16:18	123-91-1	
Ethanol	27.2	ug/m3	2.36	0.500	1	11/11/22 16:18	11/11/22 16:18	64-17-5	
Ethylbenzene	1.91	ug/m3	0.867	0.362	1	11/11/22 16:18	11/11/22 16:18	100-41-4	
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/11/22 16:18	11/11/22 16:18	141-78-6	
4-Ethyltoluene	0.942J	ug/m3	0.982	0.384	1	11/11/22 16:18	11/11/22 16:18	622-96-8	J
Trichlorofluoromethane	ND	ug/m3	1.12	0.460	1	11/11/22 16:18	11/11/22 16:18	75-69-4	
Dichlorodifluoromethane	1.08	ug/m3	0.989	0.678	1	11/11/22 16:18	11/11/22 16:18	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	11/11/22 16:18	11/11/22 16:18	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/11/22 16:18	11/11/22 16:18	76-14-2	
n-Heptane	3.69	ug/m3	0.818	0.425	1	11/11/22 16:18	11/11/22 16:18	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/11/22 16:18	11/11/22 16:18	87-68-3	
n-Hexane	7.97	ug/m3	2.22	0.726	1	11/11/22 16:18	11/11/22 16:18	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/11/22 16:18	11/11/22 16:18	98-82-8	
Methylene Chloride	ND	ug/m3	0.694	0.340	1	11/11/22 16:18	11/11/22 16:18	75-09-2	
2-Hexanone	ND	ug/m3	5.11	0.544	1	11/11/22 16:18	11/11/22 16:18	591-78-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW3B-SG		Lab ID: 60416115001		Collected: 11/03/22 17:52		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	ND	ug/m3	3.69	0.240	1	11/11/22 16:18	11/11/22 16:18	78-93-3	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.313	1	11/11/22 16:18	11/11/22 16:18	108-10-1	
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/11/22 16:18	11/11/22 16:18	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/11/22 16:18	11/11/22 16:18	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/11/22 16:18	11/11/22 16:18	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	11/15/22 01:40	11/15/22 01:40	67-63-0	
Propylene	22.0	ug/m3	2.15	0.160	1	11/11/22 16:18	11/11/22 16:18	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/11/22 16:18	11/11/22 16:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/11/22 16:18	11/11/22 16:18	79-34-5	
Tetrachloroethene	ND	ug/m3	1.36	0.553	1	11/11/22 16:18	11/11/22 16:18	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/11/22 16:18	11/11/22 16:18	109-99-9	
Toluene	2.98	ug/m3	1.88	0.328	1	11/11/22 16:18	11/11/22 16:18	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/11/22 16:18	11/11/22 16:18	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/11/22 16:18	11/11/22 16:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/11/22 16:18	11/11/22 16:18	79-00-5	
Trichloroethene	20.7	ug/m3	1.07	0.364	1	11/11/22 16:18	11/11/22 16:18	79-01-6	
1,2,4-Trimethylbenzene	2.63	ug/m3	0.982	0.375	1	11/11/22 16:18	11/11/22 16:18	95-63-6	
1,3,5-Trimethylbenzene	1.20	ug/m3	0.982	0.382	1	11/11/22 16:18	11/11/22 16:18	108-67-8	
2,2,4-Trimethylpentane	180	ug/m3	0.934	0.621	1	11/11/22 16:18	11/11/22 16:18	540-84-1	
Vinyl chloride	7.23	ug/m3	0.511	0.243	1	11/11/22 16:18	11/11/22 16:18	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/11/22 16:18	11/11/22 16:18	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/11/22 16:18	11/11/22 16:18	108-05-4	
m&p-Xylene	4.19	ug/m3	1.73	0.585	1	11/11/22 16:18	11/11/22 16:18	179601-23-1	
o-Xylene	0.776J	ug/m3	0.867	0.359	1	11/11/22 16:18	11/11/22 16:18	95-47-6	J
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	104	%	60.0-140		1	11/11/22 16:18	11/11/22 16:18	3855-82-1	
1,4-Dichlorobenzene-d4 (IS)	108	%	60.0-140		1	11/15/22 01:40	11/15/22 01:40	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW14-SG		Lab ID: 60416115002		Collected: 11/03/22 18:17		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	237J	ug/m3	826	164	1	11/11/22 16:55	11/11/22 16:55	8006-61-9	J
Acetone	5.01	ug/m3	2.97	1.39	1	11/11/22 16:55	11/11/22 16:55	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/11/22 16:55	11/11/22 16:55	107-05-1	
Benzene	2.67	ug/m3	0.639	0.228	1	11/11/22 16:55	11/11/22 16:55	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/11/22 16:55	11/11/22 16:55	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/11/22 16:55	11/11/22 16:55	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/11/22 16:55	11/11/22 16:55	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/11/22 16:55	11/11/22 16:55	74-83-9	
1,3-Butadiene	0.569J	ug/m3	4.43	0.230	1	11/11/22 16:55	11/11/22 16:55	106-99-0	J
Carbon disulfide	1.15	ug/m3	0.622	0.317	1	11/11/22 16:55	11/11/22 16:55	75-15-0	
Carbon tetrachloride	0.622J	ug/m3	1.26	0.461	1	11/11/22 16:55	11/11/22 16:55	56-23-5	J
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/11/22 16:55	11/11/22 16:55	108-90-7	
Chloroethane	0.517J	ug/m3	0.528	0.263	1	11/11/22 16:55	11/11/22 16:55	75-00-3	J
Chloroform	ND	ug/m3	0.973	0.349	1	11/11/22 16:55	11/11/22 16:55	67-66-3	
Chloromethane	1.97	ug/m3	0.413	0.213	1	11/11/22 16:55	11/11/22 16:55	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/11/22 16:55	11/11/22 16:55	95-49-8	
Cyclohexane	1.22	ug/m3	0.689	0.259	1	11/11/22 16:55	11/11/22 16:55	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/11/22 16:55	11/11/22 16:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/11/22 16:55	11/11/22 16:55	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/11/22 16:55	11/11/22 16:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/11/22 16:55	11/11/22 16:55	541-73-1	
1,4-Dichlorobenzene	0.601J	ug/m3	1.20	0.335	1	11/11/22 16:55	11/11/22 16:55	106-46-7	J
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/11/22 16:55	11/11/22 16:55	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/11/22 16:55	11/11/22 16:55	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/11/22 16:55	11/11/22 16:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	11/11/22 16:55	11/11/22 16:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/11/22 16:55	11/11/22 16:55	156-60-5	
1,2-Dichloropropane	0.428J	ug/m3	0.924	0.351	1	11/11/22 16:55	11/11/22 16:55	78-87-5	J
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/11/22 16:55	11/11/22 16:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/11/22 16:55	11/11/22 16:55	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/11/22 16:55	11/11/22 16:55	123-91-1	
Ethanol	10.5	ug/m3	2.36	0.500	1	11/11/22 16:55	11/11/22 16:55	64-17-5	
Ethylbenzene	1.61	ug/m3	0.867	0.362	1	11/11/22 16:55	11/11/22 16:55	100-41-4	
Ethyl acetate	1.14	ug/m3	0.720	0.360	1	11/11/22 16:55	11/11/22 16:55	141-78-6	
4-Ethyltoluene	ND	ug/m3	0.982	0.384	1	11/11/22 16:55	11/11/22 16:55	622-96-8	
Trichlorofluoromethane	1.15	ug/m3	1.12	0.460	1	11/11/22 16:55	11/11/22 16:55	75-69-4	
Dichlorodifluoromethane	2.41	ug/m3	0.989	0.678	1	11/11/22 16:55	11/11/22 16:55	75-71-8	
1,1,2-Trichlorotrifluoroethane	0.835J	ug/m3	1.53	0.608	1	11/11/22 16:55	11/11/22 16:55	76-13-1	J
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/11/22 16:55	11/11/22 16:55	76-14-2	
n-Heptane	1.02	ug/m3	0.818	0.425	1	11/11/22 16:55	11/11/22 16:55	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/11/22 16:55	11/11/22 16:55	87-68-3	
n-Hexane	3.46	ug/m3	2.22	0.726	1	11/11/22 16:55	11/11/22 16:55	110-54-3	
Isopropylbenzene (Cumene)	0.526J	ug/m3	0.983	0.382	1	11/11/22 16:55	11/11/22 16:55	98-82-8	J
Methylene Chloride	2.07	ug/m3	0.694	0.340	1	11/11/22 16:55	11/11/22 16:55	75-09-2	
2-Hexanone	ND	ug/m3	5.11	0.544	1	11/11/22 16:55	11/11/22 16:55	591-78-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW14-SG		Lab ID: 60416115002		Collected: 11/03/22 18:17		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15		Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet							
2-Butanone (MEK)	0.743J	ug/m3	3.69	0.240	1	11/11/22 16:55	11/11/22 16:55	78-93-3	J
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.313	1	11/11/22 16:55	11/11/22 16:55	108-10-1	
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/11/22 16:55	11/11/22 16:55	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/11/22 16:55	11/11/22 16:55	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/11/22 16:55	11/11/22 16:55	91-20-3	
2-Propanol	2.53J	ug/m3	3.07	0.649	1	11/15/22 00:58	11/15/22 00:58	67-63-0	J
Propylene	4.80	ug/m3	2.15	0.160	1	11/11/22 16:55	11/11/22 16:55	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/11/22 16:55	11/11/22 16:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/11/22 16:55	11/11/22 16:55	79-34-5	
Tetrachloroethene	1.64	ug/m3	1.36	0.553	1	11/11/22 16:55	11/11/22 16:55	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/11/22 16:55	11/11/22 16:55	109-99-9	
Toluene	14.3	ug/m3	1.88	0.328	1	11/11/22 16:55	11/11/22 16:55	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/11/22 16:55	11/11/22 16:55	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/11/22 16:55	11/11/22 16:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/11/22 16:55	11/11/22 16:55	79-00-5	
Trichloroethene	4.00	ug/m3	1.07	0.364	1	11/11/22 16:55	11/11/22 16:55	79-01-6	
1,2,4-Trimethylbenzene	1.64	ug/m3	0.982	0.375	1	11/11/22 16:55	11/11/22 16:55	95-63-6	
1,3,5-Trimethylbenzene	0.687J	ug/m3	0.982	0.382	1	11/11/22 16:55	11/11/22 16:55	108-67-8	J
2,2,4-Trimethylpentane	2.72	ug/m3	0.934	0.621	1	11/11/22 16:55	11/11/22 16:55	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/11/22 16:55	11/11/22 16:55	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/11/22 16:55	11/11/22 16:55	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/11/22 16:55	11/11/22 16:55	108-05-4	
m&p-Xylene	5.25	ug/m3	1.73	0.585	1	11/11/22 16:55	11/11/22 16:55	179601-23-1	
o-Xylene	1.99	ug/m3	0.867	0.359	1	11/11/22 16:55	11/11/22 16:55	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	99.6	%	60.0-140		1	11/11/22 16:55	11/11/22 16:55	3855-82-1	
1,4-Dichlorobenzene-d4 (IS)	98.3	%	60.0-140		1	11/15/22 00:58	11/15/22 00:58	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW13-SG		Lab ID: 60416115003		Collected: 11/03/22 18:49		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	ND	ug/m3	826	164	1	11/11/22 17:34	11/11/22 17:34	8006-61-9	
Acetone	25.7	ug/m3	2.97	1.39	1	11/11/22 17:34	11/11/22 17:34	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/11/22 17:34	11/11/22 17:34	107-05-1	
Benzene	0.616J	ug/m3	0.639	0.228	1	11/11/22 17:34	11/11/22 17:34	71-43-2	J
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/11/22 17:34	11/11/22 17:34	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/11/22 17:34	11/11/22 17:34	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/11/22 17:34	11/11/22 17:34	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/11/22 17:34	11/11/22 17:34	74-83-9	
1,3-Butadiene	0.239J	ug/m3	4.43	0.230	1	11/11/22 17:34	11/11/22 17:34	106-99-0	J
Carbon disulfide	0.439J	ug/m3	0.622	0.317	1	11/11/22 17:34	11/11/22 17:34	75-15-0	J
Carbon tetrachloride	0.636J	ug/m3	1.26	0.461	1	11/11/22 17:34	11/11/22 17:34	56-23-5	J
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/11/22 17:34	11/11/22 17:34	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/11/22 17:34	11/11/22 17:34	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/11/22 17:34	11/11/22 17:34	67-66-3	
Chloromethane	1.12	ug/m3	0.413	0.213	1	11/11/22 17:34	11/11/22 17:34	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/11/22 17:34	11/11/22 17:34	95-49-8	
Cyclohexane	0.342J	ug/m3	0.689	0.259	1	11/11/22 17:34	11/11/22 17:34	110-82-7	J
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/11/22 17:34	11/11/22 17:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/11/22 17:34	11/11/22 17:34	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/11/22 17:34	11/11/22 17:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/11/22 17:34	11/11/22 17:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.20	0.335	1	11/11/22 17:34	11/11/22 17:34	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/11/22 17:34	11/11/22 17:34	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/11/22 17:34	11/11/22 17:34	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/11/22 17:34	11/11/22 17:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	11/11/22 17:34	11/11/22 17:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/11/22 17:34	11/11/22 17:34	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/11/22 17:34	11/11/22 17:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/11/22 17:34	11/11/22 17:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/11/22 17:34	11/11/22 17:34	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/11/22 17:34	11/11/22 17:34	123-91-1	
Ethanol	56.0	ug/m3	2.36	0.500	1	11/11/22 17:34	11/11/22 17:34	64-17-5	
Ethylbenzene	0.423J	ug/m3	0.867	0.362	1	11/11/22 17:34	11/11/22 17:34	100-41-4	J
Ethyl acetate	0.594J	ug/m3	0.720	0.360	1	11/11/22 17:34	11/11/22 17:34	141-78-6	J
4-Ethyltoluene	ND	ug/m3	0.982	0.384	1	11/11/22 17:34	11/11/22 17:34	622-96-8	
Trichlorofluoromethane	1.16	ug/m3	1.12	0.460	1	11/11/22 17:34	11/11/22 17:34	75-69-4	
Dichlorodifluoromethane	2.39	ug/m3	0.989	0.678	1	11/11/22 17:34	11/11/22 17:34	75-71-8	
1,1,2-Trichlorotrifluoroethane	0.747J	ug/m3	1.53	0.608	1	11/11/22 17:34	11/11/22 17:34	76-13-1	J
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/11/22 17:34	11/11/22 17:34	76-14-2	
n-Heptane	0.487J	ug/m3	0.818	0.425	1	11/11/22 17:34	11/11/22 17:34	142-82-5	J
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/11/22 17:34	11/11/22 17:34	87-68-3	
n-Hexane	1.10J	ug/m3	2.22	0.726	1	11/11/22 17:34	11/11/22 17:34	110-54-3	J
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/11/22 17:34	11/11/22 17:34	98-82-8	
Methylene Chloride	1.40	ug/m3	0.694	0.340	1	11/11/22 17:34	11/11/22 17:34	75-09-2	
2-Hexanone	ND	ug/m3	5.11	0.544	1	11/11/22 17:34	11/11/22 17:34	591-78-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW13-SG		Lab ID: 60416115003		Collected: 11/03/22 18:49		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	2.67J	ug/m3	3.69	0.240	1	11/11/22 17:34	11/11/22 17:34	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.381J	ug/m3	5.12	0.313	1	11/11/22 17:34	11/11/22 17:34	108-10-1	J
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/11/22 17:34	11/11/22 17:34	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/11/22 17:34	11/11/22 17:34	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/11/22 17:34	11/11/22 17:34	91-20-3	
2-Propanol	5.63	ug/m3	4.42	0.934	1.44	11/14/22 19:32	11/14/22 19:32	67-63-0	
Propylene	ND	ug/m3	2.15	0.160	1	11/11/22 17:34	11/11/22 17:34	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/11/22 17:34	11/11/22 17:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/11/22 17:34	11/11/22 17:34	79-34-5	
Tetrachloroethene	ND	ug/m3	1.36	0.553	1	11/11/22 17:34	11/11/22 17:34	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/11/22 17:34	11/11/22 17:34	109-99-9	
Toluene	1.57J	ug/m3	1.88	0.328	1	11/11/22 17:34	11/11/22 17:34	108-88-3	J
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/11/22 17:34	11/11/22 17:34	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/11/22 17:34	11/11/22 17:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/11/22 17:34	11/11/22 17:34	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.364	1	11/11/22 17:34	11/11/22 17:34	79-01-6	
1,2,4-Trimethylbenzene	0.540J	ug/m3	0.982	0.375	1	11/11/22 17:34	11/11/22 17:34	95-63-6	J
1,3,5-Trimethylbenzene	ND	ug/m3	0.982	0.382	1	11/11/22 17:34	11/11/22 17:34	108-67-8	
2,2,4-Trimethylpentane	0.878J	ug/m3	0.934	0.621	1	11/11/22 17:34	11/11/22 17:34	540-84-1	J
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/11/22 17:34	11/11/22 17:34	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/11/22 17:34	11/11/22 17:34	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/11/22 17:34	11/11/22 17:34	108-05-4	
m&p-Xylene	1.17J	ug/m3	1.73	0.585	1	11/11/22 17:34	11/11/22 17:34	179601-23-1	J
o-Xylene	0.529J	ug/m3	0.867	0.359	1	11/11/22 17:34	11/11/22 17:34	95-47-6	J
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	97.8	%	60.0-140		1	11/11/22 17:34	11/11/22 17:34	3855-82-1	
1,4-Dichlorobenzene-d4 (IS)	82.5	%	60.0-140		1.44	11/14/22 19:32	11/14/22 19:32	3855-82-1	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW9-SG		Lab ID: 60416115004		Collected: 11/04/22 10:35		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	438J	ug/m3	826	164	1	11/11/22 18:13	11/11/22 18:13	8006-61-9	J
Acetone	107	ug/m3	2.97	1.39	1	11/11/22 18:13	11/11/22 18:13	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/11/22 18:13	11/11/22 18:13	107-05-1	
Benzene	0.623J	ug/m3	0.639	0.228	1	11/11/22 18:13	11/11/22 18:13	71-43-2	J
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/11/22 18:13	11/11/22 18:13	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/11/22 18:13	11/11/22 18:13	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/11/22 18:13	11/11/22 18:13	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/11/22 18:13	11/11/22 18:13	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/11/22 18:13	11/11/22 18:13	106-99-0	
Carbon disulfide	1.49	ug/m3	0.622	0.317	1	11/11/22 18:13	11/11/22 18:13	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/11/22 18:13	11/11/22 18:13	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/11/22 18:13	11/11/22 18:13	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/11/22 18:13	11/11/22 18:13	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/11/22 18:13	11/11/22 18:13	67-66-3	
Chloromethane	0.233J	ug/m3	0.413	0.213	1	11/11/22 18:13	11/11/22 18:13	74-87-3	J
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/11/22 18:13	11/11/22 18:13	95-49-8	
Cyclohexane	0.596J	ug/m3	0.689	0.259	1	11/11/22 18:13	11/11/22 18:13	110-82-7	J
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/11/22 18:13	11/11/22 18:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/11/22 18:13	11/11/22 18:13	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/11/22 18:13	11/11/22 18:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/11/22 18:13	11/11/22 18:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.20	0.335	1	11/11/22 18:13	11/11/22 18:13	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/11/22 18:13	11/11/22 18:13	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/11/22 18:13	11/11/22 18:13	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/11/22 18:13	11/11/22 18:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	11/11/22 18:13	11/11/22 18:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/11/22 18:13	11/11/22 18:13	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/11/22 18:13	11/11/22 18:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/11/22 18:13	11/11/22 18:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/11/22 18:13	11/11/22 18:13	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/11/22 18:13	11/11/22 18:13	123-91-1	
Ethanol	41.1	ug/m3	2.36	0.500	1	11/11/22 18:13	11/11/22 18:13	64-17-5	
Ethylbenzene	0.715J	ug/m3	0.867	0.362	1	11/11/22 18:13	11/11/22 18:13	100-41-4	J
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/11/22 18:13	11/11/22 18:13	141-78-6	
4-Ethyltoluene	ND	ug/m3	0.982	0.384	1	11/11/22 18:13	11/11/22 18:13	622-96-8	
Trichlorofluoromethane	1.24	ug/m3	1.12	0.460	1	11/11/22 18:13	11/11/22 18:13	75-69-4	
Dichlorodifluoromethane	2.12	ug/m3	0.989	0.678	1	11/11/22 18:13	11/11/22 18:13	75-71-8	
1,1,2-Trichlorotrifluoroethane	0.723J	ug/m3	1.53	0.608	1	11/11/22 18:13	11/11/22 18:13	76-13-1	J
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/11/22 18:13	11/11/22 18:13	76-14-2	
n-Heptane	1.51	ug/m3	0.818	0.425	1	11/11/22 18:13	11/11/22 18:13	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/11/22 18:13	11/11/22 18:13	87-68-3	
n-Hexane	4.34	ug/m3	2.22	0.726	1	11/11/22 18:13	11/11/22 18:13	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/11/22 18:13	11/11/22 18:13	98-82-8	
Methylene Chloride	1.10	ug/m3	0.694	0.340	1	11/11/22 18:13	11/11/22 18:13	75-09-2	
2-Hexanone	5.69	ug/m3	5.11	0.544	1	11/11/22 18:13	11/11/22 18:13	591-78-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW9-SG		Lab ID: 60416115004		Collected: 11/04/22 10:35		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	31.8	ug/m3	3.69	0.240	1	11/11/22 18:13	11/11/22 18:13	78-93-3	
4-Methyl-2-pentanone (MIBK)	2.54J	ug/m3	5.12	0.313	1	11/11/22 18:13	11/11/22 18:13	108-10-1	J
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/11/22 18:13	11/11/22 18:13	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/11/22 18:13	11/11/22 18:13	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/11/22 18:13	11/11/22 18:13	91-20-3	
2-Propanol	46.9	ug/m3	3.07	0.649	1	11/11/22 18:13	11/11/22 18:13	67-63-0	
Propylene	6.96	ug/m3	2.15	0.160	1	11/11/22 18:13	11/11/22 18:13	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/11/22 18:13	11/11/22 18:13	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/11/22 18:13	11/11/22 18:13	79-34-5	
Tetrachloroethene	4.26	ug/m3	1.36	0.553	1	11/11/22 18:13	11/11/22 18:13	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/11/22 18:13	11/11/22 18:13	109-99-9	
Toluene	1.36J	ug/m3	1.88	0.328	1	11/11/22 18:13	11/11/22 18:13	108-88-3	J
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/11/22 18:13	11/11/22 18:13	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/11/22 18:13	11/11/22 18:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/11/22 18:13	11/11/22 18:13	79-00-5	
Trichloroethene	8.73	ug/m3	1.07	0.364	1	11/11/22 18:13	11/11/22 18:13	79-01-6	
1,2,4-Trimethylbenzene	0.628J	ug/m3	0.982	0.375	1	11/11/22 18:13	11/11/22 18:13	95-63-6	J
1,3,5-Trimethylbenzene	ND	ug/m3	0.982	0.382	1	11/11/22 18:13	11/11/22 18:13	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	0.934	0.621	1	11/11/22 18:13	11/11/22 18:13	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/11/22 18:13	11/11/22 18:13	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/11/22 18:13	11/11/22 18:13	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/11/22 18:13	11/11/22 18:13	108-05-4	
m&p-Xylene	1.37J	ug/m3	1.73	0.585	1	11/11/22 18:13	11/11/22 18:13	179601-23-1	J
o-Xylene	0.650J	ug/m3	0.867	0.359	1	11/11/22 18:13	11/11/22 18:13	95-47-6	J
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	97.8	%	60.0-140		1	11/11/22 18:13	11/11/22 18:13	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW103-SG		Lab ID: 60416115005		Collected: 10/26/22 15:04		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	1840	ug/m3	826	164	1	11/15/22 18:48	11/15/22 18:48	8006-61-9	
Acetone	17.5	ug/m3	2.97	1.39	1	11/15/22 18:48	11/15/22 18:48	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/15/22 18:48	11/15/22 18:48	107-05-1	
Benzene	9.01	ug/m3	0.639	0.228	1	11/15/22 18:48	11/15/22 18:48	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/15/22 18:48	11/15/22 18:48	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/15/22 18:48	11/15/22 18:48	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/15/22 18:48	11/15/22 18:48	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/15/22 18:48	11/15/22 18:48	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/15/22 18:48	11/15/22 18:48	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.317	1	11/15/22 18:48	11/15/22 18:48	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/15/22 18:48	11/15/22 18:48	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/15/22 18:48	11/15/22 18:48	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/15/22 18:48	11/15/22 18:48	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/15/22 18:48	11/15/22 18:48	67-66-3	
Chloromethane	1.09	ug/m3	0.413	0.213	1	11/15/22 18:48	11/15/22 18:48	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/15/22 18:48	11/15/22 18:48	95-49-8	
Cyclohexane	25.9	ug/m3	0.689	0.259	1	11/15/22 18:48	11/15/22 18:48	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/15/22 18:48	11/15/22 18:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/15/22 18:48	11/15/22 18:48	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/15/22 18:48	11/15/22 18:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/15/22 18:48	11/15/22 18:48	541-73-1	
1,4-Dichlorobenzene	1.35	ug/m3	1.20	0.335	1	11/15/22 18:48	11/15/22 18:48	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/15/22 18:48	11/15/22 18:48	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/15/22 18:48	11/15/22 18:48	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/15/22 18:48	11/15/22 18:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	11/15/22 18:48	11/15/22 18:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/15/22 18:48	11/15/22 18:48	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/15/22 18:48	11/15/22 18:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/15/22 18:48	11/15/22 18:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/15/22 18:48	11/15/22 18:48	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/15/22 18:48	11/15/22 18:48	123-91-1	
Ethanol	496	ug/m3	23.6	5.00	10	11/16/22 18:09	11/16/22 18:09	64-17-5	
Ethylbenzene	26.1	ug/m3	0.867	0.362	1	11/15/22 18:48	11/15/22 18:48	100-41-4	
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/15/22 18:48	11/15/22 18:48	141-78-6	
4-Ethyltoluene	18.8	ug/m3	0.982	0.384	1	11/15/22 18:48	11/15/22 18:48	622-96-8	
Trichlorofluoromethane	1.10J	ug/m3	1.12	0.460	1	11/15/22 18:48	11/15/22 18:48	75-69-4	J
Dichlorodifluoromethane	2.18	ug/m3	0.989	0.678	1	11/15/22 18:48	11/15/22 18:48	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	11/15/22 18:48	11/15/22 18:48	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/15/22 18:48	11/15/22 18:48	76-14-2	
n-Heptane	33.0	ug/m3	0.818	0.425	1	11/15/22 18:48	11/15/22 18:48	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/15/22 18:48	11/15/22 18:48	87-68-3	
n-Hexane	39.5	ug/m3	2.22	0.726	1	11/15/22 18:48	11/15/22 18:48	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/15/22 18:48	11/15/22 18:48	98-82-8	
Methylene Chloride	12.7	ug/m3	0.694	0.340	1	11/15/22 18:48	11/15/22 18:48	75-09-2	
2-Hexanone	ND	ug/m3	5.11	0.544	1	11/15/22 18:48	11/15/22 18:48	591-78-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW103-SG		Lab ID: 60416115005		Collected: 10/26/22 15:04		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	11.5	ug/m3	3.69	0.240	1	11/15/22 18:48	11/15/22 18:48	78-93-3	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.313	1	11/15/22 18:48	11/15/22 18:48	108-10-1	
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/15/22 18:48	11/15/22 18:48	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/15/22 18:48	11/15/22 18:48	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/15/22 18:48	11/15/22 18:48	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	11/15/22 18:48	11/15/22 18:48	67-63-0	
Propylene	9.07	ug/m3	2.15	0.160	1	11/15/22 18:48	11/15/22 18:48	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/15/22 18:48	11/15/22 18:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/15/22 18:48	11/15/22 18:48	79-34-5	
Tetrachloroethene	1.41	ug/m3	1.36	0.553	1	11/15/22 18:48	11/15/22 18:48	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/15/22 18:48	11/15/22 18:48	109-99-9	
Toluene	81.0	ug/m3	1.88	0.328	1	11/15/22 18:48	11/15/22 18:48	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/15/22 18:48	11/15/22 18:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/15/22 18:48	11/15/22 18:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/15/22 18:48	11/15/22 18:48	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.364	1	11/15/22 18:48	11/15/22 18:48	79-01-6	
1,2,4-Trimethylbenzene	12.9	ug/m3	0.982	0.375	1	11/15/22 18:48	11/15/22 18:48	95-63-6	
1,3,5-Trimethylbenzene	5.94	ug/m3	0.982	0.382	1	11/15/22 18:48	11/15/22 18:48	108-67-8	
2,2,4-Trimethylpentane	86.9	ug/m3	0.934	0.621	1	11/15/22 18:48	11/15/22 18:48	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/15/22 18:48	11/15/22 18:48	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/15/22 18:48	11/15/22 18:48	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/15/22 18:48	11/15/22 18:48	108-05-4	
m&p-Xylene	73.3	ug/m3	1.73	0.585	1	11/15/22 18:48	11/15/22 18:48	179601-23-1	
o-Xylene	29.0	ug/m3	0.867	0.359	1	11/15/22 18:48	11/15/22 18:48	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	92.0	%	60.0-140		1	11/15/22 18:48	11/15/22 18:48	3855-82-1	
1,4-Dichlorobenzene-d4 (IS)	97.6	%	60.0-140		10	11/16/22 18:09	11/16/22 18:09	3855-82-1	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW104-SG		Lab ID: 60416115006		Collected: 10/27/22 08:47		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	425J	ug/m3	826	164	1	11/15/22 19:27	11/15/22 19:27	8006-61-9	J
Acetone	23.6	ug/m3	2.97	1.39	1	11/15/22 19:27	11/15/22 19:27	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/15/22 19:27	11/15/22 19:27	107-05-1	
Benzene	7.76	ug/m3	0.639	0.228	1	11/15/22 19:27	11/15/22 19:27	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/15/22 19:27	11/15/22 19:27	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/15/22 19:27	11/15/22 19:27	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/15/22 19:27	11/15/22 19:27	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/15/22 19:27	11/15/22 19:27	74-83-9	
1,3-Butadiene	0.597J	ug/m3	4.43	0.230	1	11/15/22 19:27	11/15/22 19:27	106-99-0	J
Carbon disulfide	0.489J	ug/m3	0.622	0.317	1	11/15/22 19:27	11/15/22 19:27	75-15-0	J
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/15/22 19:27	11/15/22 19:27	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/15/22 19:27	11/15/22 19:27	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/15/22 19:27	11/15/22 19:27	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/15/22 19:27	11/15/22 19:27	67-66-3	
Chloromethane	0.351J	ug/m3	0.413	0.213	1	11/15/22 19:27	11/15/22 19:27	74-87-3	J
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/15/22 19:27	11/15/22 19:27	95-49-8	
Cyclohexane	2.75	ug/m3	0.689	0.259	1	11/15/22 19:27	11/15/22 19:27	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/15/22 19:27	11/15/22 19:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/15/22 19:27	11/15/22 19:27	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/15/22 19:27	11/15/22 19:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/15/22 19:27	11/15/22 19:27	541-73-1	
1,4-Dichlorobenzene	0.776J	ug/m3	1.20	0.335	1	11/15/22 19:27	11/15/22 19:27	106-46-7	J
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/15/22 19:27	11/15/22 19:27	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/15/22 19:27	11/15/22 19:27	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/15/22 19:27	11/15/22 19:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	11/15/22 19:27	11/15/22 19:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/15/22 19:27	11/15/22 19:27	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/15/22 19:27	11/15/22 19:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/15/22 19:27	11/15/22 19:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/15/22 19:27	11/15/22 19:27	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/15/22 19:27	11/15/22 19:27	123-91-1	
Ethanol	14.9	ug/m3	2.36	0.500	1	11/15/22 19:27	11/15/22 19:27	64-17-5	
Ethylbenzene	7.85	ug/m3	0.867	0.362	1	11/15/22 19:27	11/15/22 19:27	100-41-4	
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/15/22 19:27	11/15/22 19:27	141-78-6	
4-Ethyltoluene	2.56	ug/m3	0.982	0.384	1	11/15/22 19:27	11/15/22 19:27	622-96-8	
Trichlorofluoromethane	1.07J	ug/m3	1.12	0.460	1	11/15/22 19:27	11/15/22 19:27	75-69-4	J
Dichlorodifluoromethane	2.18	ug/m3	0.989	0.678	1	11/15/22 19:27	11/15/22 19:27	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	11/15/22 19:27	11/15/22 19:27	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/15/22 19:27	11/15/22 19:27	76-14-2	
n-Heptane	11.8	ug/m3	0.818	0.425	1	11/15/22 19:27	11/15/22 19:27	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/15/22 19:27	11/15/22 19:27	87-68-3	
n-Hexane	8.81	ug/m3	2.22	0.726	1	11/15/22 19:27	11/15/22 19:27	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/15/22 19:27	11/15/22 19:27	98-82-8	
Methylene Chloride	4.13	ug/m3	0.694	0.340	1	11/15/22 19:27	11/15/22 19:27	75-09-2	
2-Hexanone	ND	ug/m3	5.11	0.544	1	11/15/22 19:27	11/15/22 19:27	591-78-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW104-SG		Lab ID: 60416115006		Collected: 10/27/22 08:47		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	5.40	ug/m3	3.69	0.240	1	11/15/22 19:27	11/15/22 19:27	78-93-3	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.313	1	11/15/22 19:27	11/15/22 19:27	108-10-1	
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/15/22 19:27	11/15/22 19:27	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/15/22 19:27	11/15/22 19:27	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/15/22 19:27	11/15/22 19:27	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	11/15/22 19:27	11/15/22 19:27	67-63-0	
Propylene	2.81	ug/m3	2.15	0.160	1	11/15/22 19:27	11/15/22 19:27	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/15/22 19:27	11/15/22 19:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/15/22 19:27	11/15/22 19:27	79-34-5	
Tetrachloroethene	0.910J	ug/m3	1.36	0.553	1	11/15/22 19:27	11/15/22 19:27	127-18-4	J
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/15/22 19:27	11/15/22 19:27	109-99-9	
Toluene	56.5	ug/m3	1.88	0.328	1	11/15/22 19:27	11/15/22 19:27	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/15/22 19:27	11/15/22 19:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/15/22 19:27	11/15/22 19:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/15/22 19:27	11/15/22 19:27	79-00-5	
Trichloroethene	1.63	ug/m3	1.07	0.364	1	11/15/22 19:27	11/15/22 19:27	79-01-6	
1,2,4-Trimethylbenzene	1.93	ug/m3	0.982	0.375	1	11/15/22 19:27	11/15/22 19:27	95-63-6	
1,3,5-Trimethylbenzene	0.756J	ug/m3	0.982	0.382	1	11/15/22 19:27	11/15/22 19:27	108-67-8	J
2,2,4-Trimethylpentane	17.6	ug/m3	0.934	0.621	1	11/15/22 19:27	11/15/22 19:27	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/15/22 19:27	11/15/22 19:27	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/15/22 19:27	11/15/22 19:27	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/15/22 19:27	11/15/22 19:27	108-05-4	
m&p-Xylene	20.1	ug/m3	1.73	0.585	1	11/15/22 19:27	11/15/22 19:27	179601-23-1	
o-Xylene	6.20	ug/m3	0.867	0.359	1	11/15/22 19:27	11/15/22 19:27	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	95.7	%	60.0-140		1	11/15/22 19:27	11/15/22 19:27	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW101-SG		Lab ID: 60416115007		Collected: 10/29/22 09:46		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	ND	ug/m3	826	164	1	11/15/22 20:08	11/15/22 20:08	8006-61-9	
Acetone	22.6	ug/m3	2.97	1.39	1	11/15/22 20:08	11/15/22 20:08	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/15/22 20:08	11/15/22 20:08	107-05-1	
Benzene	0.712	ug/m3	0.639	0.228	1	11/15/22 20:08	11/15/22 20:08	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/15/22 20:08	11/15/22 20:08	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/15/22 20:08	11/15/22 20:08	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/15/22 20:08	11/15/22 20:08	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/15/22 20:08	11/15/22 20:08	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/15/22 20:08	11/15/22 20:08	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.317	1	11/15/22 20:08	11/15/22 20:08	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/15/22 20:08	11/15/22 20:08	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/15/22 20:08	11/15/22 20:08	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/15/22 20:08	11/15/22 20:08	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/15/22 20:08	11/15/22 20:08	67-66-3	
Chloromethane	0.271J	ug/m3	0.413	0.213	1	11/15/22 20:08	11/15/22 20:08	74-87-3	J
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/15/22 20:08	11/15/22 20:08	95-49-8	
Cyclohexane	0.379J	ug/m3	0.689	0.259	1	11/15/22 20:08	11/15/22 20:08	110-82-7	J
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/15/22 20:08	11/15/22 20:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/15/22 20:08	11/15/22 20:08	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/15/22 20:08	11/15/22 20:08	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/15/22 20:08	11/15/22 20:08	541-73-1	
1,4-Dichlorobenzene	2.00	ug/m3	1.20	0.335	1	11/15/22 20:08	11/15/22 20:08	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/15/22 20:08	11/15/22 20:08	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/15/22 20:08	11/15/22 20:08	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/15/22 20:08	11/15/22 20:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	11/15/22 20:08	11/15/22 20:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/15/22 20:08	11/15/22 20:08	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/15/22 20:08	11/15/22 20:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/15/22 20:08	11/15/22 20:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/15/22 20:08	11/15/22 20:08	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/15/22 20:08	11/15/22 20:08	123-91-1	
Ethanol	10.4	ug/m3	2.36	0.500	1	11/15/22 20:08	11/15/22 20:08	64-17-5	
Ethylbenzene	1.76	ug/m3	0.867	0.362	1	11/15/22 20:08	11/15/22 20:08	100-41-4	
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/15/22 20:08	11/15/22 20:08	141-78-6	
4-Ethyltoluene	1.63	ug/m3	0.982	0.384	1	11/15/22 20:08	11/15/22 20:08	622-96-8	
Trichlorofluoromethane	1.16	ug/m3	1.12	0.460	1	11/15/22 20:08	11/15/22 20:08	75-69-4	
Dichlorodifluoromethane	2.06	ug/m3	0.989	0.678	1	11/15/22 20:08	11/15/22 20:08	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	11/15/22 20:08	11/15/22 20:08	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/15/22 20:08	11/15/22 20:08	76-14-2	
n-Heptane	1.06	ug/m3	0.818	0.425	1	11/15/22 20:08	11/15/22 20:08	142-82-5	
Hexachloro-1,3-butadiene	1.30J	ug/m3	6.73	1.12	1	11/15/22 20:08	11/15/22 20:08	87-68-3	J
n-Hexane	2.36	ug/m3	2.22	0.726	1	11/15/22 20:08	11/15/22 20:08	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/15/22 20:08	11/15/22 20:08	98-82-8	
Methylene Chloride	2.52	ug/m3	0.694	0.340	1	11/15/22 20:08	11/15/22 20:08	75-09-2	
2-Hexanone	1.52J	ug/m3	5.11	0.544	1	11/15/22 20:08	11/15/22 20:08	591-78-6	J

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW101-SG		Lab ID: 60416115007		Collected: 10/29/22 09:46		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	11.5	ug/m3	3.69	0.240	1	11/15/22 20:08	11/15/22 20:08	78-93-3	
4-Methyl-2-pentanone (MIBK)	0.557J	ug/m3	5.12	0.313	1	11/15/22 20:08	11/15/22 20:08	108-10-1	J
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/15/22 20:08	11/15/22 20:08	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/15/22 20:08	11/15/22 20:08	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/15/22 20:08	11/15/22 20:08	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	11/15/22 20:08	11/15/22 20:08	67-63-0	
Propylene	ND	ug/m3	2.15	0.160	1	11/15/22 20:08	11/15/22 20:08	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/15/22 20:08	11/15/22 20:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/15/22 20:08	11/15/22 20:08	79-34-5	
Tetrachloroethene	ND	ug/m3	1.36	0.553	1	11/15/22 20:08	11/15/22 20:08	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/15/22 20:08	11/15/22 20:08	109-99-9	
Toluene	5.99	ug/m3	1.88	0.328	1	11/15/22 20:08	11/15/22 20:08	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/15/22 20:08	11/15/22 20:08	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/15/22 20:08	11/15/22 20:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/15/22 20:08	11/15/22 20:08	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.364	1	11/15/22 20:08	11/15/22 20:08	79-01-6	
1,2,4-Trimethylbenzene	1.61	ug/m3	0.982	0.375	1	11/15/22 20:08	11/15/22 20:08	95-63-6	
1,3,5-Trimethylbenzene	0.520J	ug/m3	0.982	0.382	1	11/15/22 20:08	11/15/22 20:08	108-67-8	J
2,2,4-Trimethylpentane	1.07	ug/m3	0.934	0.621	1	11/15/22 20:08	11/15/22 20:08	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/15/22 20:08	11/15/22 20:08	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/15/22 20:08	11/15/22 20:08	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/15/22 20:08	11/15/22 20:08	108-05-4	
m&p-Xylene	6.11	ug/m3	1.73	0.585	1	11/15/22 20:08	11/15/22 20:08	179601-23-1	
o-Xylene	1.88	ug/m3	0.867	0.359	1	11/15/22 20:08	11/15/22 20:08	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	96.6	%	60.0-140		1	11/15/22 20:08	11/15/22 20:08	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW102-SG		Lab ID: 60416115008		Collected: 10/30/22 15:10		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	1930	ug/m3	826	164	1	11/15/22 20:48	11/15/22 20:48	8006-61-9	
Acetone	43.5	ug/m3	2.97	1.39	1	11/15/22 20:48	11/15/22 20:48	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/15/22 20:48	11/15/22 20:48	107-05-1	
Benzene	0.882	ug/m3	0.639	0.228	1	11/15/22 20:48	11/15/22 20:48	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/15/22 20:48	11/15/22 20:48	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/15/22 20:48	11/15/22 20:48	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/15/22 20:48	11/15/22 20:48	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/15/22 20:48	11/15/22 20:48	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/15/22 20:48	11/15/22 20:48	106-99-0	
Carbon disulfide	2.25	ug/m3	0.622	0.317	1	11/15/22 20:48	11/15/22 20:48	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/15/22 20:48	11/15/22 20:48	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/15/22 20:48	11/15/22 20:48	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/15/22 20:48	11/15/22 20:48	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/15/22 20:48	11/15/22 20:48	67-66-3	
Chloromethane	0.618	ug/m3	0.413	0.213	1	11/15/22 20:48	11/15/22 20:48	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/15/22 20:48	11/15/22 20:48	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.259	1	11/15/22 20:48	11/15/22 20:48	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/15/22 20:48	11/15/22 20:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/15/22 20:48	11/15/22 20:48	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/15/22 20:48	11/15/22 20:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/15/22 20:48	11/15/22 20:48	541-73-1	
1,4-Dichlorobenzene	3.04	ug/m3	1.20	0.335	1	11/15/22 20:48	11/15/22 20:48	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/15/22 20:48	11/15/22 20:48	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/15/22 20:48	11/15/22 20:48	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/15/22 20:48	11/15/22 20:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	11/15/22 20:48	11/15/22 20:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/15/22 20:48	11/15/22 20:48	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/15/22 20:48	11/15/22 20:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/15/22 20:48	11/15/22 20:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/15/22 20:48	11/15/22 20:48	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/15/22 20:48	11/15/22 20:48	123-91-1	
Ethanol	21.1	ug/m3	2.36	0.500	1	11/15/22 20:48	11/15/22 20:48	64-17-5	
Ethylbenzene	2.53	ug/m3	0.867	0.362	1	11/15/22 20:48	11/15/22 20:48	100-41-4	
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/15/22 20:48	11/15/22 20:48	141-78-6	
4-Ethyltoluene	3.31	ug/m3	0.982	0.384	1	11/15/22 20:48	11/15/22 20:48	622-96-8	
Trichlorofluoromethane	ND	ug/m3	1.12	0.460	1	11/15/22 20:48	11/15/22 20:48	75-69-4	
Dichlorodifluoromethane	3.93	ug/m3	0.989	0.678	1	11/15/22 20:48	11/15/22 20:48	75-71-8	
1,1,2-Trichlorotrifluoroethane	0.666J	ug/m3	1.53	0.608	1	11/15/22 20:48	11/15/22 20:48	76-13-1	J
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/15/22 20:48	11/15/22 20:48	76-14-2	
n-Heptane	ND	ug/m3	0.818	0.425	1	11/15/22 20:48	11/15/22 20:48	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/15/22 20:48	11/15/22 20:48	87-68-3	
n-Hexane	4.30	ug/m3	2.22	0.726	1	11/15/22 20:48	11/15/22 20:48	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/15/22 20:48	11/15/22 20:48	98-82-8	
Methylene Chloride	7.88	ug/m3	0.694	0.340	1	11/15/22 20:48	11/15/22 20:48	75-09-2	
2-Hexanone	5.69	ug/m3	5.11	0.544	1	11/15/22 20:48	11/15/22 20:48	591-78-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW102-SG		Lab ID: 60416115008		Collected: 10/30/22 15:10		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	34.8	ug/m3	3.69	0.240	1	11/15/22 20:48	11/15/22 20:48	78-93-3	
4-Methyl-2-pentanone (MIBK)	1.49J	ug/m3	5.12	0.313	1	11/15/22 20:48	11/15/22 20:48	108-10-1	J
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/15/22 20:48	11/15/22 20:48	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/15/22 20:48	11/15/22 20:48	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/15/22 20:48	11/15/22 20:48	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	11/15/22 20:48	11/15/22 20:48	67-63-0	
Propylene	4.06	ug/m3	2.15	0.160	1	11/15/22 20:48	11/15/22 20:48	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/15/22 20:48	11/15/22 20:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/15/22 20:48	11/15/22 20:48	79-34-5	
Tetrachloroethene	1.36	ug/m3	1.36	0.553	1	11/15/22 20:48	11/15/22 20:48	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/15/22 20:48	11/15/22 20:48	109-99-9	
Toluene	ND	ug/m3	1.88	0.328	1	11/15/22 20:48	11/15/22 20:48	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/15/22 20:48	11/15/22 20:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/15/22 20:48	11/15/22 20:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/15/22 20:48	11/15/22 20:48	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.364	1	11/15/22 20:48	11/15/22 20:48	79-01-6	
1,2,4-Trimethylbenzene	3.38	ug/m3	0.982	0.375	1	11/15/22 20:48	11/15/22 20:48	95-63-6	
1,3,5-Trimethylbenzene	0.987	ug/m3	0.982	0.382	1	11/15/22 20:48	11/15/22 20:48	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	0.934	0.621	1	11/15/22 20:48	11/15/22 20:48	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/15/22 20:48	11/15/22 20:48	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/15/22 20:48	11/15/22 20:48	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/15/22 20:48	11/15/22 20:48	108-05-4	
m&p-Xylene	9.49	ug/m3	1.73	0.585	1	11/15/22 20:48	11/15/22 20:48	179601-23-1	
o-Xylene	2.64	ug/m3	0.867	0.359	1	11/15/22 20:48	11/15/22 20:48	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	106	%	60.0-140		1	11/15/22 20:48	11/15/22 20:48	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW8B-SG		Lab ID: 60416115009		Collected: 11/02/22 14:10		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	1120	ug/m3	826	164	1	11/15/22 21:29	11/15/22 21:29	8006-61-9	
Acetone	53.7	ug/m3	2.97	1.39	1	11/15/22 21:29	11/15/22 21:29	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/15/22 21:29	11/15/22 21:29	107-05-1	
Benzene	0.773	ug/m3	0.639	0.228	1	11/15/22 21:29	11/15/22 21:29	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/15/22 21:29	11/15/22 21:29	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/15/22 21:29	11/15/22 21:29	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/15/22 21:29	11/15/22 21:29	75-25-2	
Bromomethane	0.625J	ug/m3	0.776	0.381	1	11/15/22 21:29	11/15/22 21:29	74-83-9	J
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/15/22 21:29	11/15/22 21:29	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.317	1	11/15/22 21:29	11/15/22 21:29	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/15/22 21:29	11/15/22 21:29	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/15/22 21:29	11/15/22 21:29	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/15/22 21:29	11/15/22 21:29	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/15/22 21:29	11/15/22 21:29	67-66-3	
Chloromethane	0.863	ug/m3	0.413	0.213	1	11/15/22 21:29	11/15/22 21:29	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/15/22 21:29	11/15/22 21:29	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.259	1	11/15/22 21:29	11/15/22 21:29	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/15/22 21:29	11/15/22 21:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/15/22 21:29	11/15/22 21:29	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/15/22 21:29	11/15/22 21:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/15/22 21:29	11/15/22 21:29	541-73-1	
1,4-Dichlorobenzene	8.48	ug/m3	1.20	0.335	1	11/15/22 21:29	11/15/22 21:29	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/15/22 21:29	11/15/22 21:29	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/15/22 21:29	11/15/22 21:29	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/15/22 21:29	11/15/22 21:29	75-35-4	
cis-1,2-Dichloroethene	10.5	ug/m3	0.793	0.311	1	11/15/22 21:29	11/15/22 21:29	156-59-2	
trans-1,2-Dichloroethene	1.51	ug/m3	0.793	0.267	1	11/15/22 21:29	11/15/22 21:29	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/15/22 21:29	11/15/22 21:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/15/22 21:29	11/15/22 21:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/15/22 21:29	11/15/22 21:29	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/15/22 21:29	11/15/22 21:29	123-91-1	
Ethanol	31.7	ug/m3	2.36	0.500	1	11/15/22 21:29	11/15/22 21:29	64-17-5	
Ethylbenzene	2.08	ug/m3	0.867	0.362	1	11/15/22 21:29	11/15/22 21:29	100-41-4	
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/15/22 21:29	11/15/22 21:29	141-78-6	
4-Ethyltoluene	3.35	ug/m3	0.982	0.384	1	11/15/22 21:29	11/15/22 21:29	622-96-8	
Trichlorofluoromethane	ND	ug/m3	1.12	0.460	1	11/15/22 21:29	11/15/22 21:29	75-69-4	
Dichlorodifluoromethane	2.08	ug/m3	0.989	0.678	1	11/15/22 21:29	11/15/22 21:29	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	11/15/22 21:29	11/15/22 21:29	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/15/22 21:29	11/15/22 21:29	76-14-2	
n-Heptane	ND	ug/m3	0.818	0.425	1	11/15/22 21:29	11/15/22 21:29	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/15/22 21:29	11/15/22 21:29	87-68-3	
n-Hexane	3.01	ug/m3	2.22	0.726	1	11/15/22 21:29	11/15/22 21:29	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/15/22 21:29	11/15/22 21:29	98-82-8	
Methylene Chloride	ND	ug/m3	0.694	0.340	1	11/15/22 21:29	11/15/22 21:29	75-09-2	
2-Hexanone	92.0	ug/m3	5.11	0.544	1	11/15/22 21:29	11/15/22 21:29	591-78-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW8B-SG		Lab ID: 60416115009		Collected: 11/02/22 14:10		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	41.0	ug/m3	3.69	0.240	1	11/15/22 21:29	11/15/22 21:29	78-93-3	
4-Methyl-2-pentanone (MIBK)	14.4	ug/m3	5.12	0.313	1	11/15/22 21:29	11/15/22 21:29	108-10-1	
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/15/22 21:29	11/15/22 21:29	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/15/22 21:29	11/15/22 21:29	1634-04-4	
Naphthalene	7.12	ug/m3	3.30	1.83	1	11/15/22 21:29	11/15/22 21:29	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	11/15/22 21:29	11/15/22 21:29	67-63-0	
Propylene	ND	ug/m3	2.15	0.160	1	11/15/22 21:29	11/15/22 21:29	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/15/22 21:29	11/15/22 21:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/15/22 21:29	11/15/22 21:29	79-34-5	
Tetrachloroethene	3.42	ug/m3	1.36	0.553	1	11/15/22 21:29	11/15/22 21:29	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/15/22 21:29	11/15/22 21:29	109-99-9	
Toluene	5.91	ug/m3	1.88	0.328	1	11/15/22 21:29	11/15/22 21:29	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/15/22 21:29	11/15/22 21:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/15/22 21:29	11/15/22 21:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/15/22 21:29	11/15/22 21:29	79-00-5	
Trichloroethene	122	ug/m3	1.07	0.364	1	11/15/22 21:29	11/15/22 21:29	79-01-6	
1,2,4-Trimethylbenzene	4.49	ug/m3	0.982	0.375	1	11/15/22 21:29	11/15/22 21:29	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	0.982	0.382	1	11/15/22 21:29	11/15/22 21:29	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	0.934	0.621	1	11/15/22 21:29	11/15/22 21:29	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/15/22 21:29	11/15/22 21:29	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/15/22 21:29	11/15/22 21:29	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/15/22 21:29	11/15/22 21:29	108-05-4	
m&p-Xylene	8.06	ug/m3	1.73	0.585	1	11/15/22 21:29	11/15/22 21:29	179601-23-1	
o-Xylene	2.82	ug/m3	0.867	0.359	1	11/15/22 21:29	11/15/22 21:29	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	103	%	60.0-140		1	11/15/22 21:29	11/15/22 21:29	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW1B-SG		Lab ID: 60416115010		Collected: 11/02/22 15:43		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	2160	ug/m3	826	164	1	11/15/22 22:09	11/15/22 22:09	8006-61-9	
Acetone	38.5	ug/m3	2.97	1.39	1	11/15/22 22:09	11/15/22 22:09	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/15/22 22:09	11/15/22 22:09	107-05-1	
Benzene	ND	ug/m3	0.639	0.228	1	11/15/22 22:09	11/15/22 22:09	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/15/22 22:09	11/15/22 22:09	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/15/22 22:09	11/15/22 22:09	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/15/22 22:09	11/15/22 22:09	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/15/22 22:09	11/15/22 22:09	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/15/22 22:09	11/15/22 22:09	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.317	1	11/15/22 22:09	11/15/22 22:09	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/15/22 22:09	11/15/22 22:09	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/15/22 22:09	11/15/22 22:09	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/15/22 22:09	11/15/22 22:09	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/15/22 22:09	11/15/22 22:09	67-66-3	
Chloromethane	ND	ug/m3	0.413	0.213	1	11/15/22 22:09	11/15/22 22:09	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/15/22 22:09	11/15/22 22:09	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.259	1	11/15/22 22:09	11/15/22 22:09	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/15/22 22:09	11/15/22 22:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/15/22 22:09	11/15/22 22:09	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/15/22 22:09	11/15/22 22:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/15/22 22:09	11/15/22 22:09	541-73-1	
1,4-Dichlorobenzene	7.70	ug/m3	1.20	0.335	1	11/15/22 22:09	11/15/22 22:09	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/15/22 22:09	11/15/22 22:09	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/15/22 22:09	11/15/22 22:09	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/15/22 22:09	11/15/22 22:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	11/15/22 22:09	11/15/22 22:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/15/22 22:09	11/15/22 22:09	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/15/22 22:09	11/15/22 22:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/15/22 22:09	11/15/22 22:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/15/22 22:09	11/15/22 22:09	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/15/22 22:09	11/15/22 22:09	123-91-1	
Ethanol	17.5	ug/m3	2.36	0.500	1	11/15/22 22:09	11/15/22 22:09	64-17-5	
Ethylbenzene	2.55	ug/m3	0.867	0.362	1	11/15/22 22:09	11/15/22 22:09	100-41-4	
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/15/22 22:09	11/15/22 22:09	141-78-6	
4-Ethyltoluene	3.79	ug/m3	0.982	0.384	1	11/15/22 22:09	11/15/22 22:09	622-96-8	
Trichlorofluoromethane	ND	ug/m3	1.12	0.460	1	11/15/22 22:09	11/15/22 22:09	75-69-4	
Dichlorodifluoromethane	ND	ug/m3	0.989	0.678	1	11/15/22 22:09	11/15/22 22:09	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	11/15/22 22:09	11/15/22 22:09	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/15/22 22:09	11/15/22 22:09	76-14-2	
n-Heptane	32.0	ug/m3	0.818	0.425	1	11/15/22 22:09	11/15/22 22:09	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/15/22 22:09	11/15/22 22:09	87-68-3	
n-Hexane	9.98	ug/m3	2.22	0.726	1	11/15/22 22:09	11/15/22 22:09	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/15/22 22:09	11/15/22 22:09	98-82-8	
Methylene Chloride	4.55	ug/m3	0.694	0.340	1	11/15/22 22:09	11/15/22 22:09	75-09-2	
2-Hexanone	8.06	ug/m3	5.11	0.544	1	11/15/22 22:09	11/15/22 22:09	591-78-6	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES
Pace Project No.: 60416115

Sample: MW1B-SG		Lab ID: 60416115010		Collected: 11/02/22 15:43		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	34.5	ug/m3	3.69	0.240	1	11/15/22 22:09	11/15/22 22:09	78-93-3	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.313	1	11/15/22 22:09	11/15/22 22:09	108-10-1	
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/15/22 22:09	11/15/22 22:09	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/15/22 22:09	11/15/22 22:09	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/15/22 22:09	11/15/22 22:09	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	11/15/22 22:09	11/15/22 22:09	67-63-0	
Propylene	ND	ug/m3	2.15	0.160	1	11/15/22 22:09	11/15/22 22:09	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/15/22 22:09	11/15/22 22:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/15/22 22:09	11/15/22 22:09	79-34-5	
Tetrachloroethene	1.13J	ug/m3	1.36	0.553	1	11/15/22 22:09	11/15/22 22:09	127-18-4	J
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/15/22 22:09	11/15/22 22:09	109-99-9	
Toluene	ND	ug/m3	1.88	0.328	1	11/15/22 22:09	11/15/22 22:09	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/15/22 22:09	11/15/22 22:09	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/15/22 22:09	11/15/22 22:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/15/22 22:09	11/15/22 22:09	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.364	1	11/15/22 22:09	11/15/22 22:09	79-01-6	
1,2,4-Trimethylbenzene	4.80	ug/m3	0.982	0.375	1	11/15/22 22:09	11/15/22 22:09	95-63-6	
1,3,5-Trimethylbenzene	1.30	ug/m3	0.982	0.382	1	11/15/22 22:09	11/15/22 22:09	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	0.934	0.621	1	11/15/22 22:09	11/15/22 22:09	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/15/22 22:09	11/15/22 22:09	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/15/22 22:09	11/15/22 22:09	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/15/22 22:09	11/15/22 22:09	108-05-4	
m&p-Xylene	9.19	ug/m3	1.73	0.585	1	11/15/22 22:09	11/15/22 22:09	179601-23-1	
o-Xylene	2.88	ug/m3	0.867	0.359	1	11/15/22 22:09	11/15/22 22:09	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	114	%	60.0-140		1	11/15/22 22:09	11/15/22 22:09	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW11-SG		Lab ID: 60416115011		Collected: 11/03/22 14:10		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	628J	ug/m3	826	164	1	11/15/22 22:48	11/15/22 22:48	8006-61-9	J
Acetone	38.0	ug/m3	2.97	1.39	1	11/15/22 22:48	11/15/22 22:48	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/15/22 22:48	11/15/22 22:48	107-05-1	
Benzene	1.35	ug/m3	0.639	0.228	1	11/15/22 22:48	11/15/22 22:48	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/15/22 22:48	11/15/22 22:48	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/15/22 22:48	11/15/22 22:48	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/15/22 22:48	11/15/22 22:48	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/15/22 22:48	11/15/22 22:48	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/15/22 22:48	11/15/22 22:48	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.317	1	11/15/22 22:48	11/15/22 22:48	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/15/22 22:48	11/15/22 22:48	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/15/22 22:48	11/15/22 22:48	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/15/22 22:48	11/15/22 22:48	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/15/22 22:48	11/15/22 22:48	67-66-3	
Chloromethane	0.993	ug/m3	0.413	0.213	1	11/15/22 22:48	11/15/22 22:48	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/15/22 22:48	11/15/22 22:48	95-49-8	
Cyclohexane	0.630J	ug/m3	0.689	0.259	1	11/15/22 22:48	11/15/22 22:48	110-82-7	J
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/15/22 22:48	11/15/22 22:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/15/22 22:48	11/15/22 22:48	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/15/22 22:48	11/15/22 22:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/15/22 22:48	11/15/22 22:48	541-73-1	
1,4-Dichlorobenzene	2.07	ug/m3	1.20	0.335	1	11/15/22 22:48	11/15/22 22:48	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/15/22 22:48	11/15/22 22:48	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/15/22 22:48	11/15/22 22:48	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/15/22 22:48	11/15/22 22:48	75-35-4	
cis-1,2-Dichloroethene	1.55	ug/m3	0.793	0.311	1	11/15/22 22:48	11/15/22 22:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/15/22 22:48	11/15/22 22:48	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/15/22 22:48	11/15/22 22:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/15/22 22:48	11/15/22 22:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/15/22 22:48	11/15/22 22:48	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/15/22 22:48	11/15/22 22:48	123-91-1	
Ethanol	56.8	ug/m3	2.36	0.500	1	11/15/22 22:48	11/15/22 22:48	64-17-5	
Ethylbenzene	2.40	ug/m3	0.867	0.362	1	11/15/22 22:48	11/15/22 22:48	100-41-4	
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/15/22 22:48	11/15/22 22:48	141-78-6	
4-Ethyltoluene	2.61	ug/m3	0.982	0.384	1	11/15/22 22:48	11/15/22 22:48	622-96-8	
Trichlorofluoromethane	ND	ug/m3	1.12	0.460	1	11/15/22 22:48	11/15/22 22:48	75-69-4	
Dichlorodifluoromethane	2.15	ug/m3	0.989	0.678	1	11/15/22 22:48	11/15/22 22:48	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	11/15/22 22:48	11/15/22 22:48	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/15/22 22:48	11/15/22 22:48	76-14-2	
n-Heptane	3.14	ug/m3	0.818	0.425	1	11/15/22 22:48	11/15/22 22:48	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/15/22 22:48	11/15/22 22:48	87-68-3	
n-Hexane	5.15	ug/m3	2.22	0.726	1	11/15/22 22:48	11/15/22 22:48	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/15/22 22:48	11/15/22 22:48	98-82-8	
Methylene Chloride	4.13	ug/m3	0.694	0.340	1	11/15/22 22:48	11/15/22 22:48	75-09-2	
2-Hexanone	4.79J	ug/m3	5.11	0.544	1	11/15/22 22:48	11/15/22 22:48	591-78-6	J

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW11-SG		Lab ID: 60416115011		Collected: 11/03/22 14:10		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	39.5	ug/m3	3.69	0.240	1	11/15/22 22:48	11/15/22 22:48	78-93-3	
4-Methyl-2-pentanone (MIBK)	0.565J	ug/m3	5.12	0.313	1	11/15/22 22:48	11/15/22 22:48	108-10-1	J
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/15/22 22:48	11/15/22 22:48	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/15/22 22:48	11/15/22 22:48	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/15/22 22:48	11/15/22 22:48	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	11/15/22 22:48	11/15/22 22:48	67-63-0	
Propylene	ND	ug/m3	2.15	0.160	1	11/15/22 22:48	11/15/22 22:48	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/15/22 22:48	11/15/22 22:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/15/22 22:48	11/15/22 22:48	79-34-5	
Tetrachloroethene	1.32J	ug/m3	1.36	0.553	1	11/15/22 22:48	11/15/22 22:48	127-18-4	J
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/15/22 22:48	11/15/22 22:48	109-99-9	
Toluene	ND	ug/m3	1.88	0.328	1	11/15/22 22:48	11/15/22 22:48	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/15/22 22:48	11/15/22 22:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/15/22 22:48	11/15/22 22:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/15/22 22:48	11/15/22 22:48	79-00-5	
Trichloroethene	298	ug/m3	1.07	0.364	1	11/15/22 22:48	11/15/22 22:48	79-01-6	
1,2,4-Trimethylbenzene	3.01	ug/m3	0.982	0.375	1	11/15/22 22:48	11/15/22 22:48	95-63-6	
1,3,5-Trimethylbenzene	0.982J	ug/m3	0.982	0.382	1	11/15/22 22:48	11/15/22 22:48	108-67-8	J
2,2,4-Trimethylpentane	1.74	ug/m3	0.934	0.621	1	11/15/22 22:48	11/15/22 22:48	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/15/22 22:48	11/15/22 22:48	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/15/22 22:48	11/15/22 22:48	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/15/22 22:48	11/15/22 22:48	108-05-4	
m&p-Xylene	7.93	ug/m3	1.73	0.585	1	11/15/22 22:48	11/15/22 22:48	179601-23-1	
o-Xylene	3.00	ug/m3	0.867	0.359	1	11/15/22 22:48	11/15/22 22:48	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	99.3	%	60.0-140		1	11/15/22 22:48	11/15/22 22:48	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW4B-SG		Lab ID: 60416115012		Collected: 11/03/22 14:53		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	228J	ug/m3	826	164	1	11/15/22 23:29	11/15/22 23:29	8006-61-9	J
Acetone	20.2	ug/m3	2.97	1.39	1	11/15/22 23:29	11/15/22 23:29	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/15/22 23:29	11/15/22 23:29	107-05-1	
Benzene	0.974	ug/m3	0.639	0.228	1	11/15/22 23:29	11/15/22 23:29	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/15/22 23:29	11/15/22 23:29	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/15/22 23:29	11/15/22 23:29	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/15/22 23:29	11/15/22 23:29	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/15/22 23:29	11/15/22 23:29	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/15/22 23:29	11/15/22 23:29	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.317	1	11/15/22 23:29	11/15/22 23:29	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/15/22 23:29	11/15/22 23:29	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/15/22 23:29	11/15/22 23:29	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/15/22 23:29	11/15/22 23:29	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/15/22 23:29	11/15/22 23:29	67-66-3	
Chloromethane	ND	ug/m3	0.413	0.213	1	11/15/22 23:29	11/15/22 23:29	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/15/22 23:29	11/15/22 23:29	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.259	1	11/15/22 23:29	11/15/22 23:29	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/15/22 23:29	11/15/22 23:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/15/22 23:29	11/15/22 23:29	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/15/22 23:29	11/15/22 23:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/15/22 23:29	11/15/22 23:29	541-73-1	
1,4-Dichlorobenzene	1.85	ug/m3	1.20	0.335	1	11/15/22 23:29	11/15/22 23:29	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/15/22 23:29	11/15/22 23:29	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/15/22 23:29	11/15/22 23:29	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/15/22 23:29	11/15/22 23:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	11/15/22 23:29	11/15/22 23:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/15/22 23:29	11/15/22 23:29	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/15/22 23:29	11/15/22 23:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/15/22 23:29	11/15/22 23:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/15/22 23:29	11/15/22 23:29	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/15/22 23:29	11/15/22 23:29	123-91-1	
Ethanol	12.9	ug/m3	2.36	0.500	1	11/15/22 23:29	11/15/22 23:29	64-17-5	
Ethylbenzene	1.67	ug/m3	0.867	0.362	1	11/15/22 23:29	11/15/22 23:29	100-41-4	
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/15/22 23:29	11/15/22 23:29	141-78-6	
4-Ethyltoluene	2.46	ug/m3	0.982	0.384	1	11/15/22 23:29	11/15/22 23:29	622-96-8	
Trichlorofluoromethane	ND	ug/m3	1.12	0.460	1	11/15/22 23:29	11/15/22 23:29	75-69-4	
Dichlorodifluoromethane	1.60	ug/m3	0.989	0.678	1	11/15/22 23:29	11/15/22 23:29	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	11/15/22 23:29	11/15/22 23:29	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/15/22 23:29	11/15/22 23:29	76-14-2	
n-Heptane	ND	ug/m3	0.818	0.425	1	11/15/22 23:29	11/15/22 23:29	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/15/22 23:29	11/15/22 23:29	87-68-3	
n-Hexane	1.35J	ug/m3	2.22	0.726	1	11/15/22 23:29	11/15/22 23:29	110-54-3	J
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/15/22 23:29	11/15/22 23:29	98-82-8	
Methylene Chloride	1.08	ug/m3	0.694	0.340	1	11/15/22 23:29	11/15/22 23:29	75-09-2	
2-Hexanone	3.30J	ug/m3	5.11	0.544	1	11/15/22 23:29	11/15/22 23:29	591-78-6	J

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW4B-SG		Lab ID: 60416115012		Collected: 11/03/22 14:53		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	29.1	ug/m3	3.69	0.240	1	11/15/22 23:29	11/15/22 23:29	78-93-3	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.313	1	11/15/22 23:29	11/15/22 23:29	108-10-1	
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/15/22 23:29	11/15/22 23:29	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/15/22 23:29	11/15/22 23:29	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/15/22 23:29	11/15/22 23:29	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	11/15/22 23:29	11/15/22 23:29	67-63-0	
Propylene	ND	ug/m3	2.15	0.160	1	11/15/22 23:29	11/15/22 23:29	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/15/22 23:29	11/15/22 23:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/15/22 23:29	11/15/22 23:29	79-34-5	
Tetrachloroethene	ND	ug/m3	1.36	0.553	1	11/15/22 23:29	11/15/22 23:29	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/15/22 23:29	11/15/22 23:29	109-99-9	
Toluene	4.56	ug/m3	1.88	0.328	1	11/15/22 23:29	11/15/22 23:29	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/15/22 23:29	11/15/22 23:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/15/22 23:29	11/15/22 23:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/15/22 23:29	11/15/22 23:29	79-00-5	
Trichloroethene	1.17	ug/m3	1.07	0.364	1	11/15/22 23:29	11/15/22 23:29	79-01-6	
1,2,4-Trimethylbenzene	3.15	ug/m3	0.982	0.375	1	11/15/22 23:29	11/15/22 23:29	95-63-6	
1,3,5-Trimethylbenzene	0.893J	ug/m3	0.982	0.382	1	11/15/22 23:29	11/15/22 23:29	108-67-8	J
2,2,4-Trimethylpentane	1.55	ug/m3	0.934	0.621	1	11/15/22 23:29	11/15/22 23:29	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/15/22 23:29	11/15/22 23:29	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/15/22 23:29	11/15/22 23:29	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/15/22 23:29	11/15/22 23:29	108-05-4	
m&p-Xylene	6.29	ug/m3	1.73	0.585	1	11/15/22 23:29	11/15/22 23:29	179601-23-1	
o-Xylene	2.24	ug/m3	0.867	0.359	1	11/15/22 23:29	11/15/22 23:29	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	96.8	%	60.0-140		1	11/15/22 23:29	11/15/22 23:29	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW2B-SG		Lab ID: 60416115013		Collected: 11/03/22 16:55		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	1570	ug/m3	826	164	1	11/16/22 00:09	11/16/22 00:09	8006-61-9	
Acetone	34.5	ug/m3	2.97	1.39	1	11/16/22 00:09	11/16/22 00:09	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/16/22 00:09	11/16/22 00:09	107-05-1	
Benzene	1.49	ug/m3	0.639	0.228	1	11/16/22 00:09	11/16/22 00:09	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/16/22 00:09	11/16/22 00:09	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/16/22 00:09	11/16/22 00:09	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/16/22 00:09	11/16/22 00:09	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/16/22 00:09	11/16/22 00:09	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/16/22 00:09	11/16/22 00:09	106-99-0	
Carbon disulfide	3.30	ug/m3	0.622	0.317	1	11/16/22 00:09	11/16/22 00:09	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/16/22 00:09	11/16/22 00:09	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/16/22 00:09	11/16/22 00:09	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/16/22 00:09	11/16/22 00:09	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/16/22 00:09	11/16/22 00:09	67-66-3	
Chloromethane	0.266J	ug/m3	0.413	0.213	1	11/16/22 00:09	11/16/22 00:09	74-87-3	J
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/16/22 00:09	11/16/22 00:09	95-49-8	
Cyclohexane	0.961	ug/m3	0.689	0.259	1	11/16/22 00:09	11/16/22 00:09	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/16/22 00:09	11/16/22 00:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/16/22 00:09	11/16/22 00:09	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/16/22 00:09	11/16/22 00:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/16/22 00:09	11/16/22 00:09	541-73-1	
1,4-Dichlorobenzene	3.10	ug/m3	1.20	0.335	1	11/16/22 00:09	11/16/22 00:09	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/16/22 00:09	11/16/22 00:09	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/16/22 00:09	11/16/22 00:09	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/16/22 00:09	11/16/22 00:09	75-35-4	
cis-1,2-Dichloroethene	51.1	ug/m3	0.793	0.311	1	11/16/22 00:09	11/16/22 00:09	156-59-2	
trans-1,2-Dichloroethene	7.41	ug/m3	0.793	0.267	1	11/16/22 00:09	11/16/22 00:09	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/16/22 00:09	11/16/22 00:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/16/22 00:09	11/16/22 00:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/16/22 00:09	11/16/22 00:09	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/16/22 00:09	11/16/22 00:09	123-91-1	
Ethanol	49.0	ug/m3	2.36	0.500	1	11/16/22 00:09	11/16/22 00:09	64-17-5	
Ethylbenzene	2.58	ug/m3	0.867	0.362	1	11/16/22 00:09	11/16/22 00:09	100-41-4	
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/16/22 00:09	11/16/22 00:09	141-78-6	
4-Ethyltoluene	3.75	ug/m3	0.982	0.384	1	11/16/22 00:09	11/16/22 00:09	622-96-8	
Trichlorofluoromethane	ND	ug/m3	1.12	0.460	1	11/16/22 00:09	11/16/22 00:09	75-69-4	
Dichlorodifluoromethane	1.98	ug/m3	0.989	0.678	1	11/16/22 00:09	11/16/22 00:09	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	11/16/22 00:09	11/16/22 00:09	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/16/22 00:09	11/16/22 00:09	76-14-2	
n-Heptane	1.71	ug/m3	0.818	0.425	1	11/16/22 00:09	11/16/22 00:09	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/16/22 00:09	11/16/22 00:09	87-68-3	
n-Hexane	3.01	ug/m3	2.22	0.726	1	11/16/22 00:09	11/16/22 00:09	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/16/22 00:09	11/16/22 00:09	98-82-8	
Methylene Chloride	1.16	ug/m3	0.694	0.340	1	11/16/22 00:09	11/16/22 00:09	75-09-2	
2-Hexanone	5.85	ug/m3	5.11	0.544	1	11/16/22 00:09	11/16/22 00:09	591-78-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW2B-SG		Lab ID: 60416115013		Collected: 11/03/22 16:55		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	41.0	ug/m3	3.69	0.240	1	11/16/22 00:09	11/16/22 00:09	78-93-3	
4-Methyl-2-pentanone (MIBK)	1.60J	ug/m3	5.12	0.313	1	11/16/22 00:09	11/16/22 00:09	108-10-1	J
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/16/22 00:09	11/16/22 00:09	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/16/22 00:09	11/16/22 00:09	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/16/22 00:09	11/16/22 00:09	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	11/16/22 00:09	11/16/22 00:09	67-63-0	
Propylene	7.51	ug/m3	2.15	0.160	1	11/16/22 00:09	11/16/22 00:09	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/16/22 00:09	11/16/22 00:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/16/22 00:09	11/16/22 00:09	79-34-5	
Tetrachloroethene	8.35	ug/m3	1.36	0.553	1	11/16/22 00:09	11/16/22 00:09	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/16/22 00:09	11/16/22 00:09	109-99-9	
Toluene	23.7	ug/m3	1.88	0.328	1	11/16/22 00:09	11/16/22 00:09	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/16/22 00:09	11/16/22 00:09	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/16/22 00:09	11/16/22 00:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/16/22 00:09	11/16/22 00:09	79-00-5	
Trichloroethene	1800	ug/m3	10.7	3.64	10	11/17/22 12:16	11/17/22 12:16	79-01-6	
1,2,4-Trimethylbenzene	4.30	ug/m3	0.982	0.375	1	11/16/22 00:09	11/16/22 00:09	95-63-6	
1,3,5-Trimethylbenzene	1.45	ug/m3	0.982	0.382	1	11/16/22 00:09	11/16/22 00:09	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	0.934	0.621	1	11/16/22 00:09	11/16/22 00:09	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/16/22 00:09	11/16/22 00:09	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/16/22 00:09	11/16/22 00:09	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/16/22 00:09	11/16/22 00:09	108-05-4	
m&p-Xylene	9.67	ug/m3	1.73	0.585	1	11/16/22 00:09	11/16/22 00:09	179601-23-1	
o-Xylene	3.69	ug/m3	0.867	0.359	1	11/16/22 00:09	11/16/22 00:09	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	95.3	%	60.0-140		1	11/16/22 00:09	11/16/22 00:09	3855-82-1	
1,4-Dichlorobenzene-d4 (IS)	93.5	%	60.0-140		10	11/17/22 12:16	11/17/22 12:16	3855-82-1	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW10-SG		Lab ID: 60416115014		Collected: 11/03/22 17:23		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
Gasoline Range Organics	206J	ug/m3	826	164	1	11/16/22 00:49	11/16/22 00:49	8006-61-9	J
Acetone	27.8	ug/m3	2.97	1.39	1	11/16/22 00:49	11/16/22 00:49	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/16/22 00:49	11/16/22 00:49	107-05-1	
Benzene	1.25	ug/m3	0.639	0.228	1	11/16/22 00:49	11/16/22 00:49	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/16/22 00:49	11/16/22 00:49	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/16/22 00:49	11/16/22 00:49	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/16/22 00:49	11/16/22 00:49	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/16/22 00:49	11/16/22 00:49	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/16/22 00:49	11/16/22 00:49	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.317	1	11/16/22 00:49	11/16/22 00:49	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/16/22 00:49	11/16/22 00:49	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/16/22 00:49	11/16/22 00:49	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/16/22 00:49	11/16/22 00:49	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/16/22 00:49	11/16/22 00:49	67-66-3	
Chloromethane	0.380J	ug/m3	0.413	0.213	1	11/16/22 00:49	11/16/22 00:49	74-87-3	J
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/16/22 00:49	11/16/22 00:49	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.259	1	11/16/22 00:49	11/16/22 00:49	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/16/22 00:49	11/16/22 00:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/16/22 00:49	11/16/22 00:49	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/16/22 00:49	11/16/22 00:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/16/22 00:49	11/16/22 00:49	541-73-1	
1,4-Dichlorobenzene	4.92	ug/m3	1.20	0.335	1	11/16/22 00:49	11/16/22 00:49	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/16/22 00:49	11/16/22 00:49	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/16/22 00:49	11/16/22 00:49	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/16/22 00:49	11/16/22 00:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	11/16/22 00:49	11/16/22 00:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/16/22 00:49	11/16/22 00:49	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/16/22 00:49	11/16/22 00:49	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/16/22 00:49	11/16/22 00:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/16/22 00:49	11/16/22 00:49	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	11/16/22 00:49	11/16/22 00:49	123-91-1	
Ethanol	20.9	ug/m3	2.36	0.500	1	11/16/22 00:49	11/16/22 00:49	64-17-5	
Ethylbenzene	1.81	ug/m3	0.867	0.362	1	11/16/22 00:49	11/16/22 00:49	100-41-4	
Ethyl acetate	ND	ug/m3	0.720	0.360	1	11/16/22 00:49	11/16/22 00:49	141-78-6	
4-Ethyltoluene	2.61	ug/m3	0.982	0.384	1	11/16/22 00:49	11/16/22 00:49	622-96-8	
Trichlorofluoromethane	ND	ug/m3	1.12	0.460	1	11/16/22 00:49	11/16/22 00:49	75-69-4	
Dichlorodifluoromethane	2.24	ug/m3	0.989	0.678	1	11/16/22 00:49	11/16/22 00:49	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	11/16/22 00:49	11/16/22 00:49	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/16/22 00:49	11/16/22 00:49	76-14-2	
n-Heptane	ND	ug/m3	0.818	0.425	1	11/16/22 00:49	11/16/22 00:49	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/16/22 00:49	11/16/22 00:49	87-68-3	
n-Hexane	ND	ug/m3	2.22	0.726	1	11/16/22 00:49	11/16/22 00:49	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/16/22 00:49	11/16/22 00:49	98-82-8	
Methylene Chloride	0.972	ug/m3	0.694	0.340	1	11/16/22 00:49	11/16/22 00:49	75-09-2	
2-Hexanone	2.80J	ug/m3	5.11	0.544	1	11/16/22 00:49	11/16/22 00:49	591-78-6	J

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416115

Sample: MW10-SG		Lab ID: 60416115014		Collected: 11/03/22 17:23		Received: 11/10/22 09:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	25.8	ug/m3	3.69	0.240	1	11/16/22 00:49	11/16/22 00:49	78-93-3	
4-Methyl-2-pentanone (MIBK)	0.733J	ug/m3	5.12	0.313	1	11/16/22 00:49	11/16/22 00:49	108-10-1	J
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/16/22 00:49	11/16/22 00:49	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/16/22 00:49	11/16/22 00:49	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/16/22 00:49	11/16/22 00:49	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	11/16/22 00:49	11/16/22 00:49	67-63-0	
Propylene	2.67	ug/m3	2.15	0.160	1	11/16/22 00:49	11/16/22 00:49	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/16/22 00:49	11/16/22 00:49	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/16/22 00:49	11/16/22 00:49	79-34-5	
Tetrachloroethene	ND	ug/m3	1.36	0.553	1	11/16/22 00:49	11/16/22 00:49	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/16/22 00:49	11/16/22 00:49	109-99-9	
Toluene	5.50	ug/m3	1.88	0.328	1	11/16/22 00:49	11/16/22 00:49	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/16/22 00:49	11/16/22 00:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/16/22 00:49	11/16/22 00:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/16/22 00:49	11/16/22 00:49	79-00-5	
Trichloroethene	11.1	ug/m3	1.07	0.364	1	11/16/22 00:49	11/16/22 00:49	79-01-6	
1,2,4-Trimethylbenzene	3.16	ug/m3	0.982	0.375	1	11/16/22 00:49	11/16/22 00:49	95-63-6	
1,3,5-Trimethylbenzene	0.780J	ug/m3	0.982	0.382	1	11/16/22 00:49	11/16/22 00:49	108-67-8	J
2,2,4-Trimethylpentane	2.51	ug/m3	0.934	0.621	1	11/16/22 00:49	11/16/22 00:49	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/16/22 00:49	11/16/22 00:49	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/16/22 00:49	11/16/22 00:49	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	11/16/22 00:49	11/16/22 00:49	108-05-4	
m&p-Xylene	6.20	ug/m3	1.73	0.585	1	11/16/22 00:49	11/16/22 00:49	179601-23-1	
o-Xylene	2.24	ug/m3	0.867	0.359	1	11/16/22 00:49	11/16/22 00:49	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	97.1	%	60.0-140		1	11/16/22 00:49	11/16/22 00:49	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416115

QC Batch: 1958178

Analysis Method: TO-15

QC Batch Method: TO-15

Analysis Description: VOA (MS) TO-15

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416115001, 60416115002, 60416115003, 60416115004

METHOD BLANK: R3859938-2

Matrix: Air

Associated Lab Samples: 60416115001, 60416115002, 60416115003, 60416115004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	ug/m3	ND	826	164	11/11/22 10:20	
Acetone	ug/m3	ND	2.97	1.39	11/11/22 10:20	
Allyl chloride	ug/m3	ND	0.626	0.357	11/11/22 10:20	
Benzene	ug/m3	ND	0.639	0.228	11/11/22 10:20	
Benzyl chloride	ug/m3	ND	1.04	0.311	11/11/22 10:20	
Bromodichloromethane	ug/m3	ND	1.34	0.471	11/11/22 10:20	
Bromoform	ug/m3	ND	6.21	0.757	11/11/22 10:20	
Bromomethane	ug/m3	ND	0.776	0.381	11/11/22 10:20	
1,3-Butadiene	ug/m3	ND	4.43	0.230	11/11/22 10:20	
Carbon disulfide	ug/m3	ND	0.622	0.317	11/11/22 10:20	
Carbon tetrachloride	ug/m3	ND	1.26	0.461	11/11/22 10:20	
Chlorobenzene	ug/m3	ND	0.924	0.385	11/11/22 10:20	
Chloroethane	ug/m3	ND	0.528	0.263	11/11/22 10:20	
Chloroform	ug/m3	ND	0.973	0.349	11/11/22 10:20	
Chloromethane	ug/m3	ND	0.413	0.213	11/11/22 10:20	
2-Chlorotoluene	ug/m3	ND	1.03	0.427	11/11/22 10:20	
Cyclohexane	ug/m3	ND	0.689	0.259	11/11/22 10:20	
Dibromochloromethane	ug/m3	ND	1.70	0.618	11/11/22 10:20	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.54	0.554	11/11/22 10:20	
1,2-Dichlorobenzene	ug/m3	ND	1.20	0.770	11/11/22 10:20	
1,3-Dichlorobenzene	ug/m3	ND	1.20	1.09	11/11/22 10:20	
1,4-Dichlorobenzene	ug/m3	ND	1.20	0.335	11/11/22 10:20	
1,2-Dichloroethane	ug/m3	ND	0.810	0.283	11/11/22 10:20	
1,1-Dichloroethane	ug/m3	ND	0.802	0.290	11/11/22 10:20	
1,1-Dichloroethene	ug/m3	ND	0.793	0.302	11/11/22 10:20	
cis-1,2-Dichloroethene	ug/m3	ND	0.793	0.311	11/11/22 10:20	
trans-1,2-Dichloroethene	ug/m3	ND	0.793	0.267	11/11/22 10:20	
1,2-Dichloropropane	ug/m3	ND	0.924	0.351	11/11/22 10:20	
cis-1,3-Dichloropropene	ug/m3	ND	0.908	0.313	11/11/22 10:20	
trans-1,3-Dichloropropene	ug/m3	ND	0.908	0.331	11/11/22 10:20	
1,4-Dioxane (p-Dioxane)	ug/m3	ND	0.721	0.300	11/11/22 10:20	
Ethanol	ug/m3	ND	2.36	0.500	11/11/22 10:20	
Ethylbenzene	ug/m3	ND	0.867	0.362	11/11/22 10:20	
Ethyl acetate	ug/m3	ND	0.720	0.360	11/11/22 10:20	
4-Ethyltoluene	ug/m3	ND	0.982	0.384	11/11/22 10:20	
Trichlorofluoromethane	ug/m3	ND	1.12	0.460	11/11/22 10:20	
Dichlorodifluoromethane	ug/m3	ND	0.989	0.678	11/11/22 10:20	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.53	0.608	11/11/22 10:20	
Dichlorotetrafluoroethane	ug/m3	ND	1.40	0.622	11/11/22 10:20	
n-Heptane	ug/m3	ND	0.818	0.425	11/11/22 10:20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416115

METHOD BLANK: R3859938-2

Matrix: Air

Associated Lab Samples: 60416115001, 60416115002, 60416115003, 60416115004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/m3	ND	6.73	1.12	11/11/22 10:20	
n-Hexane	ug/m3	ND	2.22	0.726	11/11/22 10:20	
Isopropylbenzene (Cumene)	ug/m3	ND	0.983	0.382	11/11/22 10:20	
Methylene Chloride	ug/m3	ND	0.694	0.340	11/11/22 10:20	
2-Hexanone	ug/m3	ND	5.11	0.544	11/11/22 10:20	
2-Butanone (MEK)	ug/m3	ND	3.69	0.240	11/11/22 10:20	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	5.12	0.313	11/11/22 10:20	
Methyl methacrylate	ug/m3	ND	0.819	0.359	11/11/22 10:20	
Methyl-tert-butyl ether	ug/m3	ND	0.721	0.233	11/11/22 10:20	
Naphthalene	ug/m3	ND	3.30	1.83	11/11/22 10:20	
2-Propanol	ug/m3	ND	3.07	0.649	11/11/22 10:20	
Propylene	ug/m3	0.418J	2.15	0.160	11/11/22 10:20	J
Styrene	ug/m3	ND	0.851	0.335	11/11/22 10:20	
1,1,2,2-Tetrachloroethane	ug/m3	ND	1.37	0.511	11/11/22 10:20	
Tetrachloroethene	ug/m3	ND	1.36	0.553	11/11/22 10:20	
Tetrahydrofuran	ug/m3	ND	0.590	0.216	11/11/22 10:20	
Toluene	ug/m3	ND	1.88	0.328	11/11/22 10:20	
1,2,4-Trichlorobenzene	ug/m3	ND	4.66	1.10	11/11/22 10:20	
1,1,1-Trichloroethane	ug/m3	ND	1.09	0.400	11/11/22 10:20	
1,1,2-Trichloroethane	ug/m3	ND	1.09	0.422	11/11/22 10:20	
Trichloroethene	ug/m3	ND	1.07	0.364	11/11/22 10:20	
1,2,4-Trimethylbenzene	ug/m3	ND	0.982	0.375	11/11/22 10:20	
1,3,5-Trimethylbenzene	ug/m3	ND	0.982	0.382	11/11/22 10:20	
2,2,4-Trimethylpentane	ug/m3	ND	0.934	0.621	11/11/22 10:20	
Vinyl chloride	ug/m3	ND	0.511	0.243	11/11/22 10:20	
Vinyl bromide	ug/m3	ND	0.875	0.373	11/11/22 10:20	
Vinyl acetate	ug/m3	ND	0.704	0.408	11/11/22 10:20	
m&p-Xylene	ug/m3	ND	1.73	0.585	11/11/22 10:20	
o-Xylene	ug/m3	ND	0.867	0.359	11/11/22 10:20	
1,4-Dichlorobenzene-d4 (IS)	%	97.9	60.0-140		11/11/22 10:20	

LABORATORY CONTROL SAMPLE & LCSD: R3859938-1

R3859938-3

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/m3	839	942	942	112	112	70.0-130	0.00	25	
Acetone	ug/m3	8.91	9.20	9.32	103	105	70.0-130	1.28	25	
Allyl chloride	ug/m3	11.7	11.9	11.7	101	100	70.0-130	1.32	25	
Benzene	ug/m3	12.0	11.9	11.9	98.9	99.2	70.0-130	0.269	25	
Benzyl chloride	ug/m3	19.5	19.7	19.5	101	100	70.0-152	0.795	25	
Bromodichloromethane	ug/m3	25.2	25.4	25.5	101	101	70.0-130	0.528	25	
Bromoform	ug/m3	38.8	39.0	38.5	101	99.2	70.0-130	1.34	25	
Bromomethane	ug/m3	14.6	13.5	12.5	93.1	86.1	70.0-130	7.74	25	
1,3-Butadiene	ug/m3	8.30	8.76	8.52	106	103	70.0-130	2.82	25	
Carbon disulfide	ug/m3	11.7	11.5	11.2	98.4	96.0	70.0-130	2.47	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416115

LABORATORY CONTROL SAMPLE & LCSD: R3859938-1

R3859938-3

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Carbon tetrachloride	ug/m3	23.6	24.3	23.8	103	101	70.0-130	2.09	25	
Chlorobenzene	ug/m3	17.3	17.4	17.2	100	99.5	70.0-130	0.801	25	
Chloroethane	ug/m3	9.89	9.34	8.76	94.4	88.5	70.0-130	6.41	25	
Chloroform	ug/m3	18.3	18.8	18.3	103	101	70.0-130	2.62	25	
Chloromethane	ug/m3	7.75	7.58	7.48	97.9	96.5	70.0-130	1.37	25	
2-Chlorotoluene	ug/m3	19.3	19.5	19.3	101	100	70.0-130	1.06	25	
Cyclohexane	ug/m3	12.9	13.3	13.2	103	102	70.0-130	1.04	25	
Dibromochloromethane	ug/m3	31.9	31.9	32.1	100	101	70.0-130	0.532	25	
1,2-Dibromoethane (EDB)	ug/m3	28.8	28.6	28.5	99.2	98.9	70.0-130	0.269	25	
1,2-Dichlorobenzene	ug/m3	22.5	22.1	21.8	97.9	96.5	70.0-130	1.37	25	
1,3-Dichlorobenzene	ug/m3	22.5	22.3	22.3	98.9	98.9	70.0-130	0.00	25	
1,4-Dichlorobenzene	ug/m3	22.5	23.0	23.3	102	103	70.0-130	1.04	25	
1,2-Dichloroethane	ug/m3	15.2	15.2	15.3	100	101	70.0-130	0.531	25	
1,1-Dichloroethane	ug/m3	15.0	15.2	15.0	101	99.5	70.0-130	1.86	25	
1,1-Dichloroethene	ug/m3	14.9	14.8	14.3	99.7	96.3	70.0-130	3.54	25	
cis-1,2-Dichloroethene	ug/m3	14.9	13.6	13.6	91.7	91.5	70.0-130	0.291	25	
trans-1,2-Dichloroethene	ug/m3	14.9	14.8	14.4	99.5	96.8	70.0-130	2.72	25	
1,2-Dichloropropane	ug/m3	17.3	17.3	17.4	99.7	100	70.0-130	0.533	25	
cis-1,3-Dichloropropene	ug/m3	17.0	17.3	17.3	102	102	70.0-130	0.262	25	
trans-1,3-Dichloropropene	ug/m3	17.0	17.5	17.2	103	101	70.0-130	1.57	25	
1,4-Dioxane (p-Dioxane)	ug/m3	13.5	12.9	13.0	95.7	96.0	70.0-140	0.278	25	
Ethanol	ug/m3	7.07	8.39	7.11	119	101	55.0-148	16.5	25	
Ethylbenzene	ug/m3	16.3	16.3	16.1	100	99.2	70.0-130	0.803	25	
Ethyl acetate	ug/m3	13.5	14.0	13.3	103	98.7	70.0-130	4.75	25	
4-Ethyltoluene	ug/m3	18.4	18.5	18.3	101	99.5	70.0-130	1.07	25	
Trichlorofluoromethane	ug/m3	21.1	19.2	19.1	90.9	90.4	70.0-130	0.588	25	
Dichlorodifluoromethane	ug/m3	18.5	18.8	18.2	102	98.1	64.0-139	3.47	25	
1,1,2-Trichlorotrifluoroethane	ug/m3	28.7	28.7	28.3	100	98.4	70.0-130	1.61	25	
Dichlorotetrafluoroethane	ug/m3	26.2	25.7	25.5	98.1	97.3	70.0-130	0.819	25	
n-Heptane	ug/m3	15.3	15.7	15.9	103	103	70.0-130	0.776	25	
Hexachloro-1,3-butadiene	ug/m3	40.0	38.5	37.4	96.3	93.3	70.0-151	3.09	25	
n-Hexane	ug/m3	13.2	13.6	13.5	103	102	70.0-130	0.521	25	
Isopropylbenzene (Cumene)	ug/m3	18.4	18.7	18.6	101	101	70.0-130	0.528	25	
Methylene Chloride	ug/m3	13.0	12.8	12.5	98.1	95.7	70.0-130	2.48	25	
2-Hexanone	ug/m3	15.3	15.5	15.7	101	103	70.0-149	1.83	25	
2-Butanone (MEK)	ug/m3	11.1	11.9	11.9	108	107	70.0-130	0.248	25	
4-Methyl-2-pentanone (MIBK)	ug/m3	15.4	15.3	15.6	99.7	101	70.0-139	1.59	25	
Methyl methacrylate	ug/m3	15.4	15.4	15.4	100	100	70.0-130	0.00	25	
Methyl-tert-butyl ether	ug/m3	13.5	13.6	13.3	101	98.7	70.0-130	1.87	25	
Naphthalene	ug/m3	19.6	19.3	18.4	98.1	93.9	70.0-159	4.44	25	
2-Propanol	ug/m3	9.22	10.2	10.7	111	116	70.0-139	4.47	25	
Propylene	ug/m3	6.46	6.53	6.46	101	100	64.0-144	1.06	25	
Styrene	ug/m3	16.0	16.4	16.2	103	102	70.0-130	1.04	25	
1,1,2,2-Tetrachloroethane	ug/m3	25.8	25.2	25.0	97.9	97.1	70.0-130	0.821	25	
Tetrachloroethene	ug/m3	25.5	24.9	24.9	97.9	97.9	70.0-130	0.00	25	
Tetrahydrofuran	ug/m3	11.1	11.1	11.2	101	101	70.0-137	0.528	25	
Toluene	ug/m3	14.1	14.1	13.9	99.7	98.7	70.0-130	1.08	25	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416115

LABORATORY CONTROL SAMPLE & LCSD: R3859938-1			R3859938-3							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trichlorobenzene	ug/m3	27.8	27.2	25.8	97.9	93.1	70.0-160	5.03	25	
1,1,1-Trichloroethane	ug/m3	20.4	20.6	20.3	101	99.7	70.0-130	1.33	25	
1,1,2-Trichloroethane	ug/m3	20.4	19.9	20.2	97.3	99.2	70.0-130	1.90	25	
Trichloroethene	ug/m3	20.1	20.3	19.7	101	97.9	70.0-130	3.22	25	
1,2,4-Trimethylbenzene	ug/m3	18.4	18.6	18.4	101	100	70.0-130	1.06	25	
1,3,5-Trimethylbenzene	ug/m3	18.4	18.8	18.7	102	102	70.0-130	0.784	25	
2,2,4-Trimethylpentane	ug/m3	17.5	18.1	17.8	103	102	70.0-130	1.56	25	
Vinyl chloride	ug/m3	9.59	9.46	9.15	98.7	95.5	70.0-130	3.30	25	
Vinyl bromide	ug/m3	16.4	15.4	14.8	94.1	90.4	70.0-130	4.05	25	
Vinyl acetate	ug/m3	13.2	12.8	12.5	96.8	94.4	70.0-130	2.51	25	
m&p-Xylene	ug/m3	32.5	33.2	32.8	102	101	70.0-130	1.18	25	
o-Xylene	ug/m3	16.3	16.3	16.3	100	100	70.0-130	0.266	25	
1,4-Dichlorobenzene-d4 (IS)	%				98.7	97.9	60.0-140			

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416115

QC Batch: 1959272

Analysis Method: TO-15

QC Batch Method: TO-15

Analysis Description: VOA (MS) TO-15

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416115003

METHOD BLANK: R3860982-3

Matrix: Air

Associated Lab Samples: 60416115003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
2-Propanol	ug/m3	ND	3.07	0.649	11/14/22 10:14	
1,4-Dichlorobenzene-d4 (IS)	%	86.8	60.0-140		11/14/22 10:14	

LABORATORY CONTROL SAMPLE & LCSD: R3860982-1

R3860982-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2-Propanol	ug/m3	9.22	9.68	9.49	105	103	70.0-139	2.05	25	
1,4-Dichlorobenzene-d4 (IS)	%				95.5	95.4	60.0-140			

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416115

QC Batch: 1959291

Analysis Method: TO-15

QC Batch Method: TO-15

Analysis Description: VOA (MS) TO-15

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416115001, 60416115002

METHOD BLANK: R3860949-3

Matrix: Air

Associated Lab Samples: 60416115001, 60416115002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
2-Propanol	ug/m3	ND	3.07	0.649	11/14/22 11:35	
1,4-Dichlorobenzene-d4 (IS)	%	93.8	60.0-140		11/14/22 11:35	

LABORATORY CONTROL SAMPLE & LCSD: R3860949-1

R3860949-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2-Propanol	ug/m3	9.22	8.33	8.36	90.4	90.7	70.0-139	0.295	25	
1,4-Dichlorobenzene-d4 (IS)	%				96.7	97.0	60.0-140			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416115

QC Batch: 1959846

Analysis Method: TO-15

QC Batch Method: TO-15

Analysis Description: VOA (MS) TO-15

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416115005, 60416115006, 60416115007, 60416115008, 60416115009, 60416115010, 60416115011, 60416115012, 60416115013, 60416115014

METHOD BLANK: R3861498-3

Matrix: Air

Associated Lab Samples: 60416115005, 60416115006, 60416115007, 60416115008, 60416115009, 60416115010, 60416115011, 60416115012, 60416115013, 60416115014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	ug/m3	ND	826	164	11/15/22 10:23	
Acetone	ug/m3	ND	2.97	1.39	11/15/22 10:23	
Allyl chloride	ug/m3	ND	0.626	0.357	11/15/22 10:23	
Benzene	ug/m3	ND	0.639	0.228	11/15/22 10:23	
Benzyl chloride	ug/m3	ND	1.04	0.311	11/15/22 10:23	
Bromodichloromethane	ug/m3	ND	1.34	0.471	11/15/22 10:23	
Bromoform	ug/m3	ND	6.21	0.757	11/15/22 10:23	
Bromomethane	ug/m3	ND	0.776	0.381	11/15/22 10:23	
1,3-Butadiene	ug/m3	ND	4.43	0.230	11/15/22 10:23	
Carbon disulfide	ug/m3	ND	0.622	0.317	11/15/22 10:23	
Carbon tetrachloride	ug/m3	ND	1.26	0.461	11/15/22 10:23	
Chlorobenzene	ug/m3	ND	0.924	0.385	11/15/22 10:23	
Chloroethane	ug/m3	ND	0.528	0.263	11/15/22 10:23	
Chloroform	ug/m3	ND	0.973	0.349	11/15/22 10:23	
Chloromethane	ug/m3	ND	0.413	0.213	11/15/22 10:23	
2-Chlorotoluene	ug/m3	ND	1.03	0.427	11/15/22 10:23	
Cyclohexane	ug/m3	ND	0.689	0.259	11/15/22 10:23	
Dibromochloromethane	ug/m3	ND	1.70	0.618	11/15/22 10:23	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.54	0.554	11/15/22 10:23	
1,2-Dichlorobenzene	ug/m3	ND	1.20	0.770	11/15/22 10:23	
1,3-Dichlorobenzene	ug/m3	ND	1.20	1.09	11/15/22 10:23	
1,4-Dichlorobenzene	ug/m3	ND	1.20	0.335	11/15/22 10:23	
1,2-Dichloroethane	ug/m3	ND	0.810	0.283	11/15/22 10:23	
1,1-Dichloroethane	ug/m3	ND	0.802	0.290	11/15/22 10:23	
1,1-Dichloroethene	ug/m3	ND	0.793	0.302	11/15/22 10:23	
cis-1,2-Dichloroethene	ug/m3	ND	0.793	0.311	11/15/22 10:23	
trans-1,2-Dichloroethene	ug/m3	ND	0.793	0.267	11/15/22 10:23	
1,2-Dichloropropane	ug/m3	ND	0.924	0.351	11/15/22 10:23	
cis-1,3-Dichloropropene	ug/m3	ND	0.908	0.313	11/15/22 10:23	
trans-1,3-Dichloropropene	ug/m3	ND	0.908	0.331	11/15/22 10:23	
1,4-Dioxane (p-Dioxane)	ug/m3	ND	0.721	0.300	11/15/22 10:23	
Ethanol	ug/m3	ND	2.36	0.500	11/15/22 10:23	
Ethylbenzene	ug/m3	ND	0.867	0.362	11/15/22 10:23	
Ethyl acetate	ug/m3	ND	0.720	0.360	11/15/22 10:23	
4-Ethyltoluene	ug/m3	ND	0.982	0.384	11/15/22 10:23	
Trichlorofluoromethane	ug/m3	ND	1.12	0.460	11/15/22 10:23	
Dichlorodifluoromethane	ug/m3	ND	0.989	0.678	11/15/22 10:23	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.53	0.608	11/15/22 10:23	
Dichlorotetrafluoroethane	ug/m3	ND	1.40	0.622	11/15/22 10:23	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416115

METHOD BLANK: R3861498-3

Matrix: Air

Associated Lab Samples: 60416115005, 60416115006, 60416115007, 60416115008, 60416115009, 60416115010, 60416115011, 60416115012, 60416115013, 60416115014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
n-Heptane	ug/m3	ND	0.818	0.425	11/15/22 10:23	
Hexachloro-1,3-butadiene	ug/m3	ND	6.73	1.12	11/15/22 10:23	
n-Hexane	ug/m3	ND	2.22	0.726	11/15/22 10:23	
Isopropylbenzene (Cumene)	ug/m3	ND	0.983	0.382	11/15/22 10:23	
Methylene Chloride	ug/m3	ND	0.694	0.340	11/15/22 10:23	
2-Hexanone	ug/m3	ND	5.11	0.544	11/15/22 10:23	
2-Butanone (MEK)	ug/m3	ND	3.69	0.240	11/15/22 10:23	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	5.12	0.313	11/15/22 10:23	
Methyl methacrylate	ug/m3	ND	0.819	0.359	11/15/22 10:23	
Methyl-tert-butyl ether	ug/m3	ND	0.721	0.233	11/15/22 10:23	
Naphthalene	ug/m3	ND	3.30	1.83	11/15/22 10:23	
2-Propanol	ug/m3	ND	3.07	0.649	11/15/22 10:23	
Propylene	ug/m3	0.205J	2.15	0.160	11/15/22 10:23	J
Styrene	ug/m3	ND	0.851	0.335	11/15/22 10:23	
1,1,2,2-Tetrachloroethane	ug/m3	ND	1.37	0.511	11/15/22 10:23	
Tetrachloroethene	ug/m3	ND	1.36	0.553	11/15/22 10:23	
Tetrahydrofuran	ug/m3	ND	0.590	0.216	11/15/22 10:23	
Toluene	ug/m3	ND	1.88	0.328	11/15/22 10:23	
1,2,4-Trichlorobenzene	ug/m3	ND	4.66	1.10	11/15/22 10:23	
1,1,1-Trichloroethane	ug/m3	ND	1.09	0.400	11/15/22 10:23	
1,1,2-Trichloroethane	ug/m3	ND	1.09	0.422	11/15/22 10:23	
Trichloroethene	ug/m3	ND	1.07	0.364	11/15/22 10:23	
1,2,4-Trimethylbenzene	ug/m3	ND	0.982	0.375	11/15/22 10:23	
1,3,5-Trimethylbenzene	ug/m3	ND	0.982	0.382	11/15/22 10:23	
2,2,4-Trimethylpentane	ug/m3	ND	0.934	0.621	11/15/22 10:23	
Vinyl chloride	ug/m3	ND	0.511	0.243	11/15/22 10:23	
Vinyl bromide	ug/m3	ND	0.875	0.373	11/15/22 10:23	
Vinyl acetate	ug/m3	ND	0.704	0.408	11/15/22 10:23	
m&p-Xylene	ug/m3	ND	1.73	0.585	11/15/22 10:23	
o-Xylene	ug/m3	ND	0.867	0.359	11/15/22 10:23	
1,4-Dichlorobenzene-d4 (IS)	%	93.1	60.0-140		11/15/22 10:23	

LABORATORY CONTROL SAMPLE & LCSD: R3861498-1

R3861498-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/m3	839	855	867	102	103	70.0-130	1.44	25	
Acetone	ug/m3	8.91	8.41	8.27	94.4	92.8	70.0-130	1.71	25	
Allyl chloride	ug/m3	11.7	11.6	11.2	98.7	95.2	70.0-130	3.58	25	
Benzene	ug/m3	12.0	11.5	11.7	96.0	97.9	70.0-130	1.93	25	
Benzyl chloride	ug/m3	19.5	21.2	20.4	109	105	70.0-152	3.99	25	
Bromodichloromethane	ug/m3	25.2	24.3	24.7	96.5	98.1	70.0-130	1.64	25	
Bromoform	ug/m3	38.8	38.8	39.3	100	101	70.0-130	1.32	25	
Bromomethane	ug/m3	14.6	13.9	14.3	95.5	98.4	70.0-130	3.03	25	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416115

LABORATORY CONTROL SAMPLE & LCSD: R3861498-1

R3861498-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,3-Butadiene	ug/m3	8.30	7.77	7.90	93.6	95.2	70.0-130	1.69	25	
Carbon disulfide	ug/m3	11.7	11.3	11.5	97.1	98.9	70.0-130	1.90	25	
Carbon tetrachloride	ug/m3	23.6	23.0	23.4	97.3	98.9	70.0-130	1.63	25	
Chlorobenzene	ug/m3	17.3	16.4	16.5	94.7	94.9	70.0-130	0.281	25	
Chloroethane	ug/m3	9.89	9.29	9.60	93.9	97.1	70.0-130	3.35	25	
Chloroform	ug/m3	18.3	17.5	17.9	95.7	97.9	70.0-130	2.20	25	
Chloromethane	ug/m3	7.75	7.31	7.48	94.4	96.5	70.0-130	2.23	25	
2-Chlorotoluene	ug/m3	19.3	19.1	19.4	98.7	101	70.0-130	1.87	25	
Cyclohexane	ug/m3	12.9	12.5	12.8	96.8	99.2	70.0-130	2.45	25	
Dibromochloromethane	ug/m3	31.9	31.1	31.4	97.3	98.4	70.0-130	1.09	25	
1,2-Dibromoethane (EDB)	ug/m3	28.8	27.8	27.6	96.5	95.7	70.0-130	0.832	25	
1,2-Dichlorobenzene	ug/m3	22.5	23.1	23.3	103	103	70.0-130	0.518	25	
1,3-Dichlorobenzene	ug/m3	22.5	22.7	23.0	101	102	70.0-130	1.31	25	
1,4-Dichlorobenzene	ug/m3	22.5	22.8	22.7	101	101	70.0-130	0.529	25	
1,2-Dichloroethane	ug/m3	15.2	14.9	15.1	97.9	99.2	70.0-130	1.35	25	
1,1-Dichloroethane	ug/m3	15.0	14.6	14.7	97.1	97.9	70.0-130	0.821	25	
1,1-Dichloroethene	ug/m3	14.9	14.3	14.7	96.5	98.7	70.0-130	2.19	25	
cis-1,2-Dichloroethene	ug/m3	14.9	14.3	14.7	96.3	98.7	70.0-130	2.46	25	
trans-1,2-Dichloroethene	ug/m3	14.9	14.4	14.7	97.1	98.7	70.0-130	1.63	25	
1,2-Dichloropropane	ug/m3	17.3	16.5	16.7	94.9	96.5	70.0-130	1.67	25	
cis-1,3-Dichloropropene	ug/m3	17.0	16.4	16.5	96.3	96.8	70.0-130	0.552	25	
trans-1,3-Dichloropropene	ug/m3	17.0	16.3	16.2	95.5	95.2	70.0-130	0.280	25	
1,4-Dioxane (p-Dioxane)	ug/m3	13.5	12.8	12.4	94.4	92.0	70.0-140	2.58	25	
Ethanol	ug/m3	7.07	6.60	6.56	93.3	92.8	55.0-148	0.573	25	
Ethylbenzene	ug/m3	16.3	15.7	15.7	96.8	96.5	70.0-130	0.276	25	
Ethyl acetate	ug/m3	13.5	13.1	12.7	97.1	93.9	70.0-130	3.35	25	
4-Ethyltoluene	ug/m3	18.4	19.3	19.1	105	104	70.0-130	1.02	25	
Trichlorofluoromethane	ug/m3	21.1	20.5	21.0	97.1	99.5	70.0-130	2.44	25	
Dichlorodifluoromethane	ug/m3	18.5	18.2	18.6	97.9	100	64.0-139	2.42	25	
1,1,2-Trichlorotrifluoroethane	ug/m3	28.7	27.7	28.5	96.3	99.2	70.0-130	3.00	25	
Dichlorotetrafluoroethane	ug/m3	26.2	25.5	25.7	97.1	98.1	70.0-130	1.09	25	
n-Heptane	ug/m3	15.3	14.6	15.5	94.9	101	70.0-130	5.99	25	
Hexachloro-1,3-butadiene	ug/m3	40.0	39.4	40.6	98.4	101	70.0-151	2.94	25	
n-Hexane	ug/m3	13.2	12.6	13.0	95.2	98.7	70.0-130	3.58	25	
Isopropylbenzene (Cumene)	ug/m3	18.4	18.2	18.6	98.9	101	70.0-130	1.87	25	
Methylene Chloride	ug/m3	13.0	12.4	12.5	94.9	96.0	70.0-130	1.12	25	
2-Hexanone	ug/m3	15.3	14.2	13.1	92.3	85.3	70.0-149	7.81	25	
2-Butanone (MEK)	ug/m3	11.1	10.6	10.4	96.3	93.6	70.0-130	2.81	25	
4-Methyl-2-pentanone (MIBK)	ug/m3	15.4	14.5	14.2	94.1	92.8	70.0-139	1.43	25	
Methyl methacrylate	ug/m3	15.4	14.8	14.0	96.3	91.2	70.0-130	5.41	25	
Methyl-tert-butyl ether	ug/m3	13.5	13.2	13.3	97.3	98.1	70.0-130	0.819	25	
Naphthalene	ug/m3	19.6	21.2	20.3	108	103	70.0-159	4.29	25	
2-Propanol	ug/m3	9.22	8.82	8.87	95.7	96.3	70.0-139	0.556	25	
Propylene	ug/m3	6.46	6.39	6.51	98.9	101	64.0-144	1.87	25	
Styrene	ug/m3	16.0	15.7	15.8	98.4	99.2	70.0-130	0.810	25	
1,1,2,2-Tetrachloroethane	ug/m3	25.8	25.7	26.2	99.7	102	70.0-130	2.12	25	
Tetrachloroethene	ug/m3	25.5	25.0	25.3	98.1	99.2	70.0-130	1.08	25	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416115

LABORATORY CONTROL SAMPLE & LCSD: R3861498-1			R3861498-2							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Tetrahydrofuran	ug/m3	11.1	10.5	10.4	95.2	94.1	70.0-137	1.13	25	
Toluene	ug/m3	14.1	13.5	13.6	95.7	96.3	70.0-130	0.556	25	
1,2,4-Trichlorobenzene	ug/m3	27.8	29.2	29.1	105	105	70.0-160	0.254	25	
1,1,1-Trichloroethane	ug/m3	20.4	19.7	20.1	96.8	98.7	70.0-130	1.91	25	
1,1,2-Trichloroethane	ug/m3	20.4	19.6	19.5	96.3	95.5	70.0-130	0.834	25	
Trichloroethene	ug/m3	20.1	19.3	19.5	96.0	97.1	70.0-130	1.10	25	
1,2,4-Trimethylbenzene	ug/m3	18.4	19.1	19.2	104	104	70.0-130	0.513	25	
1,3,5-Trimethylbenzene	ug/m3	18.4	18.7	19.4	102	106	70.0-130	3.86	25	
2,2,4-Trimethylpentane	ug/m3	17.5	16.9	17.2	96.5	98.1	70.0-130	1.64	25	
Vinyl chloride	ug/m3	9.59	9.10	9.15	94.9	95.5	70.0-130	0.560	25	
Vinyl bromide	ug/m3	16.4	16.0	16.4	97.6	100	70.0-130	2.43	25	
Vinyl acetate	ug/m3	13.2	12.4	11.7	94.1	88.5	70.0-130	6.13	25	
m&p-Xylene	ug/m3	32.5	31.6	31.3	97.2	96.3	70.0-130	0.965	25	
o-Xylene	ug/m3	16.3	15.5	15.5	95.2	95.2	70.0-130	0.00	25	
1,4-Dichlorobenzene-d4 (IS)	%				98.8	96.3	60.0-140			

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QUALITY CONTROL DATA

Project: CLINTON ENGINES
Pace Project No.: 60416115

QC Batch:	1960743	Analysis Method:	TO-15
QC Batch Method:	M18-Mod/TO-15	Analysis Description:	VOA (MS) TO-15
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 60416115005

METHOD BLANK: R3862003-2 Matrix: Air
Associated Lab Samples: 60416115005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethanol	ug/m3	ND	2.36	0.500	11/16/22 10:09	
1,4-Dichlorobenzene-d4 (IS)	%	96.7	60.0-140		11/16/22 10:09	

LABORATORY CONTROL SAMPLE & LCSD: R3862003-1		R3862003-3								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethanol	ug/m3	7.07	9.52	10.3	135	146	55.0-148	7.80	25	
1,4-Dichlorobenzene-d4 (IS)	%				96.8	97.8	60.0-140			

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416115

QC Batch: 1961327

Analysis Method: TO-15

QC Batch Method: TO-15

Analysis Description: VOA (MS) TO-15

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416115013

METHOD BLANK: R3862177-3

Matrix: Air

Associated Lab Samples: 60416115013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/m3	ND	1.07	0.364	11/17/22 10:33	
1,4-Dichlorobenzene-d4 (IS)	%	89.6	60.0-140		11/17/22 10:33	

LABORATORY CONTROL SAMPLE & LCSD: R3862177-1

R3862177-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Trichloroethene	ug/m3	20.1	22.2	22.0	110	109	70.0-130	0.971	25	
1,4-Dichlorobenzene-d4 (IS)	%				94.5	97.8	60.0-140			

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: CLINTON ENGINES

Pace Project No.: 60416115

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 60416115

[1]

ANALYTE QUALIFIERS

J Analyte detected below the reporting limit, therefore result is an estimate. This qualifier is also used for all TICs.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CLINTON ENGINES

Pace Project No.: 60416115

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60416115001	MW3B-SG	TO-15	1958178	TO-15	1958178
60416115001	MW3B-SG	TO-15	1959291	TO-15	1959291
60416115002	MW14-SG	TO-15	1958178	TO-15	1958178
60416115002	MW14-SG	TO-15	1959291	TO-15	1959291
60416115003	MW13-SG	TO-15	1958178	TO-15	1958178
60416115003	MW13-SG	TO-15	1959272	TO-15	1959272
60416115004	MW9-SG	TO-15	1958178	TO-15	1958178
60416115005	MW103-SG	TO-15	1959846	TO-15	1959846
60416115005	MW103-SG	TO-15	1960743	TO-15	1960743
60416115006	MW104-SG	TO-15	1959846	TO-15	1959846
60416115007	MW101-SG	TO-15	1959846	TO-15	1959846
60416115008	MW102-SG	TO-15	1959846	TO-15	1959846
60416115009	MW8B-SG	TO-15	1959846	TO-15	1959846
60416115010	MW1B-SG	TO-15	1959846	TO-15	1959846
60416115011	MW11-SG	TO-15	1959846	TO-15	1959846
60416115012	MW4B-SG	TO-15	1959846	TO-15	1959846
60416115013	MW2B-SG	TO-15	1959846	TO-15	1959846
60416115013	MW2B-SG	TO-15	1961327	TO-15	1961327
60416115014	MW10-SG	TO-15	1959846	TO-15	1959846

REPORT OF LABORATORY ANALYSIS

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AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

61556214

53321

Page: 1 of 2

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Program	
Company: Tetra Tech EMI		Report To:		Attention:		<input type="checkbox"/> UST <input type="checkbox"/> Superfund <input type="checkbox"/> Emissions <input type="checkbox"/> Clean Air Act <input type="checkbox"/> Voluntary Clean Up <input type="checkbox"/> Dry Clean <input type="checkbox"/> RCRA <input type="checkbox"/> Other	
Address: 415 Oak Street		Copy To:		Company Name:		Location of Sampling by State: IA	
Kansas City, MO 64106		Purchase Order No.:		Address:		Reporting Units ug/m ³ _____ mg/m ³ _____ PPBV _____ PPMV _____ Other _____	
Email To: kaitlyn.mitchell@tetratech.com		Project Name: Clinton Engines		Pace Quote Reference:		Report Level: II. _____ III. _____ IV. _____ Other _____	
Phone: _____ Fax: _____		Project Number:		Pace Project Manager/Sales Rep:		Pace Profile #: 42781	
Requested Due Date/TAT:							

ITEM #	'Section D Required Client Information AIR SAMPLE ID Sample IDs MUST BE UNIQUE	Valid Media Codes MEDIA CODE Tedlar Bag TB 1 Liter Summa Can 1LC 6 Liter Summa Can 6LC Low Volume Puff LVP High Volume Puff HVP Other PM10	MEDIA CODE	PID Reading (Client only)	COLLECTED				Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	Method: PM10 3c - Fixed Gas (%) To-3 BTEX To-3M (Methane) To-14 To-15 Full List VOCs To-15 Short List BTEX To-15 Short List Chlorinated To-15 Short List (other)	Pace Lab ID
					COMPOSITE START		COMPOSITE - END/GRAB							
					DATE	TIME	DATE	TIME						
1	MW3B-SG		1LC		11/3/22	1752			-30	-7	22129	12584		-01
2	MW14-SG				11/3/22	1817			-27	-7	7640	6725		-02
3	MW13-SG				11/3/22	1449			-28	-7	12045	22105		-03
4	MW9-SG				11/4/22	1035			-27	-5	22245	7808		-04
5														
6														
7														
8														
9														
10														
11														
12														

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N

COC Signed/Accurate: ☒ Y ☐ N IF Applicable

Bottles arrive intact: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☐ N

Correct bottles used: ☒ Y ☐ N Pres. Correct/Check: ☐ Y ☐ N

Sufficient volume sent: ☒ Y ☐ N

RAD Screen <0.5 mR/hr: ☒ Y ☐ N

J104

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N IF Applicable

COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☒ N

Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☐ Y ☒ N

Correct bottles used: ☒ Y ☐ N

Sufficient volume sent: ☒ Y ☐ N

RAD Screen <0.5 mR/hr: ☒ Y ☐ N

J104

Comments :	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Paulina Tinoco / Tetra Tech	11/4/22	1200	[Signature]	11/10/22	9:00		Y/N	Y/N	Y/N
				60540 0528 3022				Y/N	Y/N	Y/N
								Y/N	Y/N	Y/N
								Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE		Temp in °C
PRINT Name of SAMPLER:	Paulina Tinoco	
SIGNATURE of SAMPLER:	[Signature]	
DATE Signed (MM / DD / YY)		
11/8/22		

2

Company Name/Address: Pace Analytical - Minnesota 1700 Elm Street Suite 200 Minneapolis, MN 55414			Billing Information: Accounts Payable 1700 Elm St., Ste. 200 Minneapolis, MN 55414			Analysis		Chain of Custody Page 2 of 2	
Report To: Matt Ray			Email To: matt.ray@pacelabs.com			TO-15 Summa		PEOPLE ADVANCING SCIENCE MT JULIET, TN <small> 12665 Lehaman Road Mt Juliet, TN 37122 Phone: 615-758-5656 Alt: 800-767-5656 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubs/pas-standard-terms.pdf </small>	
Project Description: Clinton Engines		City/State Collected: Maquoketa, IA		Please Circle: PT MT <input checked="" type="radio"/> ET					
Phone: 612-607-1700		Client Project #		Lab Project # PACEMN-RAY					
Collected by (print): Paulina Tinoco		Site/Facility ID #		P.O. #					
Collected by (signature): 		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Three Day <input type="checkbox"/> Next Day <input type="checkbox"/> Five Day <input type="checkbox"/> Two Day		Date Results Needed					
		Collection		Canister Pressure/Vacuum					
Sample ID	Can #	Flow Cont. #	Date	Time	Initial	Final			
MW103-SG	A11513		10/26/22	1504	-25	-5	X		-05
MW104-SG	FC0949	1085	10/27/22	0847	-25	-5			-06
MW101-SG	4052	FC0930	10/29/22	0946	-26	-5			-07
MW102-SG	FC3399	1381	10/30/22	1510	-25	-5			-08
MW8B-SG	2425	FC1106	11/2/22	1410	-26	-5			-09
MW1B-SG	3106	FC1066	11/2/22	1543	-27	-5			-10
MW11-SG	21116	010305	11/3/22	1410	-27	-5			-11
MW4B-SG	5584	21405	11/3/22	1453	-30	-5			-12
MW2B-SG	10748	12061	11/3/22	1655	-28	-5			-13
MW10-SG	21971	7867	11/3/22	1723	-30	-5			-14
Remarks:									
			Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input checked="" type="checkbox"/> Courier			Tracking #		Hold #	
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Date: Time:		Condition: (lab use only)	
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Date: Time:		COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature)		Date: Time:		NCF:	

DATA VERIFICATION REPORT

Prepared by: Ellen McEntee
Date: December 29, 2022
Site Name/Job Number: Clinton Engines / 103G65210190.009.03
Laboratory: Pace Analytical, Lenexa, KS

Data Package or SDG Number: 60416291

Sample Designations/Names:

MW-1B	MW-2B	MW-3B	MW-4B	MW-6B	MW-6B-FD
MW-8B	MW-9	MW-10A	MW-10B	MW-10B-FD	MW-11
MW-12	MW-13	MW-14	MW-101	MW-102	MW-103
MW-104	FB-11182022	FB-11192022	FB-11202022	TRIP BLANK	

Matrices: Water

Analytical Parameters: VOCs by SW-846 Method 8260B

Data Package Element	Usable	Rejected	NA	Description of Affected Data (note specific samples and analytical parameters affected)
Chain of custody	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The requested analyses were not identified on the first page of the chain of custody. All other sections of the chain of custody were completed appropriately.
Data package completeness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The data package contains all the required elements.
Sample preservation, storage, and holding times	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The samples were received on 11/22/2022; the samples arrived in good condition. Custody seals were not present. All samples were analyzed within the recommended holding time.

Data Package Element	Usable	Rejected	NA	Description of Affected Data (note specific samples and analytical parameters affected)
Method and field blank contamination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Method Blank 3261415: cis-1,2-Dichloroethene was detected in the method blank associated with samples MW-1B, FB-11202022, and TRIP BLANK at a concentration less than the reporting limit (RL). cis-1,2-Dichloroethene is detected in sample TRIP BLANK at a concentration less than the RL; therefore, the result was raised to the RL and qualified non-detect (flagged U). The result for cis-1,2-dichloroethene is greater than ten times the blank result in sample MW-1B and non-detect in sample FB-11202022; therefore, the results were not qualified.</p> <p>TRIP BLANK: cis-1,2-Dichloroethene and methylene chloride were detected in the trip blank at concentrations less than the RL. The result for cis-1,2-dichloroethene in the trip blank was qualified non-detect (flagged U) due to method blank contamination. The results for methylene chloride in the associated samples are non-detect; therefore, results were not qualified.</p> <p>Target analytes were not detected in the field blanks.</p>
Surrogate spikes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Surrogate spikes were within control limits.
Matrix spikes/matrix spike duplicates (MS/MSD)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	MS/MSDs were not analyzed with these samples.

Data Package Element	Usable	Rejected	NA	Description of Affected Data (note specific samples and analytical parameters affected)
Laboratory control samples/Laboratory control sample duplicates (LCS/LCSD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>LCS 3261339: The LCS recoveries for 1,2,4-trichlorobenzene and naphthalene were below the acceptance limit. The 1,2,4-trichlorobenzene and naphthalene results for associated samples MW-2B, MW-3B, MW-6B, MW-6B-FD, MW-8B, MW-9, MW-10A, MW-10B, MW-10B-FD, MW-11, MW-12, MW-13, MW-14, MW-101, MW-102, MW-103, MW-104, FB-11182022, and FB-11192022 are non-detects and qualified as estimated (flagged UJ).</p> <p>LCS 3261416: The LCS recoveries for 1,2,4-trichlorobenzene and naphthalene were below the acceptance limit and the recoveries for 1,2-dichloroethane and bromochloromethane were above the acceptance limit. The results for 1,2,4-trichlorobenzene and naphthalene in samples MW-1B, FB-11202022, and TRIP BLANK are non-detects and qualified as estimated (flagged UJ). The results for 1,2-dichloroethane and bromochloromethane in samples MW-1B, FB-11202022, and TRIP BLANK are non-detects and were not qualified.</p> <p>LCS 3262109: The LCS recovery for 1,1-dichloroethane was above the acceptance limit. The 1,1-dichloroethane result for sample MW-4B is a non-detect and was not qualified.</p>
Other	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Field duplicates were collected for sample MW-6B (MW-6B/MW-6B-FD) and MW-10B (MW-10B/MW-10B-FD). The results were within acceptance criteria.
Summary Data is usable as qualified based on the findings for this validation effort.				

November 30, 2022

Kaitlyn Mitchell
Tetra Tech EMI
415 Oak
Kansas City, MO 64106

RE: Project: CLINTON ENGINES
Pace Project No.: 60416291

Dear Kaitlyn Mitchell:

Enclosed are the analytical results for sample(s) received by the laboratory on November 22, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,



Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Inorganic Drinking Water Certification #: 10090

Arkansas Drinking Water

Arkansas Certification #: 22-031-0

Illinois Certification #: 2000302021-3

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212023-1

Oklahoma Certification #: 2022-057

Florida: Cert E871149 SEKS WET

Texas Certification #: T104704407-21-15

Utah Certification #: KS000212022-12

Illinois Certification #: 004592

Kansas Field Laboratory Accreditation: # E-92587

Missouri SEKS Micro Certification: 10070

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CLINTON ENGINES

Pace Project No.: 60416291

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60416291001	MW-103	Water	11/18/22 14:35	11/22/22 10:05
60416291002	MW-14	Water	11/18/22 15:26	11/22/22 10:05
60416291003	MW-104	Water	11/18/22 16:15	11/22/22 10:05
60416291004	FB-11182022	Water	11/18/22 16:20	11/22/22 10:05
60416291005	MW-102	Water	11/19/22 09:30	11/22/22 10:05
60416291006	MW-101	Water	11/19/22 10:40	11/22/22 10:05
60416291007	MW-13	Water	11/19/22 11:45	11/22/22 10:05
60416291008	MW-12	Water	11/19/22 13:00	11/22/22 10:05
60416291009	MW-9	Water	11/19/22 13:52	11/22/22 10:05
60416291010	MW-11	Water	11/19/22 15:05	11/22/22 10:05
60416291011	MW-4B	Water	11/19/22 15:55	11/22/22 10:05
60416291012	MW-6B	Water	11/19/22 16:40	11/22/22 10:05
60416291013	MW-6B-FD	Water	11/19/22 16:50	11/22/22 10:05
60416291014	FB-11192022	Water	11/19/22 17:30	11/22/22 10:05
60416291015	MW-8B	Water	11/20/22 07:50	11/22/22 10:05
60416291016	MW-2B	Water	11/20/22 08:50	11/22/22 10:05
60416291017	MW-10B	Water	11/20/22 09:35	11/22/22 10:05
60416291018	MW-10B-FD	Water	11/20/22 09:40	11/22/22 10:05
60416291019	MW-10A	Water	11/20/22 10:45	11/22/22 10:05
60416291020	MW-3B	Water	11/20/22 11:25	11/22/22 10:05
60416291021	MW-1B	Water	11/20/22 12:20	11/22/22 10:05
60416291022	FB-11202022	Water	11/20/22 12:30	11/22/22 10:05
60416291023	TRIP BLANK	Water	11/20/22 18:30	11/22/22 10:05

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SAMPLE ANALYTE COUNT

Project: CLINTON ENGINES

Pace Project No.: 60416291

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60416291001	MW-103	EPA 5030B/8260	PGH	69	PASI-K
60416291002	MW-14	EPA 5030B/8260	HM1, PGH	69	PASI-K
60416291003	MW-104	EPA 5030B/8260	HM1, PGH	69	PASI-K
60416291004	FB-11182022	EPA 5030B/8260	PGH	69	PASI-K
60416291005	MW-102	EPA 5030B/8260	PGH	69	PASI-K
60416291006	MW-101	EPA 5030B/8260	PGH	69	PASI-K
60416291007	MW-13	EPA 5030B/8260	PGH	69	PASI-K
60416291008	MW-12	EPA 5030B/8260	HM1, PGH	69	PASI-K
60416291009	MW-9	EPA 5030B/8260	PGH	69	PASI-K
60416291010	MW-11	EPA 5030B/8260	PGH	69	PASI-K
60416291011	MW-4B	EPA 5030B/8260	HM1	69	PASI-K
60416291012	MW-6B	EPA 5030B/8260	PGH	69	PASI-K
60416291013	MW-6B-FD	EPA 5030B/8260	PGH	69	PASI-K
60416291014	FB-11192022	EPA 5030B/8260	PGH	69	PASI-K
60416291015	MW-8B	EPA 5030B/8260	HM1, PGH	69	PASI-K
60416291016	MW-2B	EPA 5030B/8260	PGH	69	PASI-K
60416291017	MW-10B	EPA 5030B/8260	PGH	69	PASI-K
60416291018	MW-10B-FD	EPA 5030B/8260	PGH	69	PASI-K
60416291019	MW-10A	EPA 5030B/8260	HM1, PGH	69	PASI-K
60416291020	MW-3B	EPA 5030B/8260	HM1, PGH	69	PASI-K
60416291021	MW-1B	EPA 5030B/8260	CSC, PGH	69	PASI-K
60416291022	FB-11202022	EPA 5030B/8260	PGH	69	PASI-K
60416291023	TRIP BLANK	EPA 5030B/8260	PGH	69	PASI-K

PASI-K = Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-103		Lab ID: 60416291001		Collected: 11/18/22 14:35		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 02:56	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 02:56	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 02:56	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 02:56	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 02:56	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 02:56	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 02:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 02:56	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 02:56	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 02:56	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:56	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 02:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 02:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 02:56	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 02:56	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 02:56	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 02:56	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 02:56	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 02:56	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 02:56	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/29/22 02:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 02:56	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 02:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 02:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 02:56	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 02:56	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 02:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 02:56	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	0.22	1		11/29/22 02:56	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 02:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		11/29/22 02:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/29/22 02:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 02:56	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 02:56	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 02:56	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 02:56	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 02:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 02:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:56	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 02:56	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 02:56	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 02:56	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 02:56	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 02:56	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-103		Lab ID: 60416291001		Collected: 11/18/22 14:35		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City									
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 02:56	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 02:56	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 02:56	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:56	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 02:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 02:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 02:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 02:56	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 02:56	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 02:56	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 02:56	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 02:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 02:56	79-00-5	
Trichloroethene	1.3	ug/L	1.0	0.21	1		11/29/22 02:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 02:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 02:56	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 02:56	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 02:56	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/29/22 02:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 02:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		11/29/22 02:56	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		11/29/22 02:56	2199-69-1	
Toluene-d8 (S)	100	%	80-120		1		11/29/22 02:56	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 02:56		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-14		Lab ID: 60416291002		Collected: 11/18/22 15:26		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 03:10	67-64-1	
Benzene	0.38J	ug/L	1.0	0.14	1		11/29/22 03:10	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 03:10	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 03:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 03:10	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 03:10	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 03:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 03:10	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 03:10	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 03:10	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:10	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 03:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 03:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 03:10	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 03:10	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 03:10	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 03:10	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 03:10	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 03:10	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 03:10	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/29/22 03:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 03:10	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 03:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:10	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 03:10	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 03:10	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 03:10	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 03:10	75-34-3	
1,2-Dichloroethane	0.24J	ug/L	1.0	0.21	1		11/29/22 03:10	107-06-2	
1,2-Dichloroethene (Total)	215	ug/L	10.0	2.2	10		11/29/22 21:04	540-59-0	
1,1-Dichloroethene	0.54J	ug/L	1.0	0.22	1		11/29/22 03:10	75-35-4	
cis-1,2-Dichloroethene	184	ug/L	10.0	1.3	10		11/29/22 21:04	156-59-2	
trans-1,2-Dichloroethene	31.2	ug/L	10.0	1.0	10		11/29/22 21:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 03:10	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 03:10	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 03:10	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 03:10	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 03:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 03:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:10	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 03:10	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 03:10	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 03:10	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 03:10	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 03:10	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-14		Lab ID: 60416291002		Collected: 11/18/22 15:26		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 03:10	108-10-1	
Methyl-tert-butyl ether	0.56J	ug/L	1.0	0.13	1		11/29/22 03:10	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 03:10	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:10	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 03:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 03:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 03:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 03:10	127-18-4	
Toluene	0.33J	ug/L	1.0	0.25	1		11/29/22 03:10	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 03:10	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 03:10	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 03:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 03:10	79-00-5	
Trichloroethene	15.8	ug/L	1.0	0.21	1		11/29/22 03:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 03:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 03:10	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 03:10	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 03:10	108-67-8	
Vinyl chloride	6.5	ug/L	1.0	0.17	1		11/29/22 03:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 03:10	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		11/29/22 03:10	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		11/29/22 03:10	2199-69-1	
Toluene-d8 (S)	100	%	80-120		1		11/29/22 03:10	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 03:10		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-104 Lab ID: 60416291003 Collected: 11/18/22 16:15 Received: 11/22/22 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City									
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 03:23	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 03:23	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 03:23	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 03:23	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 03:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 03:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 03:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 03:23	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 03:23	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 03:23	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:23	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 03:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 03:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 03:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 03:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 03:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 03:23	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 03:23	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 03:23	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 03:23	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/29/22 03:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 03:23	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 03:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 03:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 03:23	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 03:23	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 03:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 03:23	107-06-2	
1,2-Dichloroethene (Total)	2.3	ug/L	1.0	0.22	1		11/29/22 19:29	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 03:23	75-35-4	
cis-1,2-Dichloroethene	2.0	ug/L	1.0	0.13	1		11/29/22 19:29	156-59-2	
trans-1,2-Dichloroethene	0.34J	ug/L	1.0	0.10	1		11/29/22 19:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 03:23	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 03:23	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 03:23	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 03:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 03:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 03:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:23	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 03:23	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 03:23	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 03:23	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 03:23	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 03:23	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-104		Lab ID: 60416291003		Collected: 11/18/22 16:15		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City									
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 03:23	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 03:23	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 03:23	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:23	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 03:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 03:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 03:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 03:23	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 03:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 03:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 03:23	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 03:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 03:23	79-00-5	
Trichloroethene	1.3	ug/L	1.0	0.21	1		11/29/22 03:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 03:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 03:23	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 03:23	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 03:23	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/29/22 03:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 03:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		11/29/22 03:23	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		11/29/22 03:23	2199-69-1	
Toluene-d8 (S)	97	%	80-120		1		11/29/22 03:23	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 03:23		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: FB-11182022		Lab ID: 60416291004		Collected: 11/18/22 16:20		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 02:29	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 02:29	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 02:29	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 02:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 02:29	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 02:29	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 02:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 02:29	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 02:29	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 02:29	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:29	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 02:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 02:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 02:29	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 02:29	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 02:29	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 02:29	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 02:29	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 02:29	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 02:29	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/29/22 02:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 02:29	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 02:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 02:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 02:29	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 02:29	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 02:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 02:29	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	0.22	1		11/29/22 02:29	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 02:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		11/29/22 02:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/29/22 02:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 02:29	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 02:29	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 02:29	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 02:29	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 02:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 02:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:29	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 02:29	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 02:29	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 02:29	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 02:29	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 02:29	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: FB-11182022		Lab ID: 60416291004		Collected: 11/18/22 16:20		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 02:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 02:29	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 02:29	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:29	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 02:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 02:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 02:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 02:29	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 02:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 02:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 02:29	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 02:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 02:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		11/29/22 02:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 02:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 02:29	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 02:29	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 02:29	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/29/22 02:29	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 02:29	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		11/29/22 02:29	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		11/29/22 02:29	2199-69-1	
Toluene-d8 (S)	97	%	80-120		1		11/29/22 02:29	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 02:29		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-102		Lab ID: 60416291005		Collected: 11/19/22 09:30		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 03:37	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 03:37	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 03:37	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 03:37	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 03:37	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 03:37	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 03:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 03:37	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 03:37	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 03:37	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:37	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 03:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 03:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 03:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 03:37	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 03:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 03:37	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 03:37	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 03:37	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 03:37	96-12-8	
Dibromochloromethane	0.55J	ug/L	1.0	0.30	1		11/29/22 03:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 03:37	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 03:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 03:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 03:37	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 03:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 03:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 03:37	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	0.22	1		11/29/22 03:37	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 03:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		11/29/22 03:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/29/22 03:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 03:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 03:37	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 03:37	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 03:37	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 03:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 03:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:37	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 03:37	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 03:37	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 03:37	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 03:37	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 03:37	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-102		Lab ID: 60416291005		Collected: 11/19/22 09:30		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 03:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 03:37	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 03:37	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:37	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 03:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 03:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 03:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 03:37	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 03:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 03:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 03:37	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 03:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 03:37	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		11/29/22 03:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 03:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 03:37	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 03:37	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 03:37	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/29/22 03:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 03:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		11/29/22 03:37	460-00-4	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		11/29/22 03:37	2199-69-1	
Toluene-d8 (S)	98	%	80-120		1		11/29/22 03:37	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 03:37		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-101		Lab ID: 60416291006		Collected: 11/19/22 10:40		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 03:50	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 03:50	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 03:50	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 03:50	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 03:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 03:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 03:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 03:50	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 03:50	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 03:50	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:50	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 03:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 03:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 03:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 03:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 03:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 03:50	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 03:50	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 03:50	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 03:50	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/29/22 03:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 03:50	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 03:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 03:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 03:50	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 03:50	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 03:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 03:50	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	0.22	1		11/29/22 03:50	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 03:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		11/29/22 03:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/29/22 03:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 03:50	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 03:50	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 03:50	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 03:50	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 03:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 03:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:50	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 03:50	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 03:50	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 03:50	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 03:50	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 03:50	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-101		Lab ID: 60416291006		Collected: 11/19/22 10:40		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 03:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 03:50	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 03:50	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 03:50	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 03:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 03:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 03:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 03:50	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 03:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 03:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 03:50	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 03:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 03:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		11/29/22 03:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 03:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 03:50	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 03:50	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 03:50	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/29/22 03:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 03:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		11/29/22 03:50	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		11/29/22 03:50	2199-69-1	
Toluene-d8 (S)	97	%	80-120		1		11/29/22 03:50	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 03:50		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-13		Lab ID: 60416291007		Collected: 11/19/22 11:45		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 04:59	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 04:59	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 04:59	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 04:59	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 04:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 04:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 04:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 04:59	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 04:59	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 04:59	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:59	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 04:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 04:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 04:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 04:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 04:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 04:59	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 04:59	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 04:59	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 04:59	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/29/22 04:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 04:59	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 04:59	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 04:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 04:59	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 04:59	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 04:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 04:59	107-06-2	
1,2-Dichloroethene (Total)	1.2	ug/L	1.0	0.22	1		11/29/22 04:59	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 04:59	75-35-4	
cis-1,2-Dichloroethene	1.2	ug/L	1.0	0.13	1		11/29/22 04:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/29/22 04:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 04:59	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 04:59	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 04:59	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 04:59	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 04:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 04:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:59	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 04:59	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 04:59	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 04:59	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 04:59	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 04:59	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-13		Lab ID: 60416291007		Collected: 11/19/22 11:45		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 04:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 04:59	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 04:59	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:59	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 04:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 04:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 04:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 04:59	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 04:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 04:59	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 04:59	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 04:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 04:59	79-00-5	
Trichloroethene	0.32J	ug/L	1.0	0.21	1		11/29/22 04:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 04:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 04:59	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 04:59	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 04:59	108-67-8	
Vinyl chloride	2.4	ug/L	1.0	0.17	1		11/29/22 04:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 04:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		11/29/22 04:59	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		11/29/22 04:59	2199-69-1	
Toluene-d8 (S)	101	%	80-120		1		11/29/22 04:59	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 04:59		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-12		Lab ID: 60416291008		Collected: 11/19/22 13:00		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 05:12	67-64-1	
Benzene	0.40J	ug/L	1.0	0.14	1		11/29/22 05:12	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 05:12	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 05:12	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 05:12	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 05:12	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 05:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 05:12	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 05:12	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 05:12	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 05:12	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 05:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 05:12	56-23-5	
Chlorobenzene	1.2	ug/L	1.0	0.089	1		11/29/22 05:12	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 05:12	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 05:12	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 05:12	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 05:12	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 05:12	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 05:12	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/29/22 05:12	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 05:12	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 05:12	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 05:12	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 05:12	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 05:12	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 05:12	75-71-8	
1,1-Dichloroethane	3.7	ug/L	1.0	0.12	1		11/29/22 05:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 05:12	107-06-2	
1,2-Dichloroethene (Total)	1280	ug/L	50.0	11.1	50		11/29/22 21:20	540-59-0	
1,1-Dichloroethene	8.2	ug/L	1.0	0.22	1		11/29/22 05:12	75-35-4	
cis-1,2-Dichloroethene	697	ug/L	50.0	6.4	50		11/29/22 21:20	156-59-2	
trans-1,2-Dichloroethene	583	ug/L	50.0	5.1	50		11/29/22 21:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 05:12	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 05:12	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 05:12	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 05:12	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 05:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 05:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 05:12	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 05:12	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 05:12	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 05:12	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 05:12	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 05:12	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-12		Lab ID: 60416291008		Collected: 11/19/22 13:00		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City									
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 05:12	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 05:12	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 05:12	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 05:12	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 05:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 05:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 05:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 05:12	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 05:12	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 05:12	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 05:12	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 05:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 05:12	79-00-5	
Trichloroethene	4420	ug/L	50.0	10.5	50		11/29/22 21:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 05:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 05:12	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 05:12	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 05:12	108-67-8	
Vinyl chloride	22.5	ug/L	1.0	0.17	1		11/29/22 05:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 05:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		11/29/22 05:12	460-00-4	
1,2-Dichlorobenzene-d4 (S)	97	%	80-120		1		11/29/22 05:12	2199-69-1	
Toluene-d8 (S)	97	%	80-120		1		11/29/22 05:12	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 05:12		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-9		Lab ID: 60416291009		Collected: 11/19/22 13:52		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 04:04	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 04:04	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 04:04	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 04:04	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 04:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 04:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 04:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 04:04	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 04:04	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 04:04	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:04	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 04:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 04:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 04:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 04:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 04:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 04:04	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 04:04	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 04:04	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 04:04	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/29/22 04:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 04:04	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 04:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 04:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 04:04	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 04:04	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 04:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 04:04	107-06-2	
1,2-Dichloroethene (Total)	12.7	ug/L	1.0	0.22	1		11/29/22 04:04	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 04:04	75-35-4	
cis-1,2-Dichloroethene	9.6	ug/L	1.0	0.13	1		11/29/22 04:04	156-59-2	
trans-1,2-Dichloroethene	3.0	ug/L	1.0	0.10	1		11/29/22 04:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 04:04	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 04:04	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 04:04	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 04:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 04:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 04:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:04	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 04:04	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 04:04	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 04:04	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 04:04	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 04:04	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-9		Lab ID: 60416291009		Collected: 11/19/22 13:52		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 04:04	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 04:04	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 04:04	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:04	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 04:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 04:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 04:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 04:04	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 04:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 04:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 04:04	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 04:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 04:04	79-00-5	
Trichloroethene	133	ug/L	1.0	0.21	1		11/29/22 04:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 04:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 04:04	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 04:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 04:04	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/29/22 04:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 04:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		11/29/22 04:04	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		11/29/22 04:04	2199-69-1	
Toluene-d8 (S)	99	%	80-120		1		11/29/22 04:04	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 04:04		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-11		Lab ID: 60416291010		Collected: 11/19/22 15:05		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 04:18	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 04:18	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 04:18	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 04:18	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 04:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 04:18	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 04:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 04:18	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 04:18	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 04:18	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:18	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 04:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 04:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 04:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 04:18	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 04:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 04:18	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 04:18	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 04:18	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 04:18	96-12-8	
Dibromochloromethane	0.50J	ug/L	1.0	0.30	1		11/29/22 04:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 04:18	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 04:18	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 04:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 04:18	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 04:18	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 04:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 04:18	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	0.22	1		11/29/22 04:18	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 04:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		11/29/22 04:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/29/22 04:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 04:18	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 04:18	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 04:18	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 04:18	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 04:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 04:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:18	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 04:18	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 04:18	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 04:18	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 04:18	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 04:18	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-11		Lab ID: 60416291010		Collected: 11/19/22 15:05		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 04:18	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 04:18	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 04:18	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:18	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 04:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 04:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 04:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 04:18	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 04:18	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 04:18	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 04:18	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 04:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 04:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		11/29/22 04:18	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 04:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 04:18	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 04:18	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 04:18	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/29/22 04:18	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 04:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		11/29/22 04:18	460-00-4	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1		11/29/22 04:18	2199-69-1	
Toluene-d8 (S)	98	%	80-120		1		11/29/22 04:18	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 04:18		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-4B		Lab ID: 60416291011		Collected: 11/19/22 15:55		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 19:44	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 19:44	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 19:44	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 19:44	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 19:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 19:44	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 19:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 19:44	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 19:44	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 19:44	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 19:44	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 19:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 19:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 19:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 19:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 19:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 19:44	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 19:44	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 19:44	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 19:44	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/29/22 19:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 19:44	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 19:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 19:44	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 19:44	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 19:44	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 19:44	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 19:44	75-34-3	L1
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 19:44	107-06-2	
1,2-Dichloroethene (Total)	1.7	ug/L	1.0	0.22	1		11/29/22 19:44	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 19:44	75-35-4	
cis-1,2-Dichloroethene	1.5	ug/L	1.0	0.13	1		11/29/22 19:44	156-59-2	
trans-1,2-Dichloroethene	0.20J	ug/L	1.0	0.10	1		11/29/22 19:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 19:44	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 19:44	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 19:44	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 19:44	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 19:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 19:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 19:44	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 19:44	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 19:44	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 19:44	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 19:44	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 19:44	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-4B		Lab ID: 60416291011		Collected: 11/19/22 15:55		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 19:44	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 19:44	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 19:44	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 19:44	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 19:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 19:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 19:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 19:44	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 19:44	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 19:44	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 19:44	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 19:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 19:44	79-00-5	
Trichloroethene	2.9	ug/L	1.0	0.21	1		11/29/22 19:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 19:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 19:44	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 19:44	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 19:44	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/29/22 19:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 19:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		11/29/22 19:44	460-00-4	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		11/29/22 19:44	2199-69-1	
Toluene-d8 (S)	102	%	80-120		1		11/29/22 19:44	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 19:44		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-6B		Lab ID: 60416291012		Collected: 11/19/22 16:40		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 04:32	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 04:32	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 04:32	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 04:32	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 04:32	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 04:32	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 04:32	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 04:32	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 04:32	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 04:32	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:32	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 04:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 04:32	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 04:32	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 04:32	75-00-3	
Chloroform	0.36J	ug/L	1.0	0.22	1		11/29/22 04:32	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 04:32	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 04:32	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 04:32	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 04:32	96-12-8	
Dibromochloromethane	0.56J	ug/L	1.0	0.30	1		11/29/22 04:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 04:32	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 04:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 04:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 04:32	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 04:32	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 04:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 04:32	107-06-2	
1,2-Dichloroethene (Total)	3.9	ug/L	1.0	0.22	1		11/29/22 04:32	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 04:32	75-35-4	
cis-1,2-Dichloroethene	3.6	ug/L	1.0	0.13	1		11/29/22 04:32	156-59-2	
trans-1,2-Dichloroethene	0.34J	ug/L	1.0	0.10	1		11/29/22 04:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 04:32	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 04:32	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 04:32	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 04:32	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 04:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 04:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:32	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 04:32	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 04:32	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 04:32	98-82-8	
p-Isopropyltoluene	0.15J	ug/L	1.0	0.13	1		11/29/22 04:32	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 04:32	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-6B		Lab ID: 60416291012		Collected: 11/19/22 16:40		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 04:32	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 04:32	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 04:32	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:32	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 04:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 04:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 04:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 04:32	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 04:32	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 04:32	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 04:32	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 04:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 04:32	79-00-5	
Trichloroethene	10.2	ug/L	1.0	0.21	1		11/29/22 04:32	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 04:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 04:32	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 04:32	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 04:32	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/29/22 04:32	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 04:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		11/29/22 04:32	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		11/29/22 04:32	2199-69-1	
Toluene-d8 (S)	96	%	80-120		1		11/29/22 04:32	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 04:32		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-6B-FD		Lab ID: 60416291013		Collected: 11/19/22 16:50		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 04:45	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 04:45	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 04:45	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 04:45	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 04:45	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 04:45	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 04:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 04:45	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 04:45	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 04:45	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:45	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 04:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 04:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 04:45	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 04:45	75-00-3	
Chloroform	0.35J	ug/L	1.0	0.22	1		11/29/22 04:45	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 04:45	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 04:45	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 04:45	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 04:45	96-12-8	
Dibromochloromethane	0.54J	ug/L	1.0	0.30	1		11/29/22 04:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 04:45	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 04:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 04:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 04:45	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 04:45	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 04:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 04:45	107-06-2	
1,2-Dichloroethene (Total)	3.8	ug/L	1.0	0.22	1		11/29/22 04:45	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 04:45	75-35-4	
cis-1,2-Dichloroethene	3.5	ug/L	1.0	0.13	1		11/29/22 04:45	156-59-2	
trans-1,2-Dichloroethene	0.30J	ug/L	1.0	0.10	1		11/29/22 04:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 04:45	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 04:45	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 04:45	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 04:45	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 04:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 04:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:45	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 04:45	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 04:45	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 04:45	98-82-8	
p-Isopropyltoluene	0.14J	ug/L	1.0	0.13	1		11/29/22 04:45	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 04:45	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-6B-FD		Lab ID: 60416291013		Collected: 11/19/22 16:50		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City									
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 04:45	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 04:45	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 04:45	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 04:45	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 04:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 04:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 04:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 04:45	127-18-4	
Toluene	0.26J	ug/L	1.0	0.25	1		11/29/22 04:45	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 04:45	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 04:45	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 04:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 04:45	79-00-5	
Trichloroethene	9.9	ug/L	1.0	0.21	1		11/29/22 04:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 04:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 04:45	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 04:45	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 04:45	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/29/22 04:45	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 04:45	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		11/29/22 04:45	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		11/29/22 04:45	2199-69-1	
Toluene-d8 (S)	98	%	80-120		1		11/29/22 04:45	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 04:45		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: FB-11192022		Lab ID: 60416291014		Collected: 11/19/22 17:30		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 02:42	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/29/22 02:42	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 02:42	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 02:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 02:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/29/22 02:42	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 02:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 02:42	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 02:42	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 02:42	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:42	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 02:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/29/22 02:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 02:42	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 02:42	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/29/22 02:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 02:42	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 02:42	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 02:42	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 02:42	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/29/22 02:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 02:42	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 02:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 02:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 02:42	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 02:42	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 02:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 02:42	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	0.22	1		11/29/22 02:42	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/29/22 02:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		11/29/22 02:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/29/22 02:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 02:42	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 02:42	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 02:42	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 02:42	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 02:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 02:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:42	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 02:42	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 02:42	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 02:42	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 02:42	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 02:42	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: FB-11192022		Lab ID: 60416291014		Collected: 11/19/22 17:30		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 5030B/8260									
Pace Analytical Services - Kansas City									
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 02:42	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 02:42	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 02:42	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 02:42	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 02:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 02:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 02:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/29/22 02:42	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 02:42	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 02:42	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 02:42	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 02:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/29/22 02:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		11/29/22 02:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 02:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 02:42	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 02:42	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 02:42	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/29/22 02:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 02:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		11/29/22 02:42	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		11/29/22 02:42	2199-69-1	
Toluene-d8 (S)	96	%	80-120		1		11/29/22 02:42	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 02:42		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-8B Lab ID: 60416291015 Collected: 11/20/22 07:50 Received: 11/22/22 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City									
Acetone	ND	ug/L	250	63.5	25		11/29/22 06:21	67-64-1	
Benzene	13.7J	ug/L	25.0	3.4	25		11/29/22 06:21	71-43-2	
Bromobenzene	ND	ug/L	25.0	2.2	25		11/29/22 06:21	108-86-1	
Bromochloromethane	ND	ug/L	25.0	5.0	25		11/29/22 06:21	74-97-5	
Bromodichloromethane	ND	ug/L	25.0	3.9	25		11/29/22 06:21	75-27-4	
Bromoform	ND	ug/L	25.0	16.9	25		11/29/22 06:21	75-25-2	
Bromomethane	ND	ug/L	125	11.5	25		11/29/22 06:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	250	24.4	25		11/29/22 06:21	78-93-3	
n-Butylbenzene	ND	ug/L	25.0	3.8	25		11/29/22 06:21	104-51-8	
sec-Butylbenzene	ND	ug/L	25.0	2.8	25		11/29/22 06:21	135-98-8	
tert-Butylbenzene	ND	ug/L	25.0	3.0	25		11/29/22 06:21	98-06-6	
Carbon disulfide	ND	ug/L	125	24.4	25		11/29/22 06:21	75-15-0	
Carbon tetrachloride	ND	ug/L	25.0	4.3	25		11/29/22 06:21	56-23-5	
Chlorobenzene	ND	ug/L	25.0	2.2	25		11/29/22 06:21	108-90-7	
Chloroethane	ND	ug/L	25.0	9.4	25		11/29/22 06:21	75-00-3	
Chloroform	ND	ug/L	25.0	5.5	25		11/29/22 06:21	67-66-3	
Chloromethane	ND	ug/L	25.0	7.1	25		11/29/22 06:21	74-87-3	
2-Chlorotoluene	ND	ug/L	25.0	2.7	25		11/29/22 06:21	95-49-8	
4-Chlorotoluene	ND	ug/L	25.0	3.7	25		11/29/22 06:21	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	62.5	19.5	25		11/29/22 06:21	96-12-8	
Dibromochloromethane	ND	ug/L	25.0	7.6	25		11/29/22 06:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	25.0	4.9	25		11/29/22 06:21	106-93-4	
Dibromomethane	ND	ug/L	25.0	2.7	25		11/29/22 06:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	25.0	3.1	25		11/29/22 06:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	25.0	3.3	25		11/29/22 06:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	25.0	3.3	25		11/29/22 06:21	106-46-7	
Dichlorodifluoromethane	ND	ug/L	25.0	5.0	25		11/29/22 06:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	25.0	3.0	25		11/29/22 06:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	25.0	5.3	25		11/29/22 06:21	107-06-2	
1,2-Dichloroethene (Total)	6520	ug/L	100	22.2	100		11/29/22 21:36	540-59-0	
1,1-Dichloroethene	9.9J	ug/L	25.0	5.5	25		11/29/22 06:21	75-35-4	
cis-1,2-Dichloroethene	5740	ug/L	100	12.9	100		11/29/22 21:36	156-59-2	
trans-1,2-Dichloroethene	788	ug/L	100	10.2	100		11/29/22 21:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	25.0	3.5	25		11/29/22 06:21	78-87-5	
1,3-Dichloropropane	ND	ug/L	25.0	2.6	25		11/29/22 06:21	142-28-9	
2,2-Dichloropropane	ND	ug/L	25.0	4.0	25		11/29/22 06:21	594-20-7	
1,1-Dichloropropene	ND	ug/L	25.0	3.4	25		11/29/22 06:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	25.0	1.9	25		11/29/22 06:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	25.0	4.6	25		11/29/22 06:21	10061-02-6	
Ethylbenzene	ND	ug/L	25.0	3.0	25		11/29/22 06:21	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	25.0	10.4	25		11/29/22 06:21	87-68-3	
2-Hexanone	ND	ug/L	250	27.5	25		11/29/22 06:21	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	25.0	2.4	25		11/29/22 06:21	98-82-8	
p-Isopropyltoluene	ND	ug/L	25.0	3.2	25		11/29/22 06:21	99-87-6	
Methylene Chloride	ND	ug/L	25.0	9.8	25		11/29/22 06:21	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-8B		Lab ID: 60416291015		Collected: 11/20/22 07:50		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City									
4-Methyl-2-pentanone (MIBK)	ND	ug/L	250	18.4	25		11/29/22 06:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	25.0	3.2	25		11/29/22 06:21	1634-04-4	
Naphthalene	ND	ug/L	250	20.6	25		11/29/22 06:21	91-20-3	L2
n-Propylbenzene	ND	ug/L	25.0	3.0	25		11/29/22 06:21	103-65-1	
Styrene	ND	ug/L	25.0	3.1	25		11/29/22 06:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	25.0	2.1	25		11/29/22 06:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	25.0	3.8	25		11/29/22 06:21	79-34-5	
Tetrachloroethene	ND	ug/L	25.0	8.2	25		11/29/22 06:21	127-18-4	
Toluene	ND	ug/L	25.0	6.3	25		11/29/22 06:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	25.0	23.2	25		11/29/22 06:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	25.0	18.3	25		11/29/22 06:21	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	25.0	2.7	25		11/29/22 06:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	25.0	3.6	25		11/29/22 06:21	79-00-5	
Trichloroethene	4680	ug/L	25.0	5.2	25		11/29/22 06:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	25.0	4.1	25		11/29/22 06:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	62.5	10.2	25		11/29/22 06:21	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	25.0	8.1	25		11/29/22 06:21	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	25.0	2.2	25		11/29/22 06:21	108-67-8	
Vinyl chloride	154	ug/L	25.0	4.2	25		11/29/22 06:21	75-01-4	
Xylene (Total)	ND	ug/L	75.0	7.0	25		11/29/22 06:21	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		25		11/29/22 06:21	460-00-4	
1,2-Dichlorobenzene-d4 (S)	96	%	80-120		25		11/29/22 06:21	2199-69-1	
Toluene-d8 (S)	99	%	80-120		25		11/29/22 06:21	2037-26-5	
Preservation pH	1.0		0.10		25		11/29/22 06:21		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-2B		Lab ID: 60416291016		Collected: 11/20/22 08:50		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	100	25.4	10		11/29/22 05:40	67-64-1	
Benzene	2.7J	ug/L	10.0	1.4	10		11/29/22 05:40	71-43-2	
Bromobenzene	ND	ug/L	10.0	0.88	10		11/29/22 05:40	108-86-1	
Bromochloromethane	ND	ug/L	10.0	2.0	10		11/29/22 05:40	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	1.6	10		11/29/22 05:40	75-27-4	
Bromoform	ND	ug/L	10.0	6.8	10		11/29/22 05:40	75-25-2	
Bromomethane	ND	ug/L	50.0	4.6	10		11/29/22 05:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	9.8	10		11/29/22 05:40	78-93-3	
n-Butylbenzene	ND	ug/L	10.0	1.5	10		11/29/22 05:40	104-51-8	
sec-Butylbenzene	ND	ug/L	10.0	1.1	10		11/29/22 05:40	135-98-8	
tert-Butylbenzene	ND	ug/L	10.0	1.2	10		11/29/22 05:40	98-06-6	
Carbon disulfide	ND	ug/L	50.0	9.8	10		11/29/22 05:40	75-15-0	
Carbon tetrachloride	ND	ug/L	10.0	1.7	10		11/29/22 05:40	56-23-5	
Chlorobenzene	ND	ug/L	10.0	0.89	10		11/29/22 05:40	108-90-7	
Chloroethane	ND	ug/L	10.0	3.7	10		11/29/22 05:40	75-00-3	
Chloroform	3.1J	ug/L	10.0	2.2	10		11/29/22 05:40	67-66-3	
Chloromethane	ND	ug/L	10.0	2.8	10		11/29/22 05:40	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	1.1	10		11/29/22 05:40	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	1.5	10		11/29/22 05:40	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	25.0	7.8	10		11/29/22 05:40	96-12-8	
Dibromochloromethane	ND	ug/L	10.0	3.0	10		11/29/22 05:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	2.0	10		11/29/22 05:40	106-93-4	
Dibromomethane	ND	ug/L	10.0	1.1	10		11/29/22 05:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	10.0	1.2	10		11/29/22 05:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	1.3	10		11/29/22 05:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	1.3	10		11/29/22 05:40	106-46-7	
Dichlorodifluoromethane	ND	ug/L	10.0	2.0	10		11/29/22 05:40	75-71-8	
1,1-Dichloroethane	ND	ug/L	10.0	1.2	10		11/29/22 05:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	2.1	10		11/29/22 05:40	107-06-2	
1,2-Dichloroethene (Total)	1080	ug/L	10.0	2.2	10		11/29/22 05:40	540-59-0	
1,1-Dichloroethene	3.9J	ug/L	10.0	2.2	10		11/29/22 05:40	75-35-4	
cis-1,2-Dichloroethene	1040	ug/L	10.0	1.3	10		11/29/22 05:40	156-59-2	
trans-1,2-Dichloroethene	43.5	ug/L	10.0	1.0	10		11/29/22 05:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	10.0	1.4	10		11/29/22 05:40	78-87-5	
1,3-Dichloropropane	ND	ug/L	10.0	1.0	10		11/29/22 05:40	142-28-9	
2,2-Dichloropropane	ND	ug/L	10.0	1.6	10		11/29/22 05:40	594-20-7	
1,1-Dichloropropene	ND	ug/L	10.0	1.4	10		11/29/22 05:40	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	10.0	0.78	10		11/29/22 05:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	10.0	1.8	10		11/29/22 05:40	10061-02-6	
Ethylbenzene	ND	ug/L	10.0	1.2	10		11/29/22 05:40	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	4.2	10		11/29/22 05:40	87-68-3	
2-Hexanone	ND	ug/L	100	11.0	10		11/29/22 05:40	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	10.0	0.97	10		11/29/22 05:40	98-82-8	
p-Isopropyltoluene	ND	ug/L	10.0	1.3	10		11/29/22 05:40	99-87-6	
Methylene Chloride	ND	ug/L	10.0	3.9	10		11/29/22 05:40	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-2B		Lab ID: 60416291016		Collected: 11/20/22 08:50		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	7.4	10		11/29/22 05:40	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	1.3	10		11/29/22 05:40	1634-04-4	
Naphthalene	ND	ug/L	100	8.2	10		11/29/22 05:40	91-20-3	L2
n-Propylbenzene	ND	ug/L	10.0	1.2	10		11/29/22 05:40	103-65-1	
Styrene	ND	ug/L	10.0	1.2	10		11/29/22 05:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	0.84	10		11/29/22 05:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	1.5	10		11/29/22 05:40	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	3.3	10		11/29/22 05:40	127-18-4	
Toluene	ND	ug/L	10.0	2.5	10		11/29/22 05:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	9.3	10		11/29/22 05:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	7.3	10		11/29/22 05:40	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	10.0	1.1	10		11/29/22 05:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	1.4	10		11/29/22 05:40	79-00-5	
Trichloroethene	1950	ug/L	10.0	2.1	10		11/29/22 05:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1.6	10		11/29/22 05:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	25.0	4.1	10		11/29/22 05:40	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	10.0	3.2	10		11/29/22 05:40	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	10.0	0.90	10		11/29/22 05:40	108-67-8	
Vinyl chloride	41.8	ug/L	10.0	1.7	10		11/29/22 05:40	75-01-4	
Xylene (Total)	ND	ug/L	30.0	2.8	10		11/29/22 05:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		10		11/29/22 05:40	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		10		11/29/22 05:40	2199-69-1	
Toluene-d8 (S)	98	%	80-120		10		11/29/22 05:40	2037-26-5	
Preservation pH	1.0		0.10		10		11/29/22 05:40		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-10B		Lab ID: 60416291017		Collected: 11/20/22 09:35		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	500	127	50		11/29/22 06:34	67-64-1	
Benzene	ND	ug/L	50.0	6.8	50		11/29/22 06:34	71-43-2	
Bromobenzene	ND	ug/L	50.0	4.4	50		11/29/22 06:34	108-86-1	
Bromochloromethane	ND	ug/L	50.0	10.1	50		11/29/22 06:34	74-97-5	
Bromodichloromethane	ND	ug/L	50.0	7.8	50		11/29/22 06:34	75-27-4	
Bromoform	ND	ug/L	50.0	33.8	50		11/29/22 06:34	75-25-2	
Bromomethane	ND	ug/L	250	23.0	50		11/29/22 06:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	500	48.8	50		11/29/22 06:34	78-93-3	
n-Butylbenzene	ND	ug/L	50.0	7.6	50		11/29/22 06:34	104-51-8	
sec-Butylbenzene	ND	ug/L	50.0	5.5	50		11/29/22 06:34	135-98-8	
tert-Butylbenzene	ND	ug/L	50.0	6.0	50		11/29/22 06:34	98-06-6	
Carbon disulfide	ND	ug/L	250	48.9	50		11/29/22 06:34	75-15-0	
Carbon tetrachloride	ND	ug/L	50.0	8.6	50		11/29/22 06:34	56-23-5	
Chlorobenzene	ND	ug/L	50.0	4.4	50		11/29/22 06:34	108-90-7	
Chloroethane	ND	ug/L	50.0	18.7	50		11/29/22 06:34	75-00-3	
Chloroform	ND	ug/L	50.0	11.0	50		11/29/22 06:34	67-66-3	
Chloromethane	ND	ug/L	50.0	14.2	50		11/29/22 06:34	74-87-3	
2-Chlorotoluene	ND	ug/L	50.0	5.4	50		11/29/22 06:34	95-49-8	
4-Chlorotoluene	ND	ug/L	50.0	7.4	50		11/29/22 06:34	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	125	39.0	50		11/29/22 06:34	96-12-8	
Dibromochloromethane	ND	ug/L	50.0	15.2	50		11/29/22 06:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	50.0	9.8	50		11/29/22 06:34	106-93-4	
Dibromomethane	ND	ug/L	50.0	5.4	50		11/29/22 06:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	50.0	6.2	50		11/29/22 06:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	50.0	6.6	50		11/29/22 06:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	50.0	6.6	50		11/29/22 06:34	106-46-7	
Dichlorodifluoromethane	ND	ug/L	50.0	10	50		11/29/22 06:34	75-71-8	
1,1-Dichloroethane	ND	ug/L	50.0	6.1	50		11/29/22 06:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	50.0	10.6	50		11/29/22 06:34	107-06-2	
1,2-Dichloroethene (Total)	1070	ug/L	50.0	11.1	50		11/29/22 06:34	540-59-0	
1,1-Dichloroethene	ND	ug/L	50.0	11.0	50		11/29/22 06:34	75-35-4	
cis-1,2-Dichloroethene	1050	ug/L	50.0	6.4	50		11/29/22 06:34	156-59-2	
trans-1,2-Dichloroethene	17.7J	ug/L	50.0	5.1	50		11/29/22 06:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	50.0	7.0	50		11/29/22 06:34	78-87-5	
1,3-Dichloropropane	ND	ug/L	50.0	5.2	50		11/29/22 06:34	142-28-9	
2,2-Dichloropropane	ND	ug/L	50.0	8.1	50		11/29/22 06:34	594-20-7	
1,1-Dichloropropene	ND	ug/L	50.0	6.8	50		11/29/22 06:34	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	50.0	3.9	50		11/29/22 06:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	50.0	9.1	50		11/29/22 06:34	10061-02-6	
Ethylbenzene	ND	ug/L	50.0	6.0	50		11/29/22 06:34	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	50.0	20.8	50		11/29/22 06:34	87-68-3	
2-Hexanone	ND	ug/L	500	55.0	50		11/29/22 06:34	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	50.0	4.8	50		11/29/22 06:34	98-82-8	
p-Isopropyltoluene	ND	ug/L	50.0	6.4	50		11/29/22 06:34	99-87-6	
Methylene Chloride	ND	ug/L	50.0	19.6	50		11/29/22 06:34	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-10B		Lab ID: 60416291017		Collected: 11/20/22 09:35		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	500	36.8	50		11/29/22 06:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	50.0	6.4	50		11/29/22 06:34	1634-04-4	
Naphthalene	ND	ug/L	500	41.1	50		11/29/22 06:34	91-20-3	L2
n-Propylbenzene	ND	ug/L	50.0	6.0	50		11/29/22 06:34	103-65-1	
Styrene	ND	ug/L	50.0	6.2	50		11/29/22 06:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	50.0	4.2	50		11/29/22 06:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	50.0	7.7	50		11/29/22 06:34	79-34-5	
Tetrachloroethene	ND	ug/L	50.0	16.5	50		11/29/22 06:34	127-18-4	
Toluene	ND	ug/L	50.0	12.6	50		11/29/22 06:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	50.0	46.4	50		11/29/22 06:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	50.0	36.6	50		11/29/22 06:34	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	50.0	5.4	50		11/29/22 06:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	50.0	7.1	50		11/29/22 06:34	79-00-5	
Trichloroethene	3810	ug/L	50.0	10.5	50		11/29/22 06:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	50.0	8.2	50		11/29/22 06:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	125	20.4	50		11/29/22 06:34	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	50.0	16.2	50		11/29/22 06:34	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	50.0	4.5	50		11/29/22 06:34	108-67-8	
Vinyl chloride	39.5J	ug/L	50.0	8.4	50		11/29/22 06:34	75-01-4	
Xylene (Total)	ND	ug/L	150	14.1	50		11/29/22 06:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		50		11/29/22 06:34	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	80-120		50		11/29/22 06:34	2199-69-1	
Toluene-d8 (S)	100	%	80-120		50		11/29/22 06:34	2037-26-5	
Preservation pH	1.0		0.10		50		11/29/22 06:34		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-10B-FD		Lab ID: 60416291018		Collected: 11/20/22 09:40		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	500	127	50		11/29/22 06:48	67-64-1	
Benzene	ND	ug/L	50.0	6.8	50		11/29/22 06:48	71-43-2	
Bromobenzene	ND	ug/L	50.0	4.4	50		11/29/22 06:48	108-86-1	
Bromochloromethane	ND	ug/L	50.0	10.1	50		11/29/22 06:48	74-97-5	
Bromodichloromethane	ND	ug/L	50.0	7.8	50		11/29/22 06:48	75-27-4	
Bromoform	ND	ug/L	50.0	33.8	50		11/29/22 06:48	75-25-2	
Bromomethane	ND	ug/L	250	23.0	50		11/29/22 06:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	500	48.8	50		11/29/22 06:48	78-93-3	
n-Butylbenzene	ND	ug/L	50.0	7.6	50		11/29/22 06:48	104-51-8	
sec-Butylbenzene	ND	ug/L	50.0	5.5	50		11/29/22 06:48	135-98-8	
tert-Butylbenzene	ND	ug/L	50.0	6.0	50		11/29/22 06:48	98-06-6	
Carbon disulfide	ND	ug/L	250	48.9	50		11/29/22 06:48	75-15-0	
Carbon tetrachloride	ND	ug/L	50.0	8.6	50		11/29/22 06:48	56-23-5	
Chlorobenzene	ND	ug/L	50.0	4.4	50		11/29/22 06:48	108-90-7	
Chloroethane	ND	ug/L	50.0	18.7	50		11/29/22 06:48	75-00-3	
Chloroform	ND	ug/L	50.0	11.0	50		11/29/22 06:48	67-66-3	
Chloromethane	ND	ug/L	50.0	14.2	50		11/29/22 06:48	74-87-3	
2-Chlorotoluene	ND	ug/L	50.0	5.4	50		11/29/22 06:48	95-49-8	
4-Chlorotoluene	ND	ug/L	50.0	7.4	50		11/29/22 06:48	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	125	39.0	50		11/29/22 06:48	96-12-8	
Dibromochloromethane	ND	ug/L	50.0	15.2	50		11/29/22 06:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	50.0	9.8	50		11/29/22 06:48	106-93-4	
Dibromomethane	ND	ug/L	50.0	5.4	50		11/29/22 06:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	50.0	6.2	50		11/29/22 06:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	50.0	6.6	50		11/29/22 06:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	50.0	6.6	50		11/29/22 06:48	106-46-7	
Dichlorodifluoromethane	ND	ug/L	50.0	10	50		11/29/22 06:48	75-71-8	
1,1-Dichloroethane	ND	ug/L	50.0	6.1	50		11/29/22 06:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	50.0	10.6	50		11/29/22 06:48	107-06-2	
1,2-Dichloroethene (Total)	1010	ug/L	50.0	11.1	50		11/29/22 06:48	540-59-0	
1,1-Dichloroethene	ND	ug/L	50.0	11.0	50		11/29/22 06:48	75-35-4	
cis-1,2-Dichloroethene	1000	ug/L	50.0	6.4	50		11/29/22 06:48	156-59-2	
trans-1,2-Dichloroethene	7.6J	ug/L	50.0	5.1	50		11/29/22 06:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	50.0	7.0	50		11/29/22 06:48	78-87-5	
1,3-Dichloropropane	ND	ug/L	50.0	5.2	50		11/29/22 06:48	142-28-9	
2,2-Dichloropropane	ND	ug/L	50.0	8.1	50		11/29/22 06:48	594-20-7	
1,1-Dichloropropene	ND	ug/L	50.0	6.8	50		11/29/22 06:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	50.0	3.9	50		11/29/22 06:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	50.0	9.1	50		11/29/22 06:48	10061-02-6	
Ethylbenzene	ND	ug/L	50.0	6.0	50		11/29/22 06:48	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	50.0	20.8	50		11/29/22 06:48	87-68-3	
2-Hexanone	ND	ug/L	500	55.0	50		11/29/22 06:48	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	50.0	4.8	50		11/29/22 06:48	98-82-8	
p-Isopropyltoluene	ND	ug/L	50.0	6.4	50		11/29/22 06:48	99-87-6	
Methylene Chloride	ND	ug/L	50.0	19.6	50		11/29/22 06:48	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-10B-FD		Lab ID: 60416291018		Collected: 11/20/22 09:40		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	500	36.8	50		11/29/22 06:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	50.0	6.4	50		11/29/22 06:48	1634-04-4	
Naphthalene	ND	ug/L	500	41.1	50		11/29/22 06:48	91-20-3	L2
n-Propylbenzene	ND	ug/L	50.0	6.0	50		11/29/22 06:48	103-65-1	
Styrene	ND	ug/L	50.0	6.2	50		11/29/22 06:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	50.0	4.2	50		11/29/22 06:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	50.0	7.7	50		11/29/22 06:48	79-34-5	
Tetrachloroethene	ND	ug/L	50.0	16.5	50		11/29/22 06:48	127-18-4	
Toluene	ND	ug/L	50.0	12.6	50		11/29/22 06:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	50.0	46.4	50		11/29/22 06:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	50.0	36.6	50		11/29/22 06:48	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	50.0	5.4	50		11/29/22 06:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	50.0	7.1	50		11/29/22 06:48	79-00-5	
Trichloroethene	3670	ug/L	50.0	10.5	50		11/29/22 06:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	50.0	8.2	50		11/29/22 06:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	125	20.4	50		11/29/22 06:48	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	50.0	16.2	50		11/29/22 06:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	50.0	4.5	50		11/29/22 06:48	108-67-8	
Vinyl chloride	36.3J	ug/L	50.0	8.4	50		11/29/22 06:48	75-01-4	
Xylene (Total)	ND	ug/L	150	14.1	50		11/29/22 06:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		50		11/29/22 06:48	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		50		11/29/22 06:48	2199-69-1	
Toluene-d8 (S)	98	%	80-120		50		11/29/22 06:48	2037-26-5	
Preservation pH	1.0		0.10		50		11/29/22 06:48		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-10A		Lab ID: 60416291019		Collected: 11/20/22 10:45		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	100	25.4	10		11/29/22 05:53	67-64-1	
Benzene	7.8J	ug/L	10.0	1.4	10		11/29/22 05:53	71-43-2	
Bromobenzene	ND	ug/L	10.0	0.88	10		11/29/22 05:53	108-86-1	
Bromochloromethane	ND	ug/L	10.0	2.0	10		11/29/22 05:53	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	1.6	10		11/29/22 05:53	75-27-4	
Bromoform	ND	ug/L	10.0	6.8	10		11/29/22 05:53	75-25-2	
Bromomethane	ND	ug/L	50.0	4.6	10		11/29/22 05:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	9.8	10		11/29/22 05:53	78-93-3	
n-Butylbenzene	ND	ug/L	10.0	1.5	10		11/29/22 05:53	104-51-8	
sec-Butylbenzene	ND	ug/L	10.0	1.1	10		11/29/22 05:53	135-98-8	
tert-Butylbenzene	ND	ug/L	10.0	1.2	10		11/29/22 05:53	98-06-6	
Carbon disulfide	ND	ug/L	50.0	9.8	10		11/29/22 05:53	75-15-0	
Carbon tetrachloride	ND	ug/L	10.0	1.7	10		11/29/22 05:53	56-23-5	
Chlorobenzene	ND	ug/L	10.0	0.89	10		11/29/22 05:53	108-90-7	
Chloroethane	ND	ug/L	10.0	3.7	10		11/29/22 05:53	75-00-3	
Chloroform	ND	ug/L	10.0	2.2	10		11/29/22 05:53	67-66-3	
Chloromethane	ND	ug/L	10.0	2.8	10		11/29/22 05:53	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	1.1	10		11/29/22 05:53	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	1.5	10		11/29/22 05:53	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	25.0	7.8	10		11/29/22 05:53	96-12-8	
Dibromochloromethane	ND	ug/L	10.0	3.0	10		11/29/22 05:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	2.0	10		11/29/22 05:53	106-93-4	
Dibromomethane	ND	ug/L	10.0	1.1	10		11/29/22 05:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	10.0	1.2	10		11/29/22 05:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	1.3	10		11/29/22 05:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	1.3	10		11/29/22 05:53	106-46-7	
Dichlorodifluoromethane	ND	ug/L	10.0	2.0	10		11/29/22 05:53	75-71-8	
1,1-Dichloroethane	ND	ug/L	10.0	1.2	10		11/29/22 05:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	2.1	10		11/29/22 05:53	107-06-2	
1,2-Dichloroethene (Total)	2160	ug/L	100	22.2	100		11/29/22 21:52	540-59-0	
1,1-Dichloroethene	17.5	ug/L	10.0	2.2	10		11/29/22 05:53	75-35-4	
cis-1,2-Dichloroethene	2140	ug/L	100	12.9	100		11/29/22 21:52	156-59-2	
trans-1,2-Dichloroethene	23.4J	ug/L	100	10.2	100		11/29/22 21:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	10.0	1.4	10		11/29/22 05:53	78-87-5	
1,3-Dichloropropane	ND	ug/L	10.0	1.0	10		11/29/22 05:53	142-28-9	
2,2-Dichloropropane	ND	ug/L	10.0	1.6	10		11/29/22 05:53	594-20-7	
1,1-Dichloropropene	ND	ug/L	10.0	1.4	10		11/29/22 05:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	10.0	0.78	10		11/29/22 05:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	10.0	1.8	10		11/29/22 05:53	10061-02-6	
Ethylbenzene	ND	ug/L	10.0	1.2	10		11/29/22 05:53	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	4.2	10		11/29/22 05:53	87-68-3	
2-Hexanone	ND	ug/L	100	11.0	10		11/29/22 05:53	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	10.0	0.97	10		11/29/22 05:53	98-82-8	
p-Isopropyltoluene	ND	ug/L	10.0	1.3	10		11/29/22 05:53	99-87-6	
Methylene Chloride	ND	ug/L	10.0	3.9	10		11/29/22 05:53	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-10A		Lab ID: 60416291019		Collected: 11/20/22 10:45		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City									
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	7.4	10		11/29/22 05:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	1.3	10		11/29/22 05:53	1634-04-4	
Naphthalene	ND	ug/L	100	8.2	10		11/29/22 05:53	91-20-3	L2
n-Propylbenzene	ND	ug/L	10.0	1.2	10		11/29/22 05:53	103-65-1	
Styrene	ND	ug/L	10.0	1.2	10		11/29/22 05:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	0.84	10		11/29/22 05:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	1.5	10		11/29/22 05:53	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	3.3	10		11/29/22 05:53	127-18-4	
Toluene	ND	ug/L	10.0	2.5	10		11/29/22 05:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	9.3	10		11/29/22 05:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	7.3	10		11/29/22 05:53	120-82-1	L2
1,1,1-Trichloroethane	3.1J	ug/L	10.0	1.1	10		11/29/22 05:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	1.4	10		11/29/22 05:53	79-00-5	
Trichloroethene	5730	ug/L	100	21.0	100		11/29/22 21:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1.6	10		11/29/22 05:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	25.0	4.1	10		11/29/22 05:53	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	10.0	3.2	10		11/29/22 05:53	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	10.0	0.90	10		11/29/22 05:53	108-67-8	
Vinyl chloride	103	ug/L	10.0	1.7	10		11/29/22 05:53	75-01-4	
Xylene (Total)	ND	ug/L	30.0	2.8	10		11/29/22 05:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		10		11/29/22 05:53	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		10		11/29/22 05:53	2199-69-1	
Toluene-d8 (S)	96	%	80-120		10		11/29/22 05:53	2037-26-5	
Preservation pH	1.0		0.10		10		11/29/22 05:53		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-3B		Lab ID: 60416291020		Collected: 11/20/22 11:25		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/29/22 05:26	67-64-1	
Benzene	2.8	ug/L	1.0	0.14	1		11/29/22 05:26	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/29/22 05:26	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/29/22 05:26	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/29/22 05:26	75-27-4	
Bromoform	1.1	ug/L	1.0	0.68	1		11/29/22 05:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/29/22 05:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/29/22 05:26	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/29/22 05:26	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/29/22 05:26	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 05:26	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/29/22 05:26	75-15-0	
Carbon tetrachloride	12.2	ug/L	1.0	0.17	1		11/29/22 05:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/29/22 05:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/29/22 05:26	75-00-3	
Chloroform	21.9	ug/L	1.0	0.22	1		11/29/22 05:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/29/22 05:26	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/29/22 05:26	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/29/22 05:26	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/29/22 05:26	96-12-8	
Dibromochloromethane	0.57J	ug/L	1.0	0.30	1		11/29/22 05:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/29/22 05:26	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/29/22 05:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/29/22 05:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 05:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/29/22 05:26	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/29/22 05:26	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/29/22 05:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/29/22 05:26	107-06-2	
1,2-Dichloroethene (Total)	460	ug/L	10.0	2.2	10		11/29/22 22:07	540-59-0	
1,1-Dichloroethene	0.64J	ug/L	1.0	0.22	1		11/29/22 05:26	75-35-4	
cis-1,2-Dichloroethene	448	ug/L	10.0	1.3	10		11/29/22 22:07	156-59-2	
trans-1,2-Dichloroethene	11.9	ug/L	10.0	1.0	10		11/29/22 22:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/29/22 05:26	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/29/22 05:26	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/29/22 05:26	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/29/22 05:26	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/29/22 05:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/29/22 05:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 05:26	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/29/22 05:26	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/29/22 05:26	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/29/22 05:26	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/29/22 05:26	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/29/22 05:26	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-3B		Lab ID: 60416291020		Collected: 11/20/22 11:25		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City									
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/29/22 05:26	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/29/22 05:26	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/29/22 05:26	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/29/22 05:26	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/29/22 05:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/29/22 05:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/29/22 05:26	79-34-5	
Tetrachloroethene	4.9	ug/L	1.0	0.33	1		11/29/22 05:26	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/29/22 05:26	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/29/22 05:26	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/29/22 05:26	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/29/22 05:26	71-55-6	
1,1,2-Trichloroethane	0.41J	ug/L	1.0	0.14	1		11/29/22 05:26	79-00-5	
Trichloroethene	375	ug/L	10.0	2.1	10		11/29/22 22:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/29/22 05:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/29/22 05:26	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/29/22 05:26	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/29/22 05:26	108-67-8	
Vinyl chloride	22.3	ug/L	1.0	0.17	1		11/29/22 05:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/29/22 05:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		11/29/22 05:26	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		11/29/22 05:26	2199-69-1	
Toluene-d8 (S)	98	%	80-120		1		11/29/22 05:26	2037-26-5	
Preservation pH	1.0		0.10		1		11/29/22 05:26		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES
Pace Project No.: 60416291

Sample: MW-1B		Lab ID: 60416291021		Collected: 11/20/22 12:20		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/28/22 16:30	67-64-1	
Benzene	5.0	ug/L	1.0	0.14	1		11/28/22 16:30	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/28/22 16:30	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/28/22 16:30	74-97-5	L1
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/28/22 16:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/28/22 16:30	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/28/22 16:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/28/22 16:30	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/28/22 16:30	104-51-8	
sec-Butylbenzene	0.15J	ug/L	1.0	0.11	1		11/28/22 16:30	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/28/22 16:30	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/28/22 16:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/28/22 16:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/28/22 16:30	108-90-7	
Chloroethane	5.3	ug/L	1.0	0.37	1		11/28/22 16:30	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/28/22 16:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/28/22 16:30	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/28/22 16:30	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/28/22 16:30	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/28/22 16:30	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/28/22 16:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/28/22 16:30	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/28/22 16:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/28/22 16:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/28/22 16:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/28/22 16:30	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/28/22 16:30	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/28/22 16:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/28/22 16:30	107-06-2	L1
1,2-Dichloroethene (Total)	199	ug/L	5.0	1.1	5		11/29/22 14:52	540-59-0	
1,1-Dichloroethene	0.22J	ug/L	1.0	0.22	1		11/28/22 16:30	75-35-4	
cis-1,2-Dichloroethene	196	ug/L	5.0	0.64	5		11/29/22 14:52	156-59-2	
trans-1,2-Dichloroethene	3.2J	ug/L	5.0	0.51	5		11/29/22 14:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/28/22 16:30	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/28/22 16:30	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/28/22 16:30	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/28/22 16:30	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/28/22 16:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/28/22 16:30	10061-02-6	
Ethylbenzene	0.53J	ug/L	1.0	0.12	1		11/28/22 16:30	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/28/22 16:30	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/28/22 16:30	591-78-6	
Isopropylbenzene (Cumene)	0.22J	ug/L	1.0	0.097	1		11/28/22 16:30	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/28/22 16:30	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/28/22 16:30	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: MW-1B		Lab ID: 60416291021		Collected: 11/20/22 12:20		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/28/22 16:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/28/22 16:30	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/28/22 16:30	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/28/22 16:30	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/28/22 16:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/28/22 16:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/28/22 16:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/28/22 16:30	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/28/22 16:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/28/22 16:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/28/22 16:30	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/28/22 16:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/28/22 16:30	79-00-5	
Trichloroethene	7.2	ug/L	1.0	0.21	1		11/28/22 16:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/28/22 16:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/28/22 16:30	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/28/22 16:30	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/28/22 16:30	108-67-8	
Vinyl chloride	93.9	ug/L	1.0	0.17	1		11/28/22 16:30	75-01-4	
Xylene (Total)	0.57J	ug/L	3.0	0.28	1		11/28/22 16:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		11/28/22 16:30	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		11/28/22 16:30	2199-69-1	
Toluene-d8 (S)	99	%	80-120		1		11/28/22 16:30	2037-26-5	
Preservation pH	1.0		0.10		1		11/28/22 16:30		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: FB-11202022		Lab ID: 60416291022		Collected: 11/20/22 12:30		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/28/22 16:17	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/28/22 16:17	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/28/22 16:17	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/28/22 16:17	74-97-5	L1
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/28/22 16:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/28/22 16:17	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/28/22 16:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/28/22 16:17	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/28/22 16:17	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/28/22 16:17	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/28/22 16:17	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/28/22 16:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/28/22 16:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/28/22 16:17	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/28/22 16:17	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/28/22 16:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/28/22 16:17	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/28/22 16:17	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/28/22 16:17	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/28/22 16:17	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/28/22 16:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/28/22 16:17	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/28/22 16:17	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/28/22 16:17	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/28/22 16:17	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/28/22 16:17	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/28/22 16:17	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/28/22 16:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/28/22 16:17	107-06-2	L1
1,2-Dichloroethene (Total)	ND	ug/L	1.0	0.22	1		11/28/22 16:17	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/28/22 16:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		11/28/22 16:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/28/22 16:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/28/22 16:17	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/28/22 16:17	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/28/22 16:17	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/28/22 16:17	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/28/22 16:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/28/22 16:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/28/22 16:17	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/28/22 16:17	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/28/22 16:17	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/28/22 16:17	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/28/22 16:17	99-87-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/28/22 16:17	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: FB-11202022		Lab ID: 60416291022		Collected: 11/20/22 12:30		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City									
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/28/22 16:17	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/28/22 16:17	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/28/22 16:17	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/28/22 16:17	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/28/22 16:17	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/28/22 16:17	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/28/22 16:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/28/22 16:17	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/28/22 16:17	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/28/22 16:17	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/28/22 16:17	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/28/22 16:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/28/22 16:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		11/28/22 16:17	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/28/22 16:17	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/28/22 16:17	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/28/22 16:17	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/28/22 16:17	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/28/22 16:17	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/28/22 16:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		11/28/22 16:17	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		11/28/22 16:17	2199-69-1	
Toluene-d8 (S)	98	%	80-120		1		11/28/22 16:17	2037-26-5	
Preservation pH	1.0		0.10		1		11/28/22 16:17		

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: TRIP BLANK		Lab ID: 60416291023		Collected: 11/20/22 18:30		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	2.5	1		11/28/22 15:09	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/28/22 15:09	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.088	1		11/28/22 15:09	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.20	1		11/28/22 15:09	74-97-5	L1
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/28/22 15:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/28/22 15:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/28/22 15:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/28/22 15:09	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.15	1		11/28/22 15:09	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.11	1		11/28/22 15:09	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.12	1		11/28/22 15:09	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/28/22 15:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/28/22 15:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/28/22 15:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/28/22 15:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/28/22 15:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/28/22 15:09	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.11	1		11/28/22 15:09	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.15	1		11/28/22 15:09	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	0.78	1		11/28/22 15:09	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/28/22 15:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.20	1		11/28/22 15:09	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.11	1		11/28/22 15:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.12	1		11/28/22 15:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/28/22 15:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.13	1		11/28/22 15:09	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		11/28/22 15:09	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/28/22 15:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/28/22 15:09	107-06-2	L1
1,2-Dichloroethene (Total)	ND	ug/L	1.0	0.22	1		11/28/22 15:09	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/28/22 15:09	75-35-4	
cis-1,2-Dichloroethene	0.14J	ug/L	1.0	0.13	1		11/28/22 15:09	156-59-2	B
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/28/22 15:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/28/22 15:09	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.10	1		11/28/22 15:09	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/28/22 15:09	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.14	1		11/28/22 15:09	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/28/22 15:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/28/22 15:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/28/22 15:09	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.42	1		11/28/22 15:09	87-68-3	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/28/22 15:09	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.097	1		11/28/22 15:09	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.13	1		11/28/22 15:09	99-87-6	
Methylene Chloride	0.78J	ug/L	1.0	0.39	1		11/28/22 15:09	75-09-2	

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ANALYTICAL RESULTS

Project: CLINTON ENGINES

Pace Project No.: 60416291

Sample: TRIP BLANK		Lab ID: 60416291023		Collected: 11/20/22 18:30		Received: 11/22/22 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/28/22 15:09	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.13	1		11/28/22 15:09	1634-04-4	
Naphthalene	ND	ug/L	10.0	0.82	1		11/28/22 15:09	91-20-3	L2
n-Propylbenzene	ND	ug/L	1.0	0.12	1		11/28/22 15:09	103-65-1	
Styrene	ND	ug/L	1.0	0.12	1		11/28/22 15:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.084	1		11/28/22 15:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/28/22 15:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/28/22 15:09	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/28/22 15:09	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.93	1		11/28/22 15:09	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.73	1		11/28/22 15:09	120-82-1	L2
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/28/22 15:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/28/22 15:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		11/28/22 15:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.16	1		11/28/22 15:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	0.41	1		11/28/22 15:09	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		11/28/22 15:09	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.090	1		11/28/22 15:09	108-67-8	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/28/22 15:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/28/22 15:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		11/28/22 15:09	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		11/28/22 15:09	2199-69-1	
Toluene-d8 (S)	101	%	80-120		1		11/28/22 15:09	2037-26-5	
Preservation pH	1.0		0.10		1		11/28/22 15:09		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

QC Batch:	820163	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60416291001, 60416291002, 60416291003, 60416291004, 60416291005, 60416291006, 60416291007, 60416291008, 60416291009, 60416291010, 60416291012, 60416291013, 60416291014, 60416291015, 60416291016, 60416291017, 60416291018, 60416291019, 60416291020		

METHOD BLANK: 3261338

Matrix: Water

Associated Lab Samples: 60416291001, 60416291002, 60416291003, 60416291004, 60416291005, 60416291006, 60416291007, 60416291008, 60416291009, 60416291010, 60416291012, 60416291013, 60416291014, 60416291015, 60416291016, 60416291017, 60416291018, 60416291019, 60416291020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.084	11/29/22 02:15	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/29/22 02:15	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/29/22 02:15	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/29/22 02:15	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/29/22 02:15	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/29/22 02:15	
1,1-Dichloropropene	ug/L	ND	1.0	0.14	11/29/22 02:15	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.93	11/29/22 02:15	
1,2,3-Trichloropropane	ug/L	ND	2.5	0.41	11/29/22 02:15	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.73	11/29/22 02:15	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	0.32	11/29/22 02:15	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.5	0.78	11/29/22 02:15	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.20	11/29/22 02:15	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.12	11/29/22 02:15	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/29/22 02:15	
1,2-Dichloroethene (Total)	ug/L	ND	1.0	0.22	11/29/22 02:15	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/29/22 02:15	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	0.090	11/29/22 02:15	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.13	11/29/22 02:15	
1,3-Dichloropropane	ug/L	ND	1.0	0.10	11/29/22 02:15	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.13	11/29/22 02:15	
2,2-Dichloropropane	ug/L	ND	1.0	0.16	11/29/22 02:15	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/29/22 02:15	
2-Chlorotoluene	ug/L	ND	1.0	0.11	11/29/22 02:15	
2-Hexanone	ug/L	ND	10.0	1.1	11/29/22 02:15	
4-Chlorotoluene	ug/L	ND	1.0	0.15	11/29/22 02:15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/29/22 02:15	
Acetone	ug/L	ND	10.0	2.5	11/29/22 02:15	
Benzene	ug/L	ND	1.0	0.14	11/29/22 02:15	
Bromobenzene	ug/L	ND	1.0	0.088	11/29/22 02:15	
Bromochloromethane	ug/L	ND	1.0	0.20	11/29/22 02:15	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/29/22 02:15	
Bromoform	ug/L	ND	1.0	0.68	11/29/22 02:15	
Bromomethane	ug/L	ND	5.0	0.46	11/29/22 02:15	
Carbon disulfide	ug/L	ND	5.0	0.98	11/29/22 02:15	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/29/22 02:15	
Chlorobenzene	ug/L	ND	1.0	0.089	11/29/22 02:15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

METHOD BLANK: 3261338

Matrix: Water

Associated Lab Samples: 60416291001, 60416291002, 60416291003, 60416291004, 60416291005, 60416291006, 60416291007, 60416291008, 60416291009, 60416291010, 60416291012, 60416291013, 60416291014, 60416291015, 60416291016, 60416291017, 60416291018, 60416291019, 60416291020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloroethane	ug/L	ND	1.0	0.37	11/29/22 02:15	
Chloroform	ug/L	ND	1.0	0.22	11/29/22 02:15	
Chloromethane	ug/L	ND	1.0	0.28	11/29/22 02:15	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/29/22 02:15	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/29/22 02:15	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/29/22 02:15	
Dibromomethane	ug/L	ND	1.0	0.11	11/29/22 02:15	
Dichlorodifluoromethane	ug/L	ND	1.0	0.20	11/29/22 02:15	
Ethylbenzene	ug/L	ND	1.0	0.12	11/29/22 02:15	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	0.42	11/29/22 02:15	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.097	11/29/22 02:15	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.13	11/29/22 02:15	
Methylene Chloride	ug/L	ND	1.0	0.39	11/29/22 02:15	
n-Butylbenzene	ug/L	ND	1.0	0.15	11/29/22 02:15	
n-Propylbenzene	ug/L	ND	1.0	0.12	11/29/22 02:15	
Naphthalene	ug/L	ND	10.0	0.82	11/29/22 02:15	
p-Isopropyltoluene	ug/L	ND	1.0	0.13	11/29/22 02:15	
sec-Butylbenzene	ug/L	ND	1.0	0.11	11/29/22 02:15	
Styrene	ug/L	ND	1.0	0.12	11/29/22 02:15	
tert-Butylbenzene	ug/L	ND	1.0	0.12	11/29/22 02:15	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/29/22 02:15	
Toluene	ug/L	ND	1.0	0.25	11/29/22 02:15	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/29/22 02:15	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/29/22 02:15	
Trichloroethene	ug/L	ND	1.0	0.21	11/29/22 02:15	
Trichlorofluoromethane	ug/L	ND	1.0	0.16	11/29/22 02:15	
Vinyl chloride	ug/L	ND	1.0	0.17	11/29/22 02:15	
Xylene (Total)	ug/L	ND	3.0	0.28	11/29/22 02:15	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		11/29/22 02:15	
4-Bromofluorobenzene (S)	%	101	80-120		11/29/22 02:15	
Toluene-d8 (S)	%	99	80-120		11/29/22 02:15	

LABORATORY CONTROL SAMPLE: 3261339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.3	107	80-120	
1,1,1-Trichloroethane	ug/L	20	20.2	101	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	20.6	103	80-120	
1,1,2-Trichloroethane	ug/L	20	21.5	107	80-120	
1,1-Dichloroethane	ug/L	20	20.3	102	75-120	
1,1-Dichloroethene	ug/L	20	21.1	106	75-120	
1,1-Dichloropropene	ug/L	20	20.1	100	75-125	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

LABORATORY CONTROL SAMPLE: 3261339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,3-Trichlorobenzene	ug/L	20	12.1	60	60-135	
1,2,3-Trichloropropane	ug/L	20	19.0	95	75-120	
1,2,4-Trichlorobenzene	ug/L	20	11.5	58	65-130	L2
1,2,4-Trimethylbenzene	ug/L	20	16.6	83	80-120	
1,2-Dibromo-3-chloropropane	ug/L	20	20.0	100	65-130	
1,2-Dibromoethane (EDB)	ug/L	20	21.4	107	80-120	
1,2-Dichlorobenzene	ug/L	20	18.7	94	80-120	
1,2-Dichloroethane	ug/L	20	23.0	115	80-120	
1,2-Dichloroethene (Total)	ug/L	40	43.8	109	80-120	
1,2-Dichloropropane	ug/L	20	20.0	100	80-120	
1,3,5-Trimethylbenzene	ug/L	20	17.1	85	75-120	
1,3-Dichlorobenzene	ug/L	20	18.3	91	80-120	
1,3-Dichloropropane	ug/L	20	21.4	107	80-120	
1,4-Dichlorobenzene	ug/L	20	18.9	94	80-120	
2,2-Dichloropropane	ug/L	20	16.6	83	55-135	
2-Butanone (MEK)	ug/L	100	91.3	91	50-155	
2-Chlorotoluene	ug/L	20	17.3	86	80-120	
2-Hexanone	ug/L	100	84.5	85	55-145	
4-Chlorotoluene	ug/L	20	18.8	94	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.3	96	70-130	
Acetone	ug/L	100	88.7	89	35-160	
Benzene	ug/L	20	18.8	94	80-120	
Bromobenzene	ug/L	20	18.1	91	80-120	
Bromochloromethane	ug/L	20	23.8	119	80-120	
Bromodichloromethane	ug/L	20	22.0	110	80-120	
Bromoform	ug/L	20	19.5	98	60-130	
Bromomethane	ug/L	20	10.7	54	50-140	
Carbon disulfide	ug/L	20	19.8	99	75-125	
Carbon tetrachloride	ug/L	20	20.3	101	70-130	
Chlorobenzene	ug/L	20	19.7	99	80-120	
Chloroethane	ug/L	20	17.5	87	70-130	
Chloroform	ug/L	20	20.7	103	75-120	
Chloromethane	ug/L	20	15.9	79	45-145	
cis-1,2-Dichloroethene	ug/L	20	22.1	110	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.7	99	75-125	
Dibromochloromethane	ug/L	20	18.1	91	75-125	
Dibromomethane	ug/L	20	22.9	114	80-120	
Dichlorodifluoromethane	ug/L	20	21.3	107	25-180	
Ethylbenzene	ug/L	20	17.8	89	80-120	
Hexachloro-1,3-butadiene	ug/L	20	18.1	90	65-125	
Isopropylbenzene (Cumene)	ug/L	20	19.8	99	80-125	
Methyl-tert-butyl ether	ug/L	20	18.9	95	75-125	
Methylene Chloride	ug/L	20	19.4	97	70-140	
n-Butylbenzene	ug/L	20	17.1	85	70-125	
n-Propylbenzene	ug/L	20	17.3	87	80-120	
Naphthalene	ug/L	20	10.2	51	60-140	L2
p-Isopropyltoluene	ug/L	20	17.9	90	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

LABORATORY CONTROL SAMPLE: 3261339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
sec-Butylbenzene	ug/L	20	18.3	92	80-120	
Styrene	ug/L	20	19.1	95	80-120	
tert-Butylbenzene	ug/L	20	18.2	91	80-120	
Tetrachloroethene	ug/L	20	20.3	101	80-125	
Toluene	ug/L	20	18.6	93	80-120	
trans-1,2-Dichloroethene	ug/L	20	21.7	108	80-120	
trans-1,3-Dichloropropene	ug/L	20	17.2	86	75-125	
Trichloroethene	ug/L	20	19.0	95	80-125	
Trichlorofluoromethane	ug/L	20	21.9	109	75-125	
Vinyl chloride	ug/L	20	17.4	87	65-140	
Xylene (Total)	ug/L	60	57.5	96	80-120	
1,2-Dichlorobenzene-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			99	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES
Pace Project No.: 60416291

QC Batch:	820210	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60416291021, 60416291022, 60416291023

METHOD BLANK: 3261415 Matrix: Water
Associated Lab Samples: 60416291021, 60416291022, 60416291023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.084	11/28/22 14:55	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/28/22 14:55	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/28/22 14:55	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/28/22 14:55	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/28/22 14:55	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/28/22 14:55	
1,1-Dichloropropene	ug/L	ND	1.0	0.14	11/28/22 14:55	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.93	11/28/22 14:55	
1,2,3-Trichloropropane	ug/L	ND	2.5	0.41	11/28/22 14:55	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.73	11/28/22 14:55	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	0.32	11/28/22 14:55	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.5	0.78	11/28/22 14:55	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.20	11/28/22 14:55	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.12	11/28/22 14:55	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/28/22 14:55	
1,2-Dichloroethene (Total)	ug/L	ND	1.0	0.22	11/28/22 14:55	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/28/22 14:55	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	0.090	11/28/22 14:55	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.13	11/28/22 14:55	
1,3-Dichloropropane	ug/L	ND	1.0	0.10	11/28/22 14:55	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.13	11/28/22 14:55	
2,2-Dichloropropane	ug/L	ND	1.0	0.16	11/28/22 14:55	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/28/22 14:55	
2-Chlorotoluene	ug/L	ND	1.0	0.11	11/28/22 14:55	
2-Hexanone	ug/L	ND	10.0	1.1	11/28/22 14:55	
4-Chlorotoluene	ug/L	ND	1.0	0.15	11/28/22 14:55	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/28/22 14:55	
Acetone	ug/L	ND	10.0	2.5	11/28/22 14:55	
Benzene	ug/L	ND	1.0	0.14	11/28/22 14:55	
Bromobenzene	ug/L	ND	1.0	0.088	11/28/22 14:55	
Bromochloromethane	ug/L	ND	1.0	0.20	11/28/22 14:55	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/28/22 14:55	
Bromoform	ug/L	ND	1.0	0.68	11/28/22 14:55	
Bromomethane	ug/L	ND	5.0	0.46	11/28/22 14:55	
Carbon disulfide	ug/L	ND	5.0	0.98	11/28/22 14:55	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/28/22 14:55	
Chlorobenzene	ug/L	ND	1.0	0.089	11/28/22 14:55	
Chloroethane	ug/L	ND	1.0	0.37	11/28/22 14:55	
Chloroform	ug/L	ND	1.0	0.22	11/28/22 14:55	
Chloromethane	ug/L	ND	1.0	0.28	11/28/22 14:55	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

METHOD BLANK: 3261415

Matrix: Water

Associated Lab Samples: 60416291021, 60416291022, 60416291023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	0.18J	1.0	0.13	11/28/22 14:55	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/28/22 14:55	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/28/22 14:55	
Dibromomethane	ug/L	ND	1.0	0.11	11/28/22 14:55	
Dichlorodifluoromethane	ug/L	ND	1.0	0.20	11/28/22 14:55	
Ethylbenzene	ug/L	ND	1.0	0.12	11/28/22 14:55	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	0.42	11/28/22 14:55	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.097	11/28/22 14:55	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.13	11/28/22 14:55	
Methylene Chloride	ug/L	ND	1.0	0.39	11/28/22 14:55	
n-Butylbenzene	ug/L	ND	1.0	0.15	11/28/22 14:55	
n-Propylbenzene	ug/L	ND	1.0	0.12	11/28/22 14:55	
Naphthalene	ug/L	ND	10.0	0.82	11/28/22 14:55	
p-Isopropyltoluene	ug/L	ND	1.0	0.13	11/28/22 14:55	
sec-Butylbenzene	ug/L	ND	1.0	0.11	11/28/22 14:55	
Styrene	ug/L	ND	1.0	0.12	11/28/22 14:55	
tert-Butylbenzene	ug/L	ND	1.0	0.12	11/28/22 14:55	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/28/22 14:55	
Toluene	ug/L	ND	1.0	0.25	11/28/22 14:55	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/28/22 14:55	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/28/22 14:55	
Trichloroethene	ug/L	ND	1.0	0.21	11/28/22 14:55	
Trichlorofluoromethane	ug/L	ND	1.0	0.16	11/28/22 14:55	
Vinyl chloride	ug/L	ND	1.0	0.17	11/28/22 14:55	
Xylene (Total)	ug/L	ND	3.0	0.28	11/28/22 14:55	
1,2-Dichlorobenzene-d4 (S)	%	104	80-120		11/28/22 14:55	
4-Bromofluorobenzene (S)	%	102	80-120		11/28/22 14:55	
Toluene-d8 (S)	%	95	80-120		11/28/22 14:55	

LABORATORY CONTROL SAMPLE: 3261416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.7	118	80-120	
1,1,1-Trichloroethane	ug/L	20	20.6	103	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	20.4	102	80-120	
1,1,2-Trichloroethane	ug/L	20	23.0	115	80-120	
1,1-Dichloroethane	ug/L	20	20.7	104	75-120	
1,1-Dichloroethene	ug/L	20	22.0	110	75-120	
1,1-Dichloropropene	ug/L	20	20.7	104	75-125	
1,2,3-Trichlorobenzene	ug/L	20	12.4	62	60-135	
1,2,3-Trichloropropane	ug/L	20	22.1	111	75-120	
1,2,4-Trichlorobenzene	ug/L	20	12.3	62	65-130 L2	
1,2,4-Trimethylbenzene	ug/L	20	18.3	91	80-120	
1,2-Dibromo-3-chloropropane	ug/L	20	19.7	99	65-130	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

LABORATORY CONTROL SAMPLE: 3261416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	23.2	116	80-120	
1,2-Dichlorobenzene	ug/L	20	19.0	95	80-120	
1,2-Dichloroethane	ug/L	20	24.7	123	80-120	L1
1,2-Dichloroethene (Total)	ug/L	40	45.5	114	80-120	
1,2-Dichloropropane	ug/L	20	21.2	106	80-120	
1,3,5-Trimethylbenzene	ug/L	20	18.3	92	75-120	
1,3-Dichlorobenzene	ug/L	20	20.4	102	80-120	
1,3-Dichloropropane	ug/L	20	22.6	113	80-120	
1,4-Dichlorobenzene	ug/L	20	19.6	98	80-120	
2,2-Dichloropropane	ug/L	20	19.0	95	55-135	
2-Butanone (MEK)	ug/L	100	138	138	50-155	
2-Chlorotoluene	ug/L	20	18.1	90	80-120	
2-Hexanone	ug/L	100	114	114	55-145	
4-Chlorotoluene	ug/L	20	19.5	97	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.2	98	70-130	
Acetone	ug/L	100	134	134	35-160	
Benzene	ug/L	20	19.8	99	80-120	
Bromobenzene	ug/L	20	19.5	98	80-120	
Bromochloromethane	ug/L	20	24.6	123	80-120	L1
Bromodichloromethane	ug/L	20	23.1	115	80-120	
Bromoform	ug/L	20	21.6	108	60-130	
Bromomethane	ug/L	20	11.0	55	50-140	
Carbon disulfide	ug/L	20	20.1	101	75-125	
Carbon tetrachloride	ug/L	20	21.3	107	70-130	
Chlorobenzene	ug/L	20	20.3	101	80-120	
Chloroethane	ug/L	20	17.9	90	70-130	
Chloroform	ug/L	20	21.4	107	75-120	
Chloromethane	ug/L	20	16.2	81	45-145	
cis-1,2-Dichloroethene	ug/L	20	23.2	116	80-120	
cis-1,3-Dichloropropene	ug/L	20	22.3	112	75-125	
Dibromochloromethane	ug/L	20	20.2	101	75-125	
Dibromomethane	ug/L	20	22.7	114	80-120	
Dichlorodifluoromethane	ug/L	20	21.5	108	25-180	
Ethylbenzene	ug/L	20	19.8	99	80-120	
Hexachloro-1,3-butadiene	ug/L	20	17.7	88	65-125	
Isopropylbenzene (Cumene)	ug/L	20	21.0	105	80-125	
Methyl-tert-butyl ether	ug/L	20	21.0	105	75-125	
Methylene Chloride	ug/L	20	19.8	99	70-140	
n-Butylbenzene	ug/L	20	18.1	90	70-125	
n-Propylbenzene	ug/L	20	18.3	92	80-120	
Naphthalene	ug/L	20	10.9	55	60-140	L2
p-Isopropyltoluene	ug/L	20	19.2	96	80-120	
sec-Butylbenzene	ug/L	20	18.3	91	80-120	
Styrene	ug/L	20	20.0	100	80-120	
tert-Butylbenzene	ug/L	20	19.2	96	80-120	
Tetrachloroethene	ug/L	20	21.6	108	80-125	
Toluene	ug/L	20	19.9	100	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

LABORATORY CONTROL SAMPLE: 3261416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	ug/L	20	22.3	112	80-120	
trans-1,3-Dichloropropene	ug/L	20	18.6	93	75-125	
Trichloroethene	ug/L	20	21.0	105	80-125	
Trichlorofluoromethane	ug/L	20	21.7	108	75-125	
Vinyl chloride	ug/L	20	18.4	92	65-140	
Xylene (Total)	ug/L	60	62.1	103	80-120	
1,2-Dichlorobenzene-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

QC Batch: 820454

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60416291002, 60416291003, 60416291008, 60416291011, 60416291015, 60416291019, 60416291020

METHOD BLANK: 3262108

Matrix: Water

Associated Lab Samples: 60416291002, 60416291003, 60416291008, 60416291011, 60416291015, 60416291019, 60416291020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.084	11/29/22 17:04	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/29/22 17:04	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/29/22 17:04	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/29/22 17:04	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/29/22 17:04	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/29/22 17:04	
1,1-Dichloropropene	ug/L	ND	1.0	0.14	11/29/22 17:04	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.93	11/29/22 17:04	
1,2,3-Trichloropropane	ug/L	ND	2.5	0.41	11/29/22 17:04	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.73	11/29/22 17:04	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	0.32	11/29/22 17:04	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.5	0.78	11/29/22 17:04	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.20	11/29/22 17:04	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.12	11/29/22 17:04	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/29/22 17:04	
1,2-Dichloroethene (Total)	ug/L	ND	1.0	0.22	11/29/22 17:04	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/29/22 17:04	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	0.090	11/29/22 17:04	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.13	11/29/22 17:04	
1,3-Dichloropropane	ug/L	ND	1.0	0.10	11/29/22 17:04	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.13	11/29/22 17:04	
2,2-Dichloropropane	ug/L	ND	1.0	0.16	11/29/22 17:04	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/29/22 17:04	
2-Chlorotoluene	ug/L	ND	1.0	0.11	11/29/22 17:04	
2-Hexanone	ug/L	ND	10.0	1.1	11/29/22 17:04	
4-Chlorotoluene	ug/L	ND	1.0	0.15	11/29/22 17:04	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/29/22 17:04	
Acetone	ug/L	ND	10.0	2.5	11/29/22 17:04	
Benzene	ug/L	ND	1.0	0.14	11/29/22 17:04	
Bromobenzene	ug/L	ND	1.0	0.088	11/29/22 17:04	
Bromochloromethane	ug/L	ND	1.0	0.20	11/29/22 17:04	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/29/22 17:04	
Bromoform	ug/L	ND	1.0	0.68	11/29/22 17:04	
Bromomethane	ug/L	ND	5.0	0.46	11/29/22 17:04	
Carbon disulfide	ug/L	ND	5.0	0.98	11/29/22 17:04	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/29/22 17:04	
Chlorobenzene	ug/L	ND	1.0	0.089	11/29/22 17:04	
Chloroethane	ug/L	ND	1.0	0.37	11/29/22 17:04	
Chloroform	ug/L	ND	1.0	0.22	11/29/22 17:04	
Chloromethane	ug/L	ND	1.0	0.28	11/29/22 17:04	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

METHOD BLANK: 3262108

Matrix: Water

Associated Lab Samples: 60416291002, 60416291003, 60416291008, 60416291011, 60416291015, 60416291019, 60416291020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/29/22 17:04	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/29/22 17:04	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/29/22 17:04	
Dibromomethane	ug/L	ND	1.0	0.11	11/29/22 17:04	
Dichlorodifluoromethane	ug/L	ND	1.0	0.20	11/29/22 17:04	
Ethylbenzene	ug/L	ND	1.0	0.12	11/29/22 17:04	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	0.42	11/29/22 17:04	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.097	11/29/22 17:04	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.13	11/29/22 17:04	
Methylene Chloride	ug/L	ND	1.0	0.39	11/29/22 17:04	
n-Butylbenzene	ug/L	ND	1.0	0.15	11/29/22 17:04	
n-Propylbenzene	ug/L	ND	1.0	0.12	11/29/22 17:04	
Naphthalene	ug/L	ND	10.0	0.82	11/29/22 17:04	
p-Isopropyltoluene	ug/L	ND	1.0	0.13	11/29/22 17:04	
sec-Butylbenzene	ug/L	ND	1.0	0.11	11/29/22 17:04	
Styrene	ug/L	ND	1.0	0.12	11/29/22 17:04	
tert-Butylbenzene	ug/L	ND	1.0	0.12	11/29/22 17:04	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/29/22 17:04	
Toluene	ug/L	ND	1.0	0.25	11/29/22 17:04	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/29/22 17:04	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/29/22 17:04	
Trichloroethene	ug/L	ND	1.0	0.21	11/29/22 17:04	
Trichlorofluoromethane	ug/L	ND	1.0	0.16	11/29/22 17:04	
Vinyl chloride	ug/L	ND	1.0	0.17	11/29/22 17:04	
Xylene (Total)	ug/L	ND	3.0	0.28	11/29/22 17:04	
1,2-Dichlorobenzene-d4 (S)	%	105	80-120		11/29/22 17:04	
4-Bromofluorobenzene (S)	%	99	80-120		11/29/22 17:04	
Toluene-d8 (S)	%	99	80-120		11/29/22 17:04	

LABORATORY CONTROL SAMPLE: 3262109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.0	100	80-120	
1,1,1-Trichloroethane	ug/L	20	18.0	90	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	20.1	101	80-120	
1,1,2-Trichloroethane	ug/L	20	20.9	105	80-120	
1,1-Dichloroethane	ug/L	20	24.4	122	75-120	L1
1,1-Dichloroethene	ug/L	20	20.4	102	75-120	
1,1-Dichloropropene	ug/L	20	18.6	93	75-125	
1,2,3-Trichlorobenzene	ug/L	20	16.9	85	60-135	
1,2,3-Trichloropropane	ug/L	20	20.6	103	75-120	
1,2,4-Trichlorobenzene	ug/L	20	16.6	83	65-130	
1,2,4-Trimethylbenzene	ug/L	20	19.6	98	80-120	
1,2-Dibromo-3-chloropropane	ug/L	20	19.5	97	65-130	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

LABORATORY CONTROL SAMPLE: 3262109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	21.0	105	80-120	
1,2-Dichlorobenzene	ug/L	20	19.9	99	80-120	
1,2-Dichloroethane	ug/L	20	18.0	90	80-120	
1,2-Dichloroethene (Total)	ug/L	40	39.0	98	80-120	
1,2-Dichloropropane	ug/L	20	19.2	96	80-120	
1,3,5-Trimethylbenzene	ug/L	20	19.2	96	75-120	
1,3-Dichlorobenzene	ug/L	20	19.4	97	80-120	
1,3-Dichloropropane	ug/L	20	20.4	102	80-120	
1,4-Dichlorobenzene	ug/L	20	19.1	95	80-120	
2,2-Dichloropropane	ug/L	20	16.5	83	55-135	
2-Butanone (MEK)	ug/L	100	97.9	98	50-155	
2-Chlorotoluene	ug/L	20	18.6	93	80-120	
2-Hexanone	ug/L	100	105	105	55-145	
4-Chlorotoluene	ug/L	20	19.3	96	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	70-130	
Acetone	ug/L	100	110	110	35-160	
Benzene	ug/L	20	18.5	93	80-120	
Bromobenzene	ug/L	20	19.1	95	80-120	
Bromochloromethane	ug/L	20	20.1	100	80-120	
Bromodichloromethane	ug/L	20	18.8	94	80-120	
Bromoform	ug/L	20	21.1	106	60-130	
Bromomethane	ug/L	20	13.3	67	50-140	
Carbon disulfide	ug/L	20	21.9	109	75-125	
Carbon tetrachloride	ug/L	20	18.2	91	70-130	
Chlorobenzene	ug/L	20	20.0	100	80-120	
Chloroethane	ug/L	20	23.0	115	70-130	
Chloroform	ug/L	20	19.0	95	75-120	
Chloromethane	ug/L	20	14.3	71	45-145	
cis-1,2-Dichloroethene	ug/L	20	19.1	95	80-120	
cis-1,3-Dichloropropene	ug/L	20	18.5	92	75-125	
Dibromochloromethane	ug/L	20	20.4	102	75-125	
Dibromomethane	ug/L	20	19.2	96	80-120	
Dichlorodifluoromethane	ug/L	20	15.5	77	25-180	
Ethylbenzene	ug/L	20	19.6	98	80-120	
Hexachloro-1,3-butadiene	ug/L	20	18.0	90	65-125	
Isopropylbenzene (Cumene)	ug/L	20	19.2	96	80-125	
Methyl-tert-butyl ether	ug/L	20	20.7	103	75-125	
Methylene Chloride	ug/L	20	21.2	106	70-140	
n-Butylbenzene	ug/L	20	17.9	90	70-125	
n-Propylbenzene	ug/L	20	19.5	98	80-120	
Naphthalene	ug/L	20	18.5	93	60-140	
p-Isopropyltoluene	ug/L	20	18.7	93	80-120	
sec-Butylbenzene	ug/L	20	19.1	95	80-120	
Styrene	ug/L	20	20.1	101	80-120	
tert-Butylbenzene	ug/L	20	17.9	90	80-120	
Tetrachloroethene	ug/L	20	21.9	110	80-125	
Toluene	ug/L	20	20.2	101	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

LABORATORY CONTROL SAMPLE: 3262109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	ug/L	20	20.0	100	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.6	98	75-125	
Trichloroethene	ug/L	20	19.2	96	80-125	
Trichlorofluoromethane	ug/L	20	19.9	100	75-125	
Vinyl chloride	ug/L	20	19.4	97	65-140	
Xylene (Total)	ug/L	60	60.5	101	80-120	
1,2-Dichlorobenzene-d4 (S)	%			103	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			105	80-120	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES

Pace Project No.: 60416291

QC Batch: 820468

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60416291021

METHOD BLANK: 3262161

Matrix: Water

Associated Lab Samples: 60416291021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethene (Total)	ug/L	ND	1.0	0.22	11/29/22 11:57	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/29/22 11:57	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/29/22 11:57	
1,2-Dichlorobenzene-d4 (S)	%	98	80-120		11/29/22 11:57	
4-Bromofluorobenzene (S)	%	100	80-120		11/29/22 11:57	
Toluene-d8 (S)	%	97	80-120		11/29/22 11:57	

LABORATORY CONTROL SAMPLE: 3262162

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethene (Total)	ug/L	40	38.2	96	80-120	
cis-1,2-Dichloroethene	ug/L	20	19.5	98	80-120	
trans-1,2-Dichloroethene	ug/L	20	18.7	93	80-120	
1,2-Dichlorobenzene-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			100	80-120	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: CLINTON ENGINES

Pace Project No.: 60416291

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 820163

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 820210

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CLINTON ENGINES

Pace Project No.: 60416291

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60416291001	MW-103	EPA 5030B/8260	820163		
60416291002	MW-14	EPA 5030B/8260	820163		
60416291002	MW-14	EPA 5030B/8260	820454		
60416291003	MW-104	EPA 5030B/8260	820163		
60416291003	MW-104	EPA 5030B/8260	820454		
60416291004	FB-11182022	EPA 5030B/8260	820163		
60416291005	MW-102	EPA 5030B/8260	820163		
60416291006	MW-101	EPA 5030B/8260	820163		
60416291007	MW-13	EPA 5030B/8260	820163		
60416291008	MW-12	EPA 5030B/8260	820163		
60416291008	MW-12	EPA 5030B/8260	820454		
60416291009	MW-9	EPA 5030B/8260	820163		
60416291010	MW-11	EPA 5030B/8260	820163		
60416291011	MW-4B	EPA 5030B/8260	820454		
60416291012	MW-6B	EPA 5030B/8260	820163		
60416291013	MW-6B-FD	EPA 5030B/8260	820163		
60416291014	FB-11192022	EPA 5030B/8260	820163		
60416291015	MW-8B	EPA 5030B/8260	820163		
60416291015	MW-8B	EPA 5030B/8260	820454		
60416291016	MW-2B	EPA 5030B/8260	820163		
60416291017	MW-10B	EPA 5030B/8260	820163		
60416291018	MW-10B-FD	EPA 5030B/8260	820163		
60416291019	MW-10A	EPA 5030B/8260	820163		
60416291019	MW-10A	EPA 5030B/8260	820454		
60416291020	MW-3B	EPA 5030B/8260	820163		
60416291020	MW-3B	EPA 5030B/8260	820454		
60416291021	MW-1B	EPA 5030B/8260	820210		
60416291021	MW-1B	EPA 5030B/8260	820468		
60416291022	FB-11202022	EPA 5030B/8260	820210		
60416291023	TRIP BLANK	EPA 5030B/8260	820210		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-LENE-0009_Sampl

Revision: 2

Effective Date: 01/12/202

WO#: 60416291



Client Name: Tetra Tech EMI

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☒ Other ☐Tracking #: Pace Shipping Label Used? Yes ☐ No ☒Custody Seal on Cooler/Box Present: Yes ☐ No ☒ Seals intact: Yes ☐ No ☒Packing Material: Bubble Wrap ☒ Bubble Bags ☐ Foam ☐ None ☐ Other ☐Thermometer Used: 7299 Type of Ice: Wet ☒ Blue ☐ None ☐

Cooler Temperature (°C): As-read 0.1 Corr. Factor 0.0 Corrected 0.1

Date and initials of person
examining contents:

AP 11/22

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: WT	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

Client Notification/ Resolution:

Copy COC to Client? Y / N

Field Data Required? Y / N

Person Contacted:

Date/Time:

Comments/ Resolution:

Project Manager Review:

Date:

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately. Consent and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

Page: 2 Of 2

Section A

Required Client Information:

Required Project Information:

Invoice Information:

Company:	TETRA TECH EMI		Report To:	Paulina Tinoco		Attention:	
Address:	415 Oak Street Kansas City, MO 64106		Copy To:	katty@tetratech.com katty@tetratech.com		Company Name:	
Email:	paulina.tinoco@tetratech.com		Purchase Order #:			Address:	
Requested:	816-412-1779		Project Name:	Clinton Engines		Pace Quote:	
Requested Due Date:	Standard		Project #:			Pace Project Manager:	jamie church@pacelabs.com,
						Pace Profile #:	15191, line 5
						State / Location	IA
						Regulatory Agency	

Requested Due Date: Standard TAT

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Paulina Timocov / TT	11/22/22	1009	[Signature]	11/27	1009	0.1 g IV

SAMPLER NAME AND SIGNATURE		TEMP IN C	Received on ice (Y/N)	Custody Sealed (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: Paulina Tineco					
SIGNATURE of SAMPLER: [Signature]					

Client: Tetra Tech EMI

Profile # 15141-5

Site: Clinton Engineers

Notes: 82600 with 5035 kit, they forgot to mark LOC 1

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	WT	W																												
2		W																												
3		W																												
4		W																												
5		W																												
6		W																												
7		W																												
8		W																												
9		W																												
10		W																												
11		W																												
12		W																												

Container Codes

Glass		Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NaOH plastic
DG9H	40mL HCl amber vial	WGKU	4oz clear soil jar	BP1N	1L HNO3 plastic
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NaOH plastic
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered
BG3H	250mL HCl Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate
				BP4U	125mL unpreserved plastic
				BP4N	125mL HNO3 plastic
				BP4S	125mL H2SO4 plastic
				WPDU	16oz unpreserved plastic

Work Order Number:

60416291

Client: Tetra Tech EMI

Site: Clinton Engines

Profile #

15191-5

Notes: 82600 with 5035 kit, they forgot to mark COC 1

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	W	W																												
2	1	W																												
3		W																												
4		W																												
5		W																												
6		W																												
7		W																												
8		W																												
9		W																												
10		W																												
11		W																												
12		W																												

Container Codes

Glass			Plastic			Misc.		
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NaOH plastic	I	Wipe/Swab	
DG9H	40mL HCl amber vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate	
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag	
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter	
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes	
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NaOH plastic	R	Terracore Kit	
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can	
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic			
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic			
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate			
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic			
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water	
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid	
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid	
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	Oil	
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe	
				BP4U	125mL unpreserved plastic	DW	Drinking Water	
				BP4N	125mL HNO3 plastic			
				BP4S	125mL H2SO4 plastic			
				WPDU	16oz unpreserved plastic			

Work Order Number:

60416291

DATA VERIFICATION REPORT

Prepared by: Ellen McEntee
Date: January 5, 2022
Site Name/Job Number: Clinton Engines / 103G65210190.009.03
Laboratory: Pace Analytical, Lenexa, KS

Data Package or SDG Number: 60418206

Sample Designations/Names:

CE-121522-IW Trip Blank

Matrices: Water

Analytical Parameters: VOCs by SW-846 Method 8260

Data Package Element	Usable	Rejected	NA	Description of Affected Data (note specific samples and analytical parameters affected)
Chain of custody	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The chain of custody was completed appropriately.
Data package completeness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The data package contains all the required elements.
Sample preservation, storage, and holding times	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The samples were received on 12/15/2022; the samples arrived in good condition. Custody seals were not present. All samples were analyzed within the recommended holding time.
Method and field blank contamination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The method blank and trip blank were non-detect for all target analytes.
Surrogate spikes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Surrogate spikes were within control limits.
Matrix spikes/matrix spike duplicates (MS/MSD)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	MS/MSDs were not analyzed with these samples.
Laboratory control samples/Laboratory control sample duplicates (LCS/LCSD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The LCS recovery for 1,1,2,2-tetrachloroethane was above the acceptance limit. The associated sample results are non-detect and were not qualified.
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Summary Results are usable as reported by the laboratory. No qualifications of the results are recommended.				

December 20, 2022

Kaitlyn Mitchell
Tetra Tech EMI
415 Oak
Kansas City, MO 64106

RE: Project: CLINTON ENGINES, 103G6521
Pace Project No.: 60418206

Dear Kaitlyn Mitchell:

Enclosed are the analytical results for sample(s) received by the laboratory on December 15, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,



Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Emily Fisher, TETRA TECH EMI



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Inorganic Drinking Water Certification #: 10090

Arkansas Drinking Water

Arkansas Certification #: 22-031-0

Illinois Certification #: 2000302021-3

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212023-1

Oklahoma Certification #: 2022-057

Florida: Cert E871149 SEKS WET

Texas Certification #: T104704407-21-15

Utah Certification #: KS000212022-12

Illinois Certification #: 004592

Kansas Field Laboratory Accreditation: # E-92587

Missouri SEKS Micro Certification: 10070

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60418206001	CE-121522-IW	Water	12/14/22 16:20	12/15/22 14:09
60418206002	TRIP BLANK	Water	12/14/22 16:20	12/15/22 14:09

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SAMPLE ANALYTE COUNT

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60418206001	CE-121522-IW	EPA 5030B/8260	CSC	69	PASI-K
60418206002	TRIP BLANK	EPA 5030B/8260	CSC	69	PASI-K

PASI-K = Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

Sample: CE-121522-IW		Lab ID: 60418206001	Collected: 12/14/22 16:20	Received: 12/15/22 14:09	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
Acetone	ND	ug/L	10.0	1		12/19/22 21:34	67-64-1	
Benzene	ND	ug/L	1.0	1		12/19/22 21:34	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		12/19/22 21:34	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		12/19/22 21:34	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		12/19/22 21:34	75-27-4	
Bromoform	ND	ug/L	1.0	1		12/19/22 21:34	75-25-2	
Bromomethane	ND	ug/L	5.0	1		12/19/22 21:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		12/19/22 21:34	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		12/19/22 21:34	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		12/19/22 21:34	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		12/19/22 21:34	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		12/19/22 21:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		12/19/22 21:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		12/19/22 21:34	108-90-7	
Chloroethane	ND	ug/L	1.0	1		12/19/22 21:34	75-00-3	
Chloroform	ND	ug/L	1.0	1		12/19/22 21:34	67-66-3	
Chloromethane	ND	ug/L	1.0	1		12/19/22 21:34	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		12/19/22 21:34	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		12/19/22 21:34	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		12/19/22 21:34	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		12/19/22 21:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		12/19/22 21:34	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		12/19/22 21:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		12/19/22 21:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		12/19/22 21:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		12/19/22 21:34	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		12/19/22 21:34	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		12/19/22 21:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		12/19/22 21:34	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		12/19/22 21:34	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		12/19/22 21:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/19/22 21:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/19/22 21:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		12/19/22 21:34	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		12/19/22 21:34	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		12/19/22 21:34	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		12/19/22 21:34	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		12/19/22 21:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		12/19/22 21:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		12/19/22 21:34	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		12/19/22 21:34	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		12/19/22 21:34	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		12/19/22 21:34	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		12/19/22 21:34	99-87-6	
Methylene Chloride	ND	ug/L	1.0	1		12/19/22 21:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		12/19/22 21:34	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

Sample: CE-121522-IW		Lab ID: 60418206001	Collected: 12/14/22 16:20	Received: 12/15/22 14:09	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
Methyl-tert-butyl ether	ND	ug/L	1.0	1		12/19/22 21:34	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		12/19/22 21:34	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		12/19/22 21:34	103-65-1	
Styrene	ND	ug/L	1.0	1		12/19/22 21:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		12/19/22 21:34	630-20-6	
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/19/22 21:34	79-34-5	L1
Tetrachloroethene	ND	ug/L	1.0	1		12/19/22 21:34	127-18-4	
Toluene	ND	ug/L	1.0	1		12/19/22 21:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		12/19/22 21:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		12/19/22 21:34	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		12/19/22 21:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		12/19/22 21:34	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		12/19/22 21:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		12/19/22 21:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		12/19/22 21:34	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		12/19/22 21:34	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		12/19/22 21:34	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		12/19/22 21:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		12/19/22 21:34	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	80-120	1		12/19/22 21:34	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120	1		12/19/22 21:34	2199-69-1	
Toluene-d8 (S)	101	%	80-120	1		12/19/22 21:34	2037-26-5	
Preservation pH	1.0		0.10	1		12/19/22 21:34		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

Sample: TRIP BLANK		Lab ID: 60418206002	Collected: 12/14/22 16:20	Received: 12/15/22 14:09	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
	Pace Analytical Services - Kansas City							
Acetone	ND	ug/L	10.0	1		12/19/22 21:20	67-64-1	
Benzene	ND	ug/L	1.0	1		12/19/22 21:20	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		12/19/22 21:20	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		12/19/22 21:20	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		12/19/22 21:20	75-27-4	
Bromoform	ND	ug/L	1.0	1		12/19/22 21:20	75-25-2	
Bromomethane	ND	ug/L	5.0	1		12/19/22 21:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		12/19/22 21:20	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		12/19/22 21:20	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		12/19/22 21:20	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		12/19/22 21:20	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		12/19/22 21:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		12/19/22 21:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		12/19/22 21:20	108-90-7	
Chloroethane	ND	ug/L	1.0	1		12/19/22 21:20	75-00-3	
Chloroform	ND	ug/L	1.0	1		12/19/22 21:20	67-66-3	
Chloromethane	ND	ug/L	1.0	1		12/19/22 21:20	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		12/19/22 21:20	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		12/19/22 21:20	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		12/19/22 21:20	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		12/19/22 21:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		12/19/22 21:20	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		12/19/22 21:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		12/19/22 21:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		12/19/22 21:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		12/19/22 21:20	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		12/19/22 21:20	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		12/19/22 21:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		12/19/22 21:20	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		12/19/22 21:20	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		12/19/22 21:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/19/22 21:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/19/22 21:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		12/19/22 21:20	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		12/19/22 21:20	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		12/19/22 21:20	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		12/19/22 21:20	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		12/19/22 21:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		12/19/22 21:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		12/19/22 21:20	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		12/19/22 21:20	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		12/19/22 21:20	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		12/19/22 21:20	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		12/19/22 21:20	99-87-6	
Methylene Chloride	ND	ug/L	1.0	1		12/19/22 21:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		12/19/22 21:20	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

Sample: TRIP BLANK		Lab ID: 60418206002	Collected: 12/14/22 16:20	Received: 12/15/22 14:09	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
Methyl-tert-butyl ether	ND	ug/L	1.0	1		12/19/22 21:20	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		12/19/22 21:20	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		12/19/22 21:20	103-65-1	
Styrene	ND	ug/L	1.0	1		12/19/22 21:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		12/19/22 21:20	630-20-6	
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/19/22 21:20	79-34-5	L1
Tetrachloroethene	ND	ug/L	1.0	1		12/19/22 21:20	127-18-4	
Toluene	ND	ug/L	1.0	1		12/19/22 21:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		12/19/22 21:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		12/19/22 21:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		12/19/22 21:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		12/19/22 21:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		12/19/22 21:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		12/19/22 21:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		12/19/22 21:20	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		12/19/22 21:20	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		12/19/22 21:20	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		12/19/22 21:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		12/19/22 21:20	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	80-120	1		12/19/22 21:20	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120	1		12/19/22 21:20	2199-69-1	
Toluene-d8 (S)	101	%	80-120	1		12/19/22 21:20	2037-26-5	
Preservation pH	1.0		0.10	1		12/19/22 21:20		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

QC Batch: 823911

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60418206001, 60418206002

METHOD BLANK: 3274852

Matrix: Water

Associated Lab Samples: 60418206001, 60418206002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	12/19/22 21:05	
1,1,1-Trichloroethane	ug/L	ND	1.0	12/19/22 21:05	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/19/22 21:05	
1,1,2-Trichloroethane	ug/L	ND	1.0	12/19/22 21:05	
1,1-Dichloroethane	ug/L	ND	1.0	12/19/22 21:05	
1,1-Dichloroethene	ug/L	ND	1.0	12/19/22 21:05	
1,1-Dichloropropene	ug/L	ND	1.0	12/19/22 21:05	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	12/19/22 21:05	
1,2,3-Trichloropropane	ug/L	ND	2.5	12/19/22 21:05	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	12/19/22 21:05	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	12/19/22 21:05	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.5	12/19/22 21:05	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	12/19/22 21:05	
1,2-Dichlorobenzene	ug/L	ND	1.0	12/19/22 21:05	
1,2-Dichloroethane	ug/L	ND	1.0	12/19/22 21:05	
1,2-Dichloroethene (Total)	ug/L	ND	1.0	12/19/22 21:05	
1,2-Dichloropropane	ug/L	ND	1.0	12/19/22 21:05	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	12/19/22 21:05	
1,3-Dichlorobenzene	ug/L	ND	1.0	12/19/22 21:05	
1,3-Dichloropropane	ug/L	ND	1.0	12/19/22 21:05	
1,4-Dichlorobenzene	ug/L	ND	1.0	12/19/22 21:05	
2,2-Dichloropropane	ug/L	ND	1.0	12/19/22 21:05	
2-Butanone (MEK)	ug/L	ND	10.0	12/19/22 21:05	
2-Chlorotoluene	ug/L	ND	1.0	12/19/22 21:05	
2-Hexanone	ug/L	ND	10.0	12/19/22 21:05	
4-Chlorotoluene	ug/L	ND	1.0	12/19/22 21:05	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	12/19/22 21:05	
Acetone	ug/L	ND	10.0	12/19/22 21:05	
Benzene	ug/L	ND	1.0	12/19/22 21:05	
Bromobenzene	ug/L	ND	1.0	12/19/22 21:05	
Bromochloromethane	ug/L	ND	1.0	12/19/22 21:05	
Bromodichloromethane	ug/L	ND	1.0	12/19/22 21:05	
Bromoform	ug/L	ND	1.0	12/19/22 21:05	
Bromomethane	ug/L	ND	5.0	12/19/22 21:05	
Carbon disulfide	ug/L	ND	5.0	12/19/22 21:05	
Carbon tetrachloride	ug/L	ND	1.0	12/19/22 21:05	
Chlorobenzene	ug/L	ND	1.0	12/19/22 21:05	
Chloroethane	ug/L	ND	1.0	12/19/22 21:05	
Chloroform	ug/L	ND	1.0	12/19/22 21:05	
Chloromethane	ug/L	ND	1.0	12/19/22 21:05	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

METHOD BLANK: 3274852

Matrix: Water

Associated Lab Samples: 60418206001, 60418206002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	12/19/22 21:05	
cis-1,3-Dichloropropene	ug/L	ND	1.0	12/19/22 21:05	
Dibromochloromethane	ug/L	ND	1.0	12/19/22 21:05	
Dibromomethane	ug/L	ND	1.0	12/19/22 21:05	
Dichlorodifluoromethane	ug/L	ND	1.0	12/19/22 21:05	
Ethylbenzene	ug/L	ND	1.0	12/19/22 21:05	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	12/19/22 21:05	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	12/19/22 21:05	
Methyl-tert-butyl ether	ug/L	ND	1.0	12/19/22 21:05	
Methylene Chloride	ug/L	ND	1.0	12/19/22 21:05	
n-Butylbenzene	ug/L	ND	1.0	12/19/22 21:05	
n-Propylbenzene	ug/L	ND	1.0	12/19/22 21:05	
Naphthalene	ug/L	ND	10.0	12/19/22 21:05	
p-Isopropyltoluene	ug/L	ND	1.0	12/19/22 21:05	
sec-Butylbenzene	ug/L	ND	1.0	12/19/22 21:05	
Styrene	ug/L	ND	1.0	12/19/22 21:05	
tert-Butylbenzene	ug/L	ND	1.0	12/19/22 21:05	
Tetrachloroethene	ug/L	ND	1.0	12/19/22 21:05	
Toluene	ug/L	ND	1.0	12/19/22 21:05	
trans-1,2-Dichloroethene	ug/L	ND	1.0	12/19/22 21:05	
trans-1,3-Dichloropropene	ug/L	ND	1.0	12/19/22 21:05	
Trichloroethene	ug/L	ND	1.0	12/19/22 21:05	
Trichlorofluoromethane	ug/L	ND	1.0	12/19/22 21:05	
Vinyl chloride	ug/L	ND	1.0	12/19/22 21:05	
Xylene (Total)	ug/L	ND	3.0	12/19/22 21:05	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120	12/19/22 21:05	
4-Bromofluorobenzene (S)	%	101	80-120	12/19/22 21:05	
Toluene-d8 (S)	%	102	80-120	12/19/22 21:05	

LABORATORY CONTROL SAMPLE: 3274853

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.1	100	80-120	
1,1,1-Trichloroethane	ug/L	20	20.9	105	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	24.4	122	80-120	L1
1,1,2-Trichloroethane	ug/L	20	19.1	95	80-120	
1,1-Dichloroethane	ug/L	20	20.0	100	75-120	
1,1-Dichloroethene	ug/L	20	19.2	96	75-120	
1,1-Dichloropropene	ug/L	20	19.7	99	75-125	
1,2,3-Trichlorobenzene	ug/L	20	22.9	115	60-135	
1,2,3-Trichloropropane	ug/L	20	21.0	105	75-120	
1,2,4-Trichlorobenzene	ug/L	20	22.6	113	65-130	
1,2,4-Trimethylbenzene	ug/L	20	20.3	102	80-120	
1,2-Dibromo-3-chloropropane	ug/L	20	23.0	115	65-130	

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QUALITY CONTROL DATA

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

LABORATORY CONTROL SAMPLE: 3274853

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	20.4	102	80-120	
1,2-Dichlorobenzene	ug/L	20	20.8	104	80-120	
1,2-Dichloroethane	ug/L	20	20.7	104	80-120	
1,2-Dichloroethene (Total)	ug/L	40	38.8	97	80-120	
1,2-Dichloropropane	ug/L	20	20.6	103	80-120	
1,3,5-Trimethylbenzene	ug/L	20	20.8	104	75-120	
1,3-Dichlorobenzene	ug/L	20	20.2	101	80-120	
1,3-Dichloropropane	ug/L	20	21.0	105	80-120	
1,4-Dichlorobenzene	ug/L	20	20.4	102	80-120	
2,2-Dichloropropane	ug/L	20	20.4	102	55-135	
2-Butanone (MEK)	ug/L	100	87.9	88	50-155	
2-Chlorotoluene	ug/L	20	20.1	100	80-120	
2-Hexanone	ug/L	100	95.0	95	55-145	
4-Chlorotoluene	ug/L	20	19.9	100	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	70-130	
Acetone	ug/L	100	64.1	64	35-160	
Benzene	ug/L	20	20.3	101	80-120	
Bromobenzene	ug/L	20	20.3	102	80-120	
Bromochloromethane	ug/L	20	19.8	99	80-120	
Bromodichloromethane	ug/L	20	21.0	105	80-120	
Bromoform	ug/L	20	20.6	103	60-130	
Bromomethane	ug/L	20	18.2	91	50-140	
Carbon disulfide	ug/L	20	19.7	98	75-125	
Carbon tetrachloride	ug/L	20	21.4	107	70-130	
Chlorobenzene	ug/L	20	20.0	100	80-120	
Chloroethane	ug/L	20	20.6	103	70-130	
Chloroform	ug/L	20	20.2	101	75-120	
Chloromethane	ug/L	20	23.6	118	45-145	
cis-1,2-Dichloroethene	ug/L	20	19.7	99	80-120	
cis-1,3-Dichloropropene	ug/L	20	20.8	104	75-125	
Dibromochloromethane	ug/L	20	20.2	101	75-125	
Dibromomethane	ug/L	20	21.1	106	80-120	
Dichlorodifluoromethane	ug/L	20	28.6	143	25-180	
Ethylbenzene	ug/L	20	19.4	97	80-120	
Hexachloro-1,3-butadiene	ug/L	20	21.9	110	65-125	
Isopropylbenzene (Cumene)	ug/L	20	19.9	100	80-125	
Methyl-tert-butyl ether	ug/L	20	20.4	102	75-125	
Methylene Chloride	ug/L	20	18.5	92	70-140	
n-Butylbenzene	ug/L	20	22.7	113	70-125	
n-Propylbenzene	ug/L	20	20.1	101	80-120	
Naphthalene	ug/L	20	22.7	114	60-140	
p-Isopropyltoluene	ug/L	20	20.8	104	80-120	
sec-Butylbenzene	ug/L	20	21.4	107	80-120	
Styrene	ug/L	20	23.5	118	80-120	
tert-Butylbenzene	ug/L	20	19.9	99	80-120	
Tetrachloroethene	ug/L	20	19.6	98	80-125	
Toluene	ug/L	20	19.9	99	80-120	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

LABORATORY CONTROL SAMPLE: 3274853

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	ug/L	20	19.1	95	80-120	
trans-1,3-Dichloropropene	ug/L	20	21.5	108	75-125	
Trichloroethene	ug/L	20	18.6	93	80-125	
Trichlorofluoromethane	ug/L	20	20.4	102	75-125	
Vinyl chloride	ug/L	20	22.0	110	65-140	
Xylene (Total)	ug/L	60	57.6	96	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Toluene-d8 (S)	%			102	80-120	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CLINTON ENGINES, 103G6521

Pace Project No.: 60418206

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60418206001	CE-121522-IW	EPA 5030B/8260	823911		
60418206002	TRIP BLANK	EPA 5030B/8260	823911		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-LENE-0009_Sample C

Revision: 2

Effective Date: 01/12/2022

WO#: 60418206

Client Name: Tetra TechCourier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☒ Other ☐Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☒Custody Seal on Cooler/Box Present: Yes ☐ No ☒ Seals intact: Yes ☐ No ☒Packing Material: Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☐ Other ☐Thermometer Used: T296 Type of Ice: Wet ☐ Blue ☐ None ☐Cooler Temperature (°C): As-read 5.0 Corr. Factor -0.1 Corrected 4.9Date and initials of person
examining contents:AF 12/16

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>WT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

Client Notification/ Resolution:

Copy COC to Client? Y / N

Field Data Required? Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

PACE Analytical Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields										CHAIN-OF-CUSTODY Analytical Request Document Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields																			
Company: Tetra Tech Address: 415 Oak Street, KCMO					Billing Information: Same					LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or MTIL Log-In Number Here																			
Report To: Kaitlyn Mitchell Copy To:					Email To: kaitlyn.mitchell@tetratech.com Site Collection Info/Address: 605 E Maple St, Maquoketa					ALL BOLD OUTLINED AREAS are for LAB USE ONLY Lab Project Manager:																			
Customer Project Name/Number: 103G6521 Phone: Email:					State: IA / County/City: [] PT [] MT [] CT [] ET Time Zone Collected: [] PT [] MT [] CT [] ET					Container Preservative Type **																			
Collected By (print): Geoffrey Jay Quote #: Turnaround Date Required:					Site/Facility ID #: Purchase Order #: Turnaround Date Required:					Analyses																			
Sample Disposal: <input type="checkbox"/> Dispose as appropriate <input type="checkbox"/> Return <input type="checkbox"/> Archive: _____ <input type="checkbox"/> Hold: _____					Rush: (Expedite Charges Apply) <input type="checkbox"/> Same Day [] Next Day <input type="checkbox"/> 2 Day [] 3 Day <input type="checkbox"/> 4 Day [] 5 Day					Lab Profile/Line:																			
* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)					Compliance Monitoring? <input type="checkbox"/> Yes [] No DW PWS ID #: DW Location Code: Field Filtered (if applicable): <input type="checkbox"/> Yes [] No Analysis:					Lab Sample Receipt Checklist: Custody Seals Present/Intact: Y N NA Custody Signatures Present: Y N NA Collector Signature Present: Y N NA Bottles Intact: Y N NA Correct Bottles: Y N NA Sufficient Volume: Y N NA Samples Received on Ice: Y N NA VOA - Headspace Acceptable: Y N NA USDA Regulated Soils: Y N NA Samples in Holding Time: Y N NA Residual Chlorine Present: Y N NA Cl Strips: Y N NA Sample pH Acceptable: Y N NA pH Strips: Y N NA Sulfide Present: Y N NA Lead Acetate Strips: Y N NA																			
Customer Sample ID CE-121522-IW <i>Trip blank</i>					Comp / Grab C Matrix * GW					Collected (or Composite Start) Date 12/14/22 Time 1620 Composite End Date 12/14/22 Time 1620					Res Cl # of Ctns 3														
Customer Remarks / Special Conditions / Possible Hazards:										SHORT HOLDS PRESENT (<72 hours): Y N N/A																			
										Lab Tracking #:										LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: 1196 Cooler 1 Temp Upon Receipt: 4.3°C Cooler 1 Therm Corr. Factor: -0.6°C Cooler 1 Corrected Temp: 4.9°C Comments:									
										Samples received via: FEDEX UPS Client Courier Pace Courier										MTIL LAB USE ONLY Table #:									
										Date/Time: 12/15/22 1409 Date/Time:										Accnum: Template: Prelogin: PM: PB:									
Relinquished by/Company: (Signature) <i>Geoffrey Jay</i> Tetra Tech										Date/Time: 12-15-22/1409 Date/Time:										Received by/Company: (Signature) <i>DM</i>									
Relinquished by/Company: (Signature)										Date/Time:										Received by/Company: (Signature)									
Relinquished by/Company: (Signature)										Date/Time:										Received by/Company: (Signature)									
Trip Blank Received: Y N NA HCL MeOH TSP Other										Non Conformance(s): YES / NO										Page: _____ of: _____									

Client: Tetra Tech

Site: 10366521

Profile #

9083-2

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1																														
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass		Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NaOH plastic
DG9H	40mL HCl amber vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NaOH plastic
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate
				BP4U	125mL unpreserved plastic
				BP4N	125mL HNO3 plastic
				BP4S	125mL H2SO4 plastic
				WPDU	16oz unpreserved plastic

Work Order Number:

60418206

ATTACHMENT 1

SURVEY DATA

Maquoketa Monitoring Wells
CGA Nov 2022
NAD83 Iowa State Plane North Zone
NAVD 88 - Geoid 2018

Control Point #	Northing:	Easting:	Latitude: (decimal)	Longitude: (decimal)	Elevation:	Descriptor:
400	3500189.449	5692864.343	N42.066330 (d)	W90.657811 (d)	686.913	111 1/2IN RBR 5MIN OBSERVATION
401	3501615.624	5695609.424	N42.069988 (d)	W90.647530 (d)	680.653	111 1/2IN RBR 5MIN OBSERVATION

Point #	Northing:	Easting:	Latitude: (decimal)	Longitude: (decimal)	Elevation:	Descriptor:
4000	3500177.144	5691465.317	N42.066425 (d)	W90.662962 (d)	702.415	544 MW-101 TOP PVC
4001	3500177.144	5691465.317			702.894	544 MW-101 TOP CASING
4002	3501875.788	5694093.904	N42.070841 (d)	W90.653076 (d)	684.785	544 MW-104 TOP PVC
4003	3501875.788	5694093.904			685.012	544 MW-104 TOP CASING
4004	3501633.653	5695583.353	N42.070040 (d)	W90.647624 (d)	679.851	544 MW-103 TOP PVC
4005	3501633.653	5695583.353			680.185	544 MW-103 TOP CASING
4006	3501358.493	5694741.136	N42.069363 (d)	W90.650758 (d)	679.283	544 MW-14 TOP PVC
4007	3501358.493	5694741.136			679.566	544 MW-14 TOP CASING
4008	3500696.805	5693160.71	N42.067694 (d)	W90.656657 (d)	680	544 MW-13 TOP PVC
4009	3500696.805	5693160.71			680.659	544 MW-13 TOP CASING
4010	3500542.708	5692439.275	N42.067338 (d)	W90.659332 (d)	684.2	544 MW-12 TOP PVC
4011	3500542.708	5692439.275			684.776	544 MW-12 TOP CASING
4012	3500013.675	5692441.606	N42.065887 (d)	W90.659389 (d)	693.648	544 MW-09 TOP PVC
4013	3500013.675	5692441.606			694.122	544 MW-09 TOP CASING
4014	3498922.149	5692714.006	N42.062868 (d)	W90.658521 (d)	744.429	544 MW-102 TOP PVC
4015	3498922.149	5692714.006			744.677	544 MW-102 TOP CASING
4016	3500119.876	5692683.679	N42.066156 (d)	W90.658485 (d)	689.654	544 MW-10A TOP PVC
4017	3500119.876	5692683.679			689.911	544 MW-10A TOP CASING
4018	3500120.16	5692690.639	N42.066156 (d)	W90.658459 (d)	689.398	544 MW-10B TOP PVC
4019	3500120.16	5692690.639			689.962	544 MW-10B TOP CASING
4020	3499938.302	5692863.512	N42.065641 (d)	W90.657845 (d)	693.835	544 MW-2B TOP PVC
4021	3499938.302	5692863.512			694.216	544 MW-2B TOP CASING
4022	3499878.061	5693136.146	N42.065451 (d)	W90.656849 (d)	700.082	544 MW-6B TOP PVC
4023	3499878.061	5693136.146			697.508	544 MW-6B GROUND
4024	3499741.476	5693501.743	N42.065043 (d)	W90.655520 (d)	701.474	544 MW-11 TOP PVC
4025	3499741.476	5693501.743			699.307	544 MW-11 GROUND
4026	3499693.71	5693370.68	N42.064924 (d)	W90.656009 (d)	702.532	544 MW-4B TOP PVC
4027	3499693.71	5693370.68			699.432	544 MW-4B GROUND
4028	3499830.522	5692779.974	N42.065353 (d)	W90.658166 (d)	699.182	544 MW-3B TOP PVC
4029	3499830.522	5692779.974			699.59	544 MW-3B TOP CASING
4030	3500009.863	5692870.598	N42.065837 (d)	W90.657810 (d)	691.144	544 MW-8B TOP PVC
4031	3500009.863	5692870.598			691.73	544 MW-8B TOP CASING
4032	3499956.789	5692776.043	N42.065700 (d)	W90.658165 (d)	697.31	544 MW-1B TOP PVC
4033	3499956.789	5692776.043			697.643	544 MW-1B TOP CASING
4034	3499878.061	5693136.146	N42.065451 (d)	W90.656849 (d)	700.454	544 MW-6B TOP CASING
4035	3499741.476	5693501.743	N42.065043 (d)	W90.655520 (d)	701.992	544 MW-11 TOP CASING
4036	3499693.71	5693370.68	N42.064924 (d)	W90.656009 (d)	702.913	544 MW-4B TOP CASING

Note: Elevations leveled from local set control point # 400, leveled to all wells and then checked into control point # 401