CAP IMP SP3 Meadows of Dan Food Market PC# 2014-2256

CORRECTIVE ACTION PLAN IMPLEMENTATION REPORT SUB-PHASE 3

Meadows of Dan Food Market
2609 Jeb Stuart Highway
Meadows of Dan, Virginia 24120

PC# 2014-2256
Greene Project# FMMD1008

August 23, 2016

DEQ Case Manager:
Mr. Douglas B. Carl

CORRECTIVE ACTION PLAN
IMPLEMENTATION REPORT
SUB-PHASE 3

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Meadows of Dan, Virginia 24120
PC# 2014-2256

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EXECUTIVE SUMMARY

Corrective Action Plan Implementation Sub-Phase 3

This Corrective Action Plan Implementation Report Sub-Phase 3 (CAP IMP SP3) documents the operation of the Dual Phase Extraction (DPE) system as laid out in the Corrective Action Plan (CAP) submitted to the Virginia Department of Environmental Quality (VA DEQ) on June 30, 2015. These operations are being conducted at the Meadows of Dan Food Market facility (PC 2014-2256) located at 2609 Jeb Stuart Highway in Meadows of Dan, Virginia and the associated reports are to be submitted to the Roanoke Branch of the Blue Ridge Regional Office (BRRO-ROA) of the VA DEQ on a quarterly basis. The information contained within this Quarterly CAP IMP Report covers work conducted from April 1, 2016 to June 30, 2016.

During this phase of investigation the system operated for approximately 2,108.1 hours and recovered approximately 17,969 pounds of hydrocarbons. Measurable free phase petroleum was not observed within any of the monitoring wells during this phase of investigation; however, monitoring well groundwater samples confirmed the presence of significant dissolved phase petroleum contamination. Drinking water samples collected from receptor IDs DW01, DW07, DW13, DW14, DW17, and DW23 yielded Non Detected for chemicals typically associated with petroleum contamination at method detection limits.

The dual-phase extraction system appears to be operating efficiently both in terms of effectiveness and cost at the Meadows of Dan Food Market facility. Greene recommends continuing with the system operation and maintenance schedule as outlined in the CAP. Based on the observed carbon fouling, replacement of the liquid granular activated carbon will likely be required during CAP IMP SP4 activities. In addition, due to the limited dissolved phase petroleum contamination observed in monitoring wells MW12, MW22, MW25, and MW27 during this phase of investigation, Greene recommends turning off vacuum extraction to those monitoring wells in an effort to increase overall efficiency of hydrocarbon recovery.

This Executive Summary is an integral part of the Corrective Action Plan Implementation Sub-Phase 3. Greene recommends that the report be read in its entirety.

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CORRECTIVE ACTION PLAN
IMPLEMENTATION REPORT
SUB-PHASE 3
for
Meadows of Dan Food Market
Meadows of Dan, VA

1.0 Introduction

This Corrective Action Plan Implementation Report Sub-Phase 3 (CAP IMP SP3) documents the operation of the Dual Phase Extraction (DPE) system as described in the Corrective Action Plan (CAP) submitted to the Virginia Department of Environmental Quality (VA DEQ) on June 30, 2015. These operations are being conducted at the Meadows of Dan Food Market facility (PC 2014-2256) located at 2609 Jeb Stuart Highway in Meadows of Dan, Virginia and the associated reports are to be submitted to the Roanoke Branch of the Blue Ridge Regional Office (BRRO-ROA) of the VA DEQ on a quarterly basis. The information contained within this Quarterly CAP IMP Report covers work conducted from April 1, 2016 to June 30, 2016.

2.0 Site Location and Description

The subject property is an approximately 1.07-acre parcel located at 2609 Jeb Stuart Highway in a primarily commercial and residential area within the limits of Patrick County, Virginia. The subject site is improved with a two-story building that serves as the Meadows of Dan Food Market, as well as a coin-operated laundromat and rental apartment. It is believed that the subject site has operated as a retail gasoline station and convenience store from approximately 1976 to present. As part of underground storage tank (UST) system upgrade activities, one 10,000-gallon regular gasoline UST (UST #1) and one 10,000-gallon premium gasoline UST (UST #2) located within a common basin were removed from the ground on December 30, 2013. The subject site currently maintains one 10,000-gallon gasoline UST and one 8,000-gallon compartmental UST containing gasoline and kerosene. In addition, the property maintains two gasoline dispensers and one kerosene dispenser. The subject site is further improved with asphalt access and parking areas. The Meadows of Dan Food Market obtains potable water from a drilled supply well located within the store building approximately 75 feet northwest of the tank basin. The subject site is bordered by Jeb Stuart Highway to the south, Baptist Church Lane to the north, and commercial properties to the east and west. A Site Map documenting pertinent features of the site and surrounding area is included in Appendix B.

3.0 Operations Summary

3.1 System Downtime

The DPE system is designed to be operated 24 hours a day 7 days a week until such time as endpoints are met. The system may experience routine downtime to perform normal maintenance of system components or non-routine downtime due to the logic circuit detecting an abnormal operating parameter. During this reporting period, the system was in operation for 2,108.1 hours of the possible 2,184 hours from April 1, 2016 to June 30, 2016 for a total of 75.9 hours of downtime. Based on this total downtime data, the system was operational for 96.52% of the time during this phase of work.

In order to make the appropriate adjustments to recovery rate and estimated recovery time period, an overall operational efficiency to date for system operation is necessary. Based on the 2,959.5 hours of runtime compared to the possible 3,086 hours from system start-up on February 23, 2016 to June 30, 2016 the overall operational efficiency has been 95.90%.

3.2 Remediation System Operation & Maintenance

During CAP IMP SP3, the dual-phase remediation system was monitored on a weekly schedule. As stated in the CAP, twice monthly monitoring events will be performed during CAP IMP SP4 and thereafter for the duration of the project. During the scheduled site visits, the operation of system components and site conditions are observed/monitored and the data is utilized to maximize hydrocarbon recovery and prevent potential downtime conditions.

3.2.1 Remediation System Sampling

As part of CAP IMP SP3 activities, Greene collected three sample sets, one per month, from the remediation system. Each sample set includes one air sample and three water samples. The rotary claw pump exhaust samples, which are labeled RCP## are collected from a sample port located along the RCP exhaust piping. The influent water samples, which are labeled INF## are collected from a sample port located along the piping that transfers water from the oil-water separator to the air stripper. The midpoint water samples, which are labeled MID## are collected from a sample port located along the pipping between the air stripper and the carbon units, and the effluent water samples, which are labeled EFF##, are collected from a sample port located on the piping that discharges water from the carbon units to the outfall location. One additional RCP exhaust air sample was collected during CAP IMP SP3 in an attempt to confirm the effectiveness of modifications made to improve hydrocarbon recovery. As stated in the CAP, system samples will continue to be collected approximately once per month for the duration of system operation.

3.2.2 Remediation System Flow Rates & Recovery Volume

By design, Dual-Phase Extraction technology recovers subsurface contamination via liquids removal/treatment and subsurface vapor phase removal. These two streams have been monitored during site visits in order to yield total flows during the CAP IMP SP3 phase of system operation.

3.2.2.1 Groundwater

Groundwater flow volume is measured on the discharge piping of the air stripper sump by a non-resettable totalizer. Upon delivery, the flow meter had registered a total of 240 gallons during system checks performed at the factory. For the purposes of this project, 240 gallons will serve as the zero point for total water flow volume calculations. The 164,860 gallons of effluent discharge recorded as of April 1, 2016 at 5:00 A.M. will serve as the starting point for the current reporting period. As of July 1, 2016 at 5:00 A.M., the totalizer had registered a total volume of 692,490 gallons, which indicated the system had discharged a total of 527,630 gallons or approximately 5,798.13 gallons per day during this phase of investigation. A general decrease in the daily groundwater recovery was observed during this phase of investigation, and it is likely the daily groundwater recovery will continue to slowly decrease as ongoing system operation continues to depress the shallow aquifer/groundwater table.

3.2.2.2 Vapor Phase

It should be noted that the air stripper exhaust stream is not true vapor recovered from the subsurface and the exhaust volume of the air stripper portion of the groundwater treatment will not be included with the vapor stream for the purposes of flow rate/volume reporting. However, the contamination recovered via the air stripper will be used in calculating the vapor phase petroleum emissions as required by the VA DEQ Stationary Source Permit to Construct and Operate obtained by Greene prior to system start-up. A copy of the air permit is included in Appendix D.

Air flow volume has been calculated based on RCP runtime hours and the flow rates measured through the use of a pitot tube on the effluent RCP piping. The logic circuit has been programmed to calculate the flow rate in standard cubic feet per minute (SCFM). During the current reporting period, observed daily air flow data was averaged and multiplied across the total number of runtime hours to calculate the air flow volume estimate. Based on 2,108.1 hours of runtime and the average effluent air flow rate of 331.78 SCFM, the total exhaust discharge volume generated during CAP IMP SP3 is approximately 41,965,525 (standardized) cubic feet.

3.2.3 Petroleum Mass Concentrations & Recovery

DPE technology recovers petroleum contamination through the removal of vapor, dissolved, and free phases. During this phase of investigation, very limited free product has been observed in the remediation system components suggesting that the free phase contamination recovered by the system has shifted into the vapor and dissolved phases during the recovery process. As such, mass estimates have been generated for the dissolved and vapor phases only.

3.2.3.1 Dissolved Phase

During CAP IMP SP3 activities, three sets of influent, midpoint, and effluent water samples have been collected and submitted for laboratory analysis. The influent samples were collected from a sample port located along the piping that transfers water from the oil-water separator to the air stripper. The midpoint samples were collected from a sample port located along the piping between the air stripper and the carbon units, and the effluent samples were collected from a sample port located on the piping that discharges water from the carbon units to the outfall location. All water samples were collected in glass sampling bottles, entered onto a chain of custody document, sealed inside a shipping cooler on ice, and shipped overnight to ESC Lab Sciences of Mt. Juliet, TN. The water samples were analyzed for total petroleum hydrocarbons-gasoline range organics (TPH-GRO) by EPA method 8015, benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tert-butyl ether (MTBE), naphthalene, and ethanol by EPA method 8260. In addition, as part of Virginia Pollutant Discharge Elimination System (VPDES) requirements the three effluent samples were submitted for pH analysis via EPA method 9040. Table 1 - Summary of CAP IMP SP3 Remediation System Dissolved Phase Analytical Results is included in Appendix A, Page 1. Copies of the laboratory analytical results and chain of custody documentation for the water samples collected during CAP IMP SP3 are included in Appendix C.

As discussed in the Section 3.2.2.1, 527,630 gallons of contaminated groundwater was recovered and disposed of during this phase of investigation. The dissolved phase mass removal estimate has been calculated by applying averaged constituent concentrations across the entire water discharge volume. For the purposes of determining mass removal through the dissolved phase, the influent water sample results have been used. The calculation process is as follows: The influent water sample laboratory results for each constituent were averaged, converted from micrograms per liter (µg/L) into pounds per gallon (lbs/gal), and then multiplied by the total water discharge. Based on the analytical data obtained during this phase of work, approximately 80.29 pounds of hydrocarbon contamination was recovered in the dissolved phase during CAP IMP SP3. Table 2 - Summary of the Dissolved Phase Mass Recovery Totals is included in Appendix A, Page 1. A Calculation Sheet depicting this process for individual BTEX constituents, MTBE, and TPH-GRO is included in Appendix F.

The midpoint effluent laboratory analytical results were utilized to calculate the air stripper efficiency (discussed in Section 3.2.3.3) and the mass of hydrocarbons emitted from the air striper as required by the air permit (discussed in Section 3.2.5). The effluent laboratory analytical results were utilized to prepare the monthly Discharge Monitoring Reports (DMRs) as required by the VPDES General Permit. The monthly DMRs have been submitted to the BRRO-ROA of the VA DEQ. There were no observed concentration exceedances in the water being discharged from the remediation system during CAP IMP SP3. A copy of the VPDES General Permit Coverage Letter is provided in Appendix E. Copies of the DMRs prepared and submitted during this phase of investigation are included in Appendix E.

3.2.3.2 Vapor Phase

During CAP IMP SP3 activities, four RCP exhaust air samples have been collected and submitted for laboratory analysis. All vapor samples were collected in tedlar bags, entered onto a chain of custody document, sealed inside a shipping cooler on ice, and shipped overnight to ESC Lab Sciences of Mt. Juliet, TN. The air samples were submitted for total volatile petroleum hydrocarbons (TVPH), BTEX, and MTBE analysis via EPA Method 18. Table 3 - Summary of CAP IMP SP3 Remediation System Vapor Phase Analytical Results is included in Appendix A, Page 2. Copies of the laboratory results and chain of custody documentation are included in Appendix C.

As discussed in the Section 3.2.2.2, 41,965,525 (standardized) cubic feet of RCP exhaust gases were discharged during this phase of investigation. The vapor phase mass removal estimate has been calculated by applying averaged constituent concentrations across the entire exhaust discharge volume. For the purposes of determining mass removal through the vapor phase, the RCP sample results have been used. The calculation process is as follows: The RCP air sample laboratory results were averaged for each constituent, converted from milligrams per cubic meter (mg/m^3) into lbs/gal, and then multiplied by the total RCP exhaust discharge. Based on the analytical data obtained during this phase of work, approximately 17,889.02 pounds of hydrocarbon contamination was recovered in the vapor phase as TVPH during CAP IMP SP3. Table 4 - Summary of the Vapor Phase Mass Recovery Totals is included in Appendix A, Page 2. A Calculation Sheet depicting this process for individual BTEX constituents, MTBE, and TVPH is included in Appendix F.

3.2.3.3 Remediation System Treatment Efficiency

Individual and combined air stripper and liquid granular activated carbon (LGAC) efficiency has been calculated based on the laboratory results for influent, midpoint, and effluent sample sets. Water sample laboratory results were broken down by individual constituents and then average midpoint results were compared to the average influent results in order to determine the percentage of each constituent removed

through air stripping. In addition, the average effluent results were compared to the average midpoint results in order to determine the percentage of each constituent removed through carbon polishing. Finally, the average effluent results were compared to the average influent results in order to determine the percentage of each constituent removed through both air stripping and carbon polishing. A Calculation Sheet depicting this process for individual BTEX constituents, MTBE, and TPH-GRO is included in Appendix F. During this phase of investigation the carbon efficiency for MTBE was calculated to be -25.22%, which indicates the carbon is becoming saturated/fouled. The effluent concentrations remained below the discharge requirements; however, based on the carbon fouling replacement of the LGAC will likely be required during CAP IMP SP4 activities. Table 5 - Summary of Remediation System Components Treatment Efficiencies is included in Appendix A, Page 2.

3.2.4 Operational Adjustments

Throughout this phase of work small adjustments were made to the volume of dilution air entering the vacuum stream. These adjustments were made on an as needed basis during site visits in order to maintain an approximate vacuum of 15.0 inches Hg. In addition, limited adjustments were made to the drop tubes utilized in the extraction wells. Based on gauging data, Greene adjusted the number, size, and/or location of holes within the drop tubes to maximize liquid recovery at each extraction well. No other significant adjustments have been made during this reporting period.

3.2.5 Air Emissions Data

As stated in the CAP, Greene submitted a competed Air Operating Permit Application requesting a nonbinding applicability determination to the BRRO-ROA of the VA DEQ on June 30, 2015. In a letter dated July 30, 2015, the VA DEQ determined the DPE remediation system would be subject to air permitting requirements based on the potential to emit VOCs at a rate greater than 25 tons per year (tpy). Over the next few months Greene provided a VA DEQ air permit writer with site specific information regarding the proposed remediation system and potential options for treatment of the air waste stream. Based on the estimated mass of petroleum contamination and the current site and PC conditions it was determined that the vapor phase VOCs associated with the DPE would not require control measures. On October 19, 2015, the VA DEQ issued the air permit for the Meadows of Dan Food Market, which stated emissions from the operation of the DPE remediation system will not exceed 65 tpy. Further, the permit requires monthly sampling of the air waste stream and the preparation monthly and annual air emissions calculations. Copies of the VA DEQ Stationary Source Permit to Construct and Operate and the monthly air emissions calculations are included Appendix D.

Operation of the DPE system during this reporting period has resulted in measurable VOC emissions from the RCP and air stripper. As a result, Greene generated monthly emissions rates as well as the total emissions to date. Further, Greene predicted the annual emissions (observed monthly rates across one full year). Emissions calculations reveal that emissions of total VOCs is below the annual emission limit of 65 tpy. It should be noted that the estimated total petroleum mass (approximately 40 tons) in the subsurface at the Meadows of Dan Food Market is below the VA DEQ air permit emission limit for the subject site and Greene does not anticipate exceeding 65 tpy. Table 6 – Summary of DPE Remediation System Air Emissions is included in Appendix A, Page 3. Emissions from the RCP and air stripper exhaust can be seen on the Vapor Phase Mass Recovery Calculation Sheets included in Appendix F.

3.3 Utilities, Consumables, & Waste Disposal

3.3.1 Utilities

Long-term implementation of DPE technology requires the usage of two utilities; electricity and cellular service. Three monthly bills for the electrical service have been received during this reporting period. The bills covering the usage period for CAP IMP SP3 averaged approximately $1,700.00. Future monthly electrical charges are expected to remain within this range and will depend on system runtime during each particular billing cycle as well as current rates. The majority of the electrical usage at the site is thought to be attributed to the three 15-horsepower motors that are operating the rotary claw pumps almost continually. Finally, a cellular service agreement has been implemented to provide offsite access to the system's logic circuit. The agreement is billed monthly at approximately $150.00.

3.3.2 Consumables

Consumables used during this reporting period include industrial type bag filters. A total of 11 bag filters have been installed in the bag filter housings within the DPE remediation system. The filters have been replaced on an as needed basis, which has been determined by the pressure differential as observed on either side of the filter housings. No other consumables have been used during this reporting period.

3.3.3 Waste

The only waste generated during the current reporting period is the bag filters discussed in the previous section. These filters are being stored onsite in a 55-gallon drum awaiting disposal at the end of the project. No other wastes have been generated during the current reporting period.

3.4 Problems with System Operation

3.4.1 Remediation System

Following optimization/balancing during start-up activities, the DPE remediation system has functioned properly through approximately four months of operation. There have been no major operational issues noted during this reporting period.

3.4.2 Subsurface Components

There have been no major issues noted with any of the subsurface components during CAP IMP SP3.

3.5 DPE Remediation System Components Maintenance & Modifications

3.5.1 Routine Maintenance

There has been no true maintenance performed on the remediation system or any subsurface components. During each site visit the oil water separator is checked for the presence of free phase petroleum. To date, only a limited layer of petroleum (sheen) has been observed within the oil water separator. Additional routine maintenance includes the cleaning of site glasses and wye-strainers on an as needed basis. Further, the LGAC vessels were backwashed twice during this reporting period and will continue to be backwashed as needed based on pressure readings and to prevent significant breakthrough of petroleum hydrocarbons. As previously mentioned, the bag filters are removed and replaced on an as needed basis. Finally, locks have been installed on the system doors, system control panel, and power disconnects.

3.5.2 Modifications & Non-Routine Maintenance

There have been no system modifications during this reporting period. No non-routine maintenance was performed during this reporting period. However, as discussed in Section 3.2.3.3, the LGAC appears to be fouling and replacement will likely be required during CAP IMP SP4 activities.

4.0 Subsurface Data

4.1 Water Level Measurements

During the current reporting period the site wells were monitored for depth to product and depth to water. These measurements were collected relative to the tops of the well casings and have been corrected to a relative elevation based on the surveyed well casing elevations. Table 7 – Summary of Corrective Action Plan Implementation Groundwater Elevation Data is included in Appendix A, Page 3.

Groundwater elevation data collected on April 18, 2016, May 16, 2016, and June 13, 2016 were selected for the generation of potentiometric surface maps. The Surfer Version 11.6 program was employed to generate the potentiometric surface contour array over the base map created in DesignCAD. A minimum of pseudo data points were used and these were applied only when the kriging algorithm clearly interpolated the contour lines into certain regions where a paucity of data resulted in an unnatural contour distribution. When pseudo points were used, they were based on nearest neighbors. The potentiometric surface maps generated from the relative elevations of equilibrated groundwater as measured on April 18, 2016, May 16, 2016, and June 13, 2016 are included in Appendix B. Relative groundwater elevations measured on April 18, 2016, May 16, 2016, and June 13, 2016 indicate a groundwater gradient pattern that slopes towards the recovery wells. It appears that DPE operation is effectively influencing groundwater flow in a manner which will promote system performance. This is further depicted in the Drawdown Maps included in Appendix B, which document the change in groundwater elevation on April 18, 2016, May 16, 2016, and June 13, 2016 following approximately two, three, and four months of system operation, respectively, as compared to the groundwater elevations observed immediately prior to system operation on February 22, 2016.

4.2 Free Phase Petroleum

During this phase of investigation measurable free product was not observed in any of the onsite or offsite monitoring wells. It appears that DPE operation has removed the majority of the easily accessible free product and may be preventing its reforming. Table 8 – Summary of Corrective Action Plan Implementation Free Product Thicknesses is included in Appendix A, Page 22.

4.3 Dissolved Phase Petroleum

4.3.1 Groundwater Monitoring Wells

On June 13, 2016, groundwater samples were collected from the 28 monitoring wells associated with the Meadows of Dan Food Market investigation. The groundwater samples collected from the recovery wells (MW01A, MW02, MW03, MW07, MW12, MW14, MW15, MW19, and MW21-MW28) were collected using dedicated, disposable, HDPE bailers and were transferred directly into the appropriate sample containers. Further, monitoring well MW04, MW05, MW06, MW08, MW09, MW10, MW11, MW13, MW16, MW17, MW18, and MW19 groundwater samples were collected using a 12-volt S.S. Monsoon Proactive Environmental Products submersible pump with a low-flow controller. Dedicated, disposable, LDPE tubing was used to purge the wells and transfer the groundwater samples directly into the appropriate sample containers. The wells were purged until dry or a minimum of three well volumes had been displaced. Water samples were collected in the appropriate sample containers, stored on ice, and

transported via courier to the REI Consultants, Inc. laboratory in Beaver, WV. The groundwater samples collected from the 28 monitoring wells were submitted for TPH-GRO via EPA method 8015, BTEX, MTBE, and naphthalene via EPA method 8260. Copies of the laboratory results and chain of custody documentation are included in Appendix C. Isoconcentration Maps are provided in Appendix B.

The water samples collected from monitoring wells MW01A-MW05, MW07, MW09-MW16, and MW18-MW28 yielded measurable levels of petroleum contamination. However, selected results were flagged with J qualifiers and the concentrations are considered estimates due to the reported results being below the reported detection limits (RDLs) and equal to or above the method detection limits (MDLs). As a result, it is likely the analytes are present in the samples, but the results should be viewed only as qualitative and not quantitative. The water samples collected from monitoring wells MW06, MW08, and MW17 yielded Non Detected at MDLs. Table 9 - Summary of Monitoring Well Dissolved Phase Analytical Results is included in Appendix A, Page 33. A summary of the monitoring well dissolved phase analytical results is provided below:

The groundwater sample collected from monitoring well MW01A yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene contamination. In addition, this sample yielded the highest TPH-GRO, BTEX, MTBE, and naphthalene concentrations observed during CAP IMP SP3 monitoring well sampling activities. However, the reported naphthalene concentration was flagged with a J qualifier.

The groundwater sample collected from monitoring well MW02 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW03 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW04 yielded measurable TPH-GRO, benzene, ethylbenzene, xylenes, and MTBE concentrations during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW05 yielded measurable TPH-GRO, benzene, ethylbenzene, xylenes, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities. However, the reported naphthalene concentration was flagged with a J qualifier.

The groundwater sample collected from monitoring well MW06 yielded Non Detected for petroleum contamination during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW07 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW08 yielded Non Detected for petroleum contamination during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW09 yielded only a measurable MTBE concentration during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW10 yielded only a measurable MTBE concentration during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW11 yielded measurable TPH-GRO, BTEX, MTBE and naphthalene concentrations during CAP IMP SP3 sampling activities. However, the reported naphthalene concentration was flagged with a J qualifier.

The groundwater sample collected from monitoring well MW12 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW13 yielded only measurable xylenes and MTBE concentrations during CAP IMP SP3 sampling activities. However, the reported xylenes concentration was flagged with a J qualifier.

The groundwater sample collected from monitoring well MW14 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities. However, the reported naphthalene concentration was flagged with a J qualifier.

The groundwater sample collected from monitoring well MW15 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW16 yielded only measurable xylenes and MTBE concentrations during CAP IMP SP3 sampling activities. However, the reported xylenes concentration was flagged with a J qualifier.

The groundwater sample collected from monitoring well MW17 yielded Non Detected for petroleum contamination during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW18 yielded measurable TPH-GRO, BTEX, and naphthalene concentrations during CAP IMP SP3 sampling activities. However, the reported xylenes concentration was flagged with a J qualifier.

The groundwater sample collected from monitoring well MW19 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities. However, the reported MTBE and naphthalene concentrations were flagged with J qualifiers.

The groundwater sample collected from monitoring well MW20 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities. However, the reported toluene and naphthalene concentrations were flagged with J qualifiers.

The groundwater sample collected from monitoring well MW21 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities. However, the reported naphthalene concentration was flagged with a J qualifier.

The groundwater sample collected from monitoring well MW22 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW23 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW24 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities. However, the reported naphthalene concentration was flagged with a J qualifier.

The groundwater sample collected from monitoring well MW25 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities. However, the reported naphthalene concentration was flagged with a J qualifier.

The groundwater sample collected from monitoring well MW26 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities. However, the reported naphthalene concentration was flagged with a J qualifier.

The groundwater sample collected from monitoring well MW27 yielded measurable TPH-GRO, toluene, ethylbenzene, xylenes, and MTBE concentrations during CAP IMP SP3 sampling activities.

The groundwater sample collected from monitoring well MW28 yielded measurable TPH-GRO, BTEX, MTBE, and naphthalene concentrations during CAP IMP SP3 sampling activities. However, the reported MTBE concentration was flagged with a J qualifier.

4.3.2 Supply Wells

As part of CAP IMP SP3 activities, groundwater samples were collected from receptor IDs DW01, DW07, DW13, DW14, DW17, and DW23. Due to the power being disconnected, Greene was unable to collect a drinking water sample from receptor ID DW16. Clean, disposable nitrile gloves were used during all phases of sample collection. All drinking water samples were collected in glass sampling bottles, entered onto a chain of custody document, placed on ice, and submitted to ESC Lab Sciences of Mt. Juliet, TN. The drinking water samples were submitted for VOCs analysis via EPA method 8260. Additional information regarding the potential receptors located proximal to the Meadows of Dan Food Market is included in the Summary of the ¼-Mile Radius Receptor Survey Results presented in Table 10 included in Appendix A, Page 37. A Potential Receptors Location Map is included in Appendix B.

As documented in the previously submitted site characterization, CAP Development, and CAP IMP reports, offsite receptors DW02, DW03, DW04/DW05/DW06, DW12, DW15, and DW19 have been impacted with petroleum. In an effort to mitigate concern associated with ingestion of petroleum impacted drinking water, carbon filtration unit (CFU) systems have been installed as part of the VA DEQ Alternate Water Supply (AWS) program. As part of CFU system installation and maintenance activities pre-treatment drinking water samples are routinely collected. As a result, Greene did not collect a sample from receptors DW02, DW03, DW04/DW05/DW06, DW12, DW15, or DW19 during this phase of investigation. However, the available laboratory analytical results collected on behalf of the VA DEQ AWS program have been included in this report. Copies of the laboratory results and chain of custody documentation for the samples collected on behalf of the VA DEQ AWS program are not included in this report and any request for this documentation should be made to the VA DEQ AWS program.

The water samples collected from receptors DW01, DW07, DW13, DW14, DW17, and DW23 yielded Non Detected for chemicals typically associated with petroleum contamination at method detection limits. However, the water sample collected from the offsite supply well (DW23) on April 25, 2016 yielded a 2-Butanone (MEK) concentration of 12.0 µg/L. 2-Butanone (MEK) is primarily utilized as a solvent and is

also a component of PVC glue and is generally not associated with petroleum releases. It is likely the presence of MEK is a result of the newly installed water system and it should dissipate with time and usage. Copies of the laboratory results and chain of custody documentation are included in Appendix C. Table 11 - Summary of Historic & Current Drinking Water Dissolved Phase Analytical Results is included in Appendix A, Page 39.

4.3.3 Vacuum Measurements

During the current reporting period the site wells were monitored for vacuum. The measurements were obtained from vacuum gauges located within the recovery well vaults and from magnehelic gauges installed on the well casings of the remaining monitoring wells. The measurements were recorded in inches of mercury for the recovery wells and inches of water for the monitoring wells and were collected during the site visits. The data obtained during the April 18, May 16, and June 13, 2016 site visits were utilized to generate radius of influence maps. However, if monitoring data was not available due to a damaged gauge an approximate vacuum measurement was made based on historical data and manifold vacuum readings. Monitoring data obtained during CAP IMP SP3 activities indicated a significant radius of influence. An area of measurable vacuum communication was observed extending approximately 250 feet northeast to southwest during CAP IMP SP3 activities. Throughout the current reporting period significant areas of influence were observed likely indicating acceptable communication throughout the subsurface soils. Table 12 - Summary of CAP IMP SP3 Vacuum Readings is included in Appendix A, Page 45. Copies of the Radius of Influence Maps are included in Appendix B.

5.0 Projected Time to Achieve Endpoints

5.1 Short-Term

As laid out in the CAP, the major goal of system operation is preventing the formation of subsurface free phase gasoline contamination. Based on the lack of observed free product during CAP IMP SP3 activities, the remediation system appears to have removed a significant portion of the readily available free phase petroleum within the onsite recovery wells. As a result the continued operation of the DPE remediation system is expected to ultimately prevent free product formation at the subject site.

5.2 Long-Term

As stated in the CAP, the major goal of system operation is achieving an endpoint of <0.01 feet of product thickness. In the short-term, the DPE remediation system appears to have reduced the observable free product within the recovery wells to <0.01. In the long-term, this means removing sufficient quantities of subsurface contamination to prevent future free product formation. As estimated in the CAP,

approximately 81,698 pounds of petroleum contamination existed beneath the site as of the start of system operation. The mass of the free phase removed through free product recovery is thought to be relatively small and as such has not been subtracted from the original estimate. Data collected during this and the previous reporting period indicates that approximately 28,169 pounds of gasoline range contamination has been removed from the site during 2,959.5 hours of system operation.

Based on the original mass estimate of 81,698 pounds, approximately 53,529 pounds of gasoline contamination remains in the subsurface at the site. Using the mass prior to CAP IMP SP3 of 71,498 pounds of petroleum and the average daily petroleum recovery mass observed during CAP IMP SP3 activities of approximately 205 pounds, the average daily recovery rate was found to be 0.29%. Currently the recovery may best be represented as linear due to the large volumes of free phase contamination that are readily available for removal in the well casings, sand packs, and nearby soils. This recovery is expected to remain linear until the remaining easily accessible free phase petroleum has been removed from the subsurface. Based on the recovery rate of 205 lbs/day observed during CAP IMP SP3, the remaining petroleum mass is estimated to be removed following approximately 251 days of DPE operation. However, following the removal of the easily accessible free product, the reduction of subsurface petroleum contamination by DPE is expected to be best represented through use of an exponential decay model. The daily recovery rate of 0.29% was applied to an equation expressing exponential decay resulting in a calculated decay constant (k) of -0.0032951. Based on a decay constant of -0.0032951, the remaining petroleum mass is estimated to be reduced to one-half and one-quarter of its current mass following approximately 210 days and 421 days of DPE operation respectively. Greene will continue to adjust the estimated timeframe to achieve remedial endpoints based on the ongoing long-term implementation of the DPE remediation system. A graph depicting the remaining petroleum mass and estimated timeframe is included in Appendix F.

6.0 Recommendations & Suggested System Modifications

The dual-phase extraction system appears to be operating efficiently both in terms of effectiveness and cost at the Meadows of Dan Food Market facility. Greene recommends continuing with the system operation and maintenance schedule as outlined in the CAP. Based on the observed carbon fouling, replacement of the LGAC will likely be required during CAP IMP SP4 activities. In addition, due to the limited dissolved phase petroleum contamination observed in monitoring wells MW12, MW22, MW25, and MW27 during this phase of investigation, Greene recommends turning off vacuum extraction to those monitoring wells in an effort to increase overall efficiency of hydrocarbon recovery.

End of the CAP Implementation Report Sub-Phase 3

APPENDIX A

Tables

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Table 1.

Summary of CAP IMP SP3 Remediation System Dissolved Phase Analytical Results

Sample ID	Date	TPH-GRO[1]	Benzene[2]	Toluene	Ethyl-benzene	Xylenes	MTBE	Naphthalene	Ethanol	pH[3]
INF07	04/11/16	32,400	255	3,630	924	5,800	736	553	932	NA[4]
INF08	05/10/16	11,800	87.7	1,500	359	2,360	204	219	ND[5]	NA
INF09	06/13/16	10,500	52.4	1,050	250	1,770	158	237	ND	NA
MID01	04/11/16	2,320	8.67[6]	117	28.6	226	264	227	555[6]	NA
MID02	05/10/16	1,080	ND	83.4	18.9	152	67.9	89.4	ND	NA
MID03	06/13/16	1,260	4.03	79.5	17.6	150	55.9	117	520	NA
EFF07[7]	04/11/16	495	ND	ND	ND	ND	281	ND	76.1[6]	6.15
EFF08	05/10/16	122	ND	1.22[6]	ND	1.40[6]	121	ND	ND	6.14
EFF09	06/13/16	272	ND	2.50[6]	ND	2.06[6]	83.6	ND	ND	6.17

[1]TPH (gasoline range organics) analysis via U.S. EPA SW-846 method 8015B; reported in micrograms per liter (µg/L).
[2]BTEX, MTBE, naphthalene, and ethanol analysis via U.S. EPA SW-846 method 8260; reported in µg/L.
[3]pH analysis via U.S. EPA SW-846 method 9040.
[4]NA = Not applicable.
[5]ND = Non detected at reporting limit or method detection limit.
[6]The reported result is an estimate. The reported concentration is less than the reported detection limit (RDL) but equal to or above the method detection limit (MDL).
[7]The pH sample for EFF07 was collected on April 25, 2016.

Table 2.

Summary of the Dissolved Phase Mass Recovery Totals[1]

Reporting Period	TPH-GRO	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
07/01/15-03/31/16	125.37	1.13	15.69	4.17	24.65	3.25
04/01/16-06/30/16	80.29	0.58	9.07	2.25	14.57	1.61
Operation Total	**205.66**	**1.71**	**24.76**	**6.42**	**39.22**	**4.86**

[1]Recovery totals are reported in pounds.

Table 3.

Summary of CAP IMP SP3 Remediation System Vapor Phase Analytical Results

Sample ID	Date	TVPH[1]	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
RCP08	04/11/16	13,100	111	1,360	288	1,283	23.8
RCP09	04/25/16	8,070	43.6	654	146	717	8.78
RCP10	05/10/16	6,220	28.3	458	100	478	5.49
RCP11	06/13/16	3,680	16.7	263	57.8	243.1	4.64

[1]TVPH, BTEX, and MTBE analysis via U.S. EPA SW-846 method 18; reported in milligrams per cubic meter (mg/m^3).

Table 4.

Summary of the Vapor Phase Mass Recovery Totals[1]

Reporting Period	Exhaust Stream	TVPH	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
07/01/15-03/31/16	Rotary Claw Pump	10,067.26	55.18	930.01	150.55	606.91	17.40
04/01/16-06/30/16	Rotary Claw Pump	17,889.02	106.80	1,509.02	327.30	1,502.99	23.07
Operation Total		**27,956.28**	**161.98**	**2,439.03**	**477.85**	**2,109.90**	**40.47**

[1]Recovery totals are reported in pounds.

Table 5.

Summary of Remediation System Components Treatment Efficiencies

Reporting Period	System Component	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TPH-GRO
07/01/15-03/31/16	Air Stripper & Carbon Units	100.00%	100.00%	100.00%	100.00%	96.88%	99.91%
04/01/16-06/30/16	Air Stripper	96.79%	95.47%	95.75%	94.68%	64.68%	91.48%
	Carbon Units	100.00%	98.67%	100.00%	99.34%	-25.22%	80.92%
	Air Stripper & Carbon Units	100.00%	99.94%	100.00%	99.97%	55.77%	98.37%

Table 6.

Summary of DPE Remediation System Air Emissions

Reporting Period	System Component	Calculated Monthly Emissions (tons)	Total Monthly Emissions (tons)	Total Emissions to Date (tons)	Predicted Total Annual Emissions (tons)	Annual Exemption Rate (tons/year)
02/22/16-02/29/16	RCP Exhaust	0.66	0.68	0.68	8.16	65
	Air Stripper Exhaust	0.015				
03/01/16-03/31/16	RCP Exhaust	4.42	4.46	5.14	30.84	65
	Air Stripper Exhaust	0.038				
04/01/16-04/30/16	RCP Exhaust	4.88	4.91	10.05	40.20	65
	Air Stripper Exhaust	0.025				
05/01/16-05/31/16	RCP Exhaust	2.54	2.55	12.60	37.80	65
	Air Stripper Exhaust	0.007				
06/01/16-06/30/16	RCP Exhaust	1.64	1.65	14.25	34.20	65
	Air Stripper Exhaust	0.006				

Table 7.

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW01A	02/10/16	2,966.19	27.84	2,938.35
	02/22/16		27.59	2,938.60
	03/01/16		29.46	2,936.73
	03/04/16		28.54	2,937.65
	03/07/16		29.55	2,936.64
	03/11/16		29.37	2,936.82
	03/15/16		29.32	2,936.87
	03/18/16		29.78	2,936.41
	03/22/16		29.05	2,937.14
	03/25/16		30.83	2,935.36
	03/29/16		33.53	2,932.66
	04/01/16		34.33	2,931.86

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW01A (Cont'd)	04/06/16	2,966.19	34.32	2,931.87
	04/11/16		34.44	2,931.75
	04/18/16		32.96	2,933.23
	04/25/16		33.25	2,932.94
	05/02/16		34.07	2,932.12
	050/9/16		32.65	2,933.54
	05/16/16		34.15	2,932.04
	05/23/16		33.78	2,932.41
	05/31/16		33.83	2,932.36
	06/06/16		33.74	2,932.45
	06/13/16		33.48	2,932.71
	06/20/16		33.51	2,932.68
MW02	02/10/16	2,966.24	28.14	2,938.10
	02/22/16		27.98	2,938.26
	03/01/16		32.25	2,933.99
	03/04/16		31.39	2,934.85
	03/07/16		32.61	2,933.63
	03/11/16		31.70	2,934.54
	03/15/16		31.50	2,934.74
	03/18/16		31.63	2,934.61
	03/22/16		31.23	2,935.01
	03/25/16		35.21	2,931.03
	03/29/16		36.24	2,930.00
	04/01/16		36.90	2,929.34
	04/06/16		36.98	2,929.26
	04/11/16		37.37	2,928.87
	04/18/16		36.04	2,930.20
	04/25/16		37.36	2,928.88
	05/02/16		37.67	2,928.57
	05/09/16		35.73	2,930.51
	05/16/16		36.56	2,929.68
	05/23/16		37.56	2,928.68
	05/31/16		37.55	2,928.69
	06/06/16		38.05	2,928.19
	06/13/16		38.05	2,928.19
	06/20/16		37.96	2,928.28

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW03	02/10/16	2,966.05	29.20	2,936.85
	02/22/16		29.14	2,936.91
	03/01/16		32.16	2,933.89
	03/04/16		30.94	2,935.11
	03/07/16		31.03	2,935.02
	03/11/16		31.38	2,934.67
	03/15/16		30.88	2,935.17
	03/18/16		31.21	2,934.84
	03/22/16		33.86	2,932.19
	03/25/16		33.72	2,932.33
	03/29/16		36.70	2,929.35
	04/01/16		36.88	2,929.17
	04/06/16		38.29	2,927.76
	04/11/16		38.36	2,927.69
	04/18/16		36.61	2,929.44
	04/25/16		36.33	2,929.72
	05/02/16		36.65	2,929.40
	05/09/16		35.81	2,930.24
	05/16/16		37.30	2,928.75
	05/23/16		36.84	2,929.21
	05/31/16		37.74	2,928.31
	06/06/16		37.81	2,928.24
	06/13/16		37.77	2,928.28
	06/20/16		38.03	2,928.02
MW04	02/10/16	2,965.67	28.95	2,936.72
	02/22/16		28.93	2,936.74
	03/01/16		30.08	2,935.59
	03/04/16		30.18	2,935.49
	03/07/16		30.20	2,935.47
	03/11/16		30.43	2,935.24
	03/15/16		30.47	2,935.20
	03/18/16		30.57	2,935.10
	03/22/16		30.57	2,935.10
	03/25/16		31.25	2,934.42
	03/29/16		32.01	2,933.66
	04/01/16		32.56	2,933.11
	04/06/16		33.61	2,932.06

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW04 (Cont'd)	04/11/16	2,965.67	34.07	2,931.60
	04/18/16		34.26	2,931.41
	04/25/16		34.46	2,931.21
	05/02/16		34.74	2,930.93
	05/09/16		34.05	2,931.62
	05/16/16		34.86	2,930.81
	05/23/16		34.96	2,930.71
	05/31/16		35.14	2,930.53
	06/06/16		35.48	2,930.19
	06/13/16		35.94	2,929.73
	06/20/16		34.34	2,931.33
MW05	02/10/16	2,965.57	28.71	2,936.86
	02/22/16		28.70	2,936.87
	03/01/16		30.07	2,935.50
	03/04/16		30.01	2,935.56
	03/07/16		30.15	2,935.42
	03/11/16		30.28	2,935.29
	03/15/16		30.32	2,935.25
	03/18/16		30.43	2,935.14
	03/22/16		30.48	2,935.09
	03/25/16		31.20	2,934.37
	03/29/16		32.05	2,933.52
	04/01/16		32.54	2,933.03
	04/06/16		33.69	2,931.88
	04/11/16		34.21	2,931.36
	04/18/16		34.33	2,931.24
	04/25/16		34.53	2,931.04
	05/02/16		34.91	2,930.66
	05/09/16		34.02	2,931.55
	05/16/16		34.93	2,930.64
	05/23/16		35.06	2,930.51
	05/31/16		35.38	2,930.19
	06/06/16		35.54	2,930.03
	06/13/16		36.19	2,929.38
	06/20/16		36.13	2,929.44
MW06	02/10/16	2,967.63	27.65	2,939.98
	02/22/16		27.61	2,940.02

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW06 (Cont'd)	03/01/16	2,967.63	28.94	2,938.69
	03/04/16		29.04	2,938.59
	03/07/16		29.23	2,938.40
	03/11/16		29.42	2,938.21
	03/15/16		29.41	2,938.22
	03/18/16		29.60	2,938.03
	03/22/16		29.72	2,937.91
	03/25/16		30.07	2,937.56
	03/29/16		30.61	2,937.02
	04/01/16		31.36	2,936.27
	04/06/16		32.14	2,935.49
	04/11/16		32.59	2,935.04
	04/18/16		32.80	2,934.83
	04/25/16		33.34	2,934.29
	05/02/16		33.82	2,933.81
	05/09/16		33.01	2,934.62
	05/16/16		34.30	2,933.33
	05/23/16		34.83	2,932.80
	05/31/16		34.81	2,932.82
	06/06/16		34.96	2,932.67
	06/13/16		35.25	2,932.38
	06/20/16		35.54	2,932.09
MW07	02/10/16	2,966.00	27.86	2,938.14
	02/22/16		27.76	2,938.24
	03/01/16		27.79	2,938.21
	03/04/16		26.46	2,939.54
	03/07/16		27.57	2,938.43
	03/11/16		27.42	2,938.58
	03/15/16		27.62	2,938.38
	03/18/16		27.60	2,938.40
	03/22/16		26.75	2,939.25
	03/25/16		27.30	2,938.70
	03/29/16		33.05	2,932.95
	04/01/16		29.08	2,936.92
	04/06/16		35.25	2,930.75
	04/11/16		35.79	2,930.21
	04/18/16		35.82	2,930.18

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW07 (Cont'd)	04/25/16	2,966.00	36.54	2,929.46
	05/02/16		36.05	2,929.95
	05/09/16		36.52	2,929.48
	05/16/16		36.07	2,929.93
	05/23/16		35.57	2,930.43
	05/31/16		36.45	2,929.55
	06/06/16		36.34	2,929.66
	06/13/16		36.20	2,929.80
	06/20/16		36.19	2,929.81
MW08	02/10/16	2,966.74	30.44	2,936.30
	02/22/16		30.46	2,936.28
	03/01/16		30.71	2,936.03
	03/04/16		30.79	2,935.95
	03/07/16		30.94	2,935.80
	03/11/16		31.08	2,935.66
	03/15/16		31.16	2,935.58
	03/18/16		31.24	2,935.50
	03/22/16		31.45	2,935.29
	03/25/16		31.65	2,935.09
	03/29/16		32.17	2,934.57
	04/01/16		32.45	2,934.29
	04/06/16		33.09	2,933.65
	04/11/16		33.56	2,933.18
	04/18/16		34.08	2,932.66
	04/25/16		34.57	2,932.17
	05/02/16		36.94	2,929.80
	05/09/16		34.69	2,932.05
	05/16/16		35.15	2,931.59
	05/23/16		35.36	2,931.38
	05/31/16		35.51	2,931.23
	06/06/16		35.86	2,930.88
	06/13/16		36.08	2,930.66
	06/20/16		36.37	2,930.37
MW09	02/10/16	2,967.40	31.19	2,936.21
	02/22/16		31.21	2,936.19
	03/01/16		31.69	2,935.71
	03/04/16		31.79	2,935.61

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW09 (Cont'd)	03/07/16	2,967.40	31.95	2,935.45
	03/11/16		32.08	2,935.32
	03/15/16		32.14	2,935.26
	03/18/16		32.25	2,935.15
	03/22/16		32.37	2,935.03
	03/25/16		32.73	2,934.67
	03/29/16		33.28	2,934.12
	04/01/16		33.63	2,933.77
	04/06/16		34.28	2,933.12
	04/11/16		34.78	2,932.62
	04/18/16		35.24	2,932.16
	04/25/16		35.58	2,931.82
	05/02/16		35.95	2,931.45
	05/09/16		35.47	2,931.93
	05/16/16		36.12	2,931.28
	05/23/16		36.32	2,931.08
	05/31/16		36.45	2,930.95
	06/06/16		36.74	2,930.66
	06/13/16		36.98	2,930.42
	06/20/16		37.22	2,930.18
MW10	02/10/16	2,966.76	31.87	2,934.89
	02/22/16		31.89	2,934.87
	03/01/16		31.71	2,935.05
	03/04/16		31.63	2,935.13
	03/07/16		31.99	2,934.77
	03/11/16		32.10	2,934.66
	03/15/16		32.10	2,934.66
	03/18/16		32.42	2,934.34
	03/22/16		32.54	2,934.22
	03/25/16		32.56	2,934.20
	03/29/16		32.91	2,933.85
	04/01/16		33.10	2,933.66
	04/06/16		33.57	2,933.19
	04/11/16		33.90	2,932.86
	04/18/16		34.79	2,931.97
	04/25/16		35.02	2,931.74
	05/02/16		32.55	2,934.21

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW10 (Cont'd)	05/09/16	2,966.76	35.34	2,931.42
	05/16/16		35.41	2,931.35
	05/23/16		35.46	2,931.30
	05/31/16		35.82	2,930.94
	06/06/16		35.93	2,930.83
	06/13/16		36.16	2,930.60
	06/20/16		36.57	2,930.19
MW11	02/10/16	2,968.11	31.92	2,936.19
	02/22/16		31.91	2,936.20
	03/01/16		32.52	2,935.59
	03/04/16		32.62	2,935.49
	03/07/16		32.75	2,935.36
	03/11/16		32.88	2,935.23
	03/15/16		32.95	2,935.16
	03/18/16		33.03	2,935.08
	03/22/16		33.15	2,934.96
	03/25/16		33.57	2,934.54
	03/29/16		34.16	2,933.95
	04/01/16		34.54	2,933.57
	04/06/16		35.30	2,932.81
	04/11/16		35.74	2,932.37
	04/18/16		36.12	2,931.99
	04/25/16		36.42	2,931.69
	05/02/16		36.75	2,931.36
	05/09/16		36.18	2,931.93
	05/16/16		36.89	2,931.22
	05/23/16		37.12	2,930.99
	05/31/16		37.24	2,930.87
	06/06/16		37.43	2,930.68
	06/13/16		37.76	2,930.35
	06/20/16		38.02	2,930.09
MW12	02/10/16	2,965.94	27.59	2,938.35
	02/22/16		27.56	2,938.38
	03/01/16		31.10	2,934.84
	03/04/16		29.92	2,936.02
	03/07/16		30.18	2,935.76
	03/11/16		30.28	2,935.66

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW12 (Cont'd)	03/15/16	2,965.94	30.49	2,935.45
	03/18/16		30.56	2,935.38
	03/22/16		30.42	2,935.52
	03/25/16		34.33	2,931.61
	03/29/16		34.89	2,931.05
	04/01/16		35.76	2,930.18
	04/06/16		35.69	2,930.25
	04/11/16		35.63	2,930.31
	04/18/16		35.71	2,930.23
	04/25/16		36.14	2,929.80
	05/02/16		35.75	2,930.19
	05/09/16		35.74	2,930.20
	05/16/16		36.09	2,929.85
	05/23/16		36.45	2,929.49
	05/31/16		34.73	2,931.21
	06/06/16		36.35	2,929.59
	06/13/16		35.87	2,930.07
	06/20/16		36.15	2,929.79
MW13	02/10/16	2,965.32	28.17	2,937.15
	02/22/16		28.20	2,937.12
	03/01/16		28.92	2,936.40
	03/04/16		30.96	2,934.36
	03/07/16		29.11	2,936.21
	03/11/16		29.29	2,936.03
	03/15/16		29.37	2,935.95
	03/18/16		29.52	2,935.80
	03/22/16		29.62	2,935.70
	03/25/16		30.90	2,934.42
	03/29/16		30.68	2,934.64
	04/01/16		31.08	2,934.24
	04/06/16		31.92	2,933.40
	04/11/16		32.49	2,932.83
	04/18/16		32.88	2,932.44
	04/25/16		33.28	2,932.04
	05/02/16		33.73	2,931.59
	05/09/16		33.14	2,932.18
	05/16/16		33.88	2,931.44

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW13 (Cont'd)	05/23/16	2,965.32	34.06	2,931.26
	05/31/16		34.21	2,931.11
	06/06/16		34.48	2,930.84
	06/13/16		35.90	2,929.42
	06/20/16		36.08	2,929.24
MW14	02/10/16	2,966.11	29.35	2,936.76
	02/22/16		29.34	2,936.77
	03/01/16		30.95	2,935.16
	03/04/16		30.16	2,935.95
	03/07/16		30.20	2,935.91
	03/11/16		30.21	2,935.90
	03/15/16		30.00	2,936.11
	03/18/16		31.37	2,934.74
	03/22/16		29.98	2,936.13
	03/25/16		35.29	2,930.82
	03/29/16		35.87	2,930.24
	04/01/16		35.96	2,930.15
	04/06/16		36.69	2,929.42
	04/11/16		36.41	2,929.70
	04/18/16		36.32	2,929.79
	04/25/16		36.20	2,929.91
	05/02/16		36.38	2,929.73
	05/09/16		34.56	2,931.55
	05/16/16		35.58	2,930.53
	05/23/16		35.40	2,930.71
	05/31/16		35.86	2,930.25
	06/06/16		36.10	2,930.01
	06/13/16		36.15	2,929.96
	06/20/16		36.67	2,929.44
MW15	02/10/16	2,967.06	30.30	2,936.76
	02/22/16		30.26	2,936.80
	03/01/16		32.13	2,934.93
	03/04/16		31.28	2,935.78
	03/07/16		31.33	2,935.73
	03/11/16		31.16	2,935.90
	03/15/16		31.41	2,935.65
	03/18/16		31.49	2,935.57

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW15 (Cont'd)	03/22/16	2,967.06	31.25	2,935.81
	03/25/16		35.16	2,931.90
	03/29/16		36.45	2,930.61
	04/01/16		35.69	2,931.37
	04/06/16		35.82	2,931.24
	04/11/16		35.83	2,931.23
	04/18/16		35.81	2,931.25
	04/25/16		35.89	2,931.17
	05/02/16		35.98	2,931.08
	05/09/16		35.83	2,931.23
	05/16/16		36.03	2,931.03
	05/23/16		36.09	2,930.97
	05/31/16		36.48	2,930.58
	06/06/16		36.54	2,930.52
	06/13/16		36.04	2,931.02
	06/20/16		36.15	2,930.91
MW16	02/10/16	2,965.29	29.40	2,935.89
	02/22/16		29.44	2,935.85
	03/01/16		29.34	2,935.95
	03/04/16		29.34	2,935.95
	03/07/16		29.53	2,935.76
	03/11/16		29.69	2,935.60
	03/15/16		29.78	2,935.51
	03/18/16		29.91	2,935.38
	03/22/16		30.12	2,935.17
	03/25/16		30.18	2,935.11
	03/29/16		30.65	2,934.64
	04/01/16		30.81	2,934.48
	04/06/16		31.36	2,933.93
	04/11/16		31.82	2,933.47
	04/18/16		32.35	2,932.94
	04/25/16		32.86	2,932.43
	05/02/16		35.33	2,929.96
	05/09/16		33.19	2,932.10
	05/16/16		33.46	2,931.83
	05/23/16		33.64	2,931.65
	05/31/16		33.92	2,931.37

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW16 (Cont'd)	06/06/16	2,965.29	34.12	2,931.17
	06/13/16		34.47	2,930.82
	06/20/16		34.91	2,930.38
MW17	02/10/16	2,958.98	24.87	2,934.11
	02/22/16		24.79	2,934.19
	03/01/16		23.68	2,935.30
	03/04/16		23.70	2,935.28
	03/07/16		24.10	2,934.88
	03/11/16		24.51	2,934.47
	03/15/16		24.77	2,934.21
	03/18/16		24.90	2,934.08
	03/22/16		25.00	2,933.98
	03/25/16		24.92	2,934.06
	03/29/16		25.53	2,933.45
	04/01/16		25.66	2,933.32
	04/06/16		26.43	2,932.55
	04/11/16		26.75	2,932.23
	04/18/16		27.28	2,931.70
	04/25/16		27.86	2,931.12
	05/02/16		28.32	2,930.66
	05/09/16		27.92	2,931.06
	05/16/16		27.59	2,931.39
	05/23/16		27.74	2,931.24
	05/31/16		28.08	2,930.90
	06/06/16		28.49	2,930.49
	06/13/16		29.02	2,929.96
	06/20/16		29.88	2,929.10
MW18	02/10/16	2,969.25	31.35	2,937.90
	02/22/16		31.33	2,937.92
	03/01/16		32.34	2,936.91
	03/04/16		32.44	2,936.81
	03/07/16		32.59	2,936.66
	03/11/16		32.77	2,936.48
	03/15/16		32.77	2,936.48
	03/18/16		32.86	2,936.39
	03/22/16		32.93	2,936.32
	03/25/16		33.64	2,935.61

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW18 (Cont'd)	03/29/16	2,969.25	34.28	2,934.97
	04/01/16		34.70	2,934.55
	04/06/16		35.30	2,933.95
	04/11/16		35.79	2,933.46
	04/18/16		36.10	2,933.15
	04/25/16		36.43	2,932.82
	05/02/16		36.75	2,932.50
	05/09/16		35.77	2,933.48
	05/16/16		36.78	2,932.47
	05/23/16		36.87	2,932.38
	05/31/16		37.02	2,932.23
	06/06/16		37.31	2,931.94
	06/13/16		37.85	2,931.40
	06/20/16		37.74	2,931.51
MW19	02/10/16	2,968.05	30.27	2,937.78
	02/22/16		30.27	2,937.78
	03/01/16		28.49	2,939.56
	03/04/16		27.96	2,940.09
	03/07/16		27.97	2,940.08
	03/11/16		27.94	2,940.11
	03/15/16		28.14	2,939.91
	03/18/16		28.23	2,939.82
	03/22/16		28.30	2,939.75
	03/25/16		30.74	2,937.31
	03/29/16		35.89	2,932.16
	04/01/16		31.10	2,936.95
	04/06/16		35.79	2,932.26
	04/11/16		36.27	2,931.78
	04/18/16		36.46	2,931.59
	04/25/16		36.66	2,931.39
	05/02/16		36.73	2,931.32
	05/09/16		36.45	2,931.60
	05/16/16		36.79	2,931.26
	05/23/16		37.02	2,931.03
	05/31/16		36.80	2,931.25
	06/06/16		36.99	2,931.06

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW19 (Cont'd)	06/13/16	2,968.05	37.03	2,931.02
	06/20/16		37.06	2,930.99
MW20	02/10/16	2,968.47	32.38	2,936.09
	02/22/16		32.35	2,936.12
	03/01/16		32.90	2,935.57
	03/04/16		32.90	2,935.57
	03/07/16		33.14	2,935.33
	03/11/16		33.23	2,935.24
	03/15/16		33.29	2,935.18
	03/18/16		33.41	2,935.06
	03/22/16		33.50	2,934.97
	03/25/16		33.86	2,934.61
	03/29/16		34.44	2,934.03
	04/01/16		34.80	2,933.67
	04/06/16		35.45	2,933.02
	04/11/16		35.90	2,932.57
	04/18/16		36.34	2,932.13
	04/25/16		36.64	2,931.83
	05/02/16		36.95	2,931.52
	05/09/16		36.46	2,932.01
	05/16/16		37.12	2,931.35
	05/23/16		37.34	2,931.13
	05/31/16		37.51	2,930.96
	06/06/16		37.80	2,930.67
	06/13/16		38.01	2,930.46
	06/20/16		38.16	2,930.31
MW21	02/10/16	2,967.61	30.82	2,936.79
	02/22/16		30.79	2,936.82
	03/01/16		32.51	2,935.10
	03/04/16		31.75	2,935.86
	03/07/16		31.62	2,935.99
	03/11/16		31.86	2,935.75
	03/15/16		31.79	2,935.82
	03/18/16		32.00	2,935.61
	03/22/16		31.84	2,935.77
	03/25/16		36.12	2,931.49
	03/29/16		37.50	2,930.11

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW21 (Cont'd)	04/01/16	2,967.61	36.68	2,930.93
	04/06/16		36.81	2,930.80
	04/11/16		36.76	2,930.85
	04/18/16		36.84	2,930.77
	04/25/16		36.95	2,930.66
	05/02/16		36.95	2,930.66
	05/09/16		36.92	2,930.69
	05/16/16		36.95	2,930.66
	05/23/16		36.86	2,930.75
	05/31/16		37.04	2,930.57
	06/06/16		37.10	2,930.51
	06/13/16		36.92	2,930.69
	06/20/16		37.10	2,930.51
MW22	02/10/16	2,966.98	28.69	2,938.29
	02/22/16		28.64	2,938.34
	03/01/16		32.29	2,934.69
	03/04/16		31.24	2,935.74
	03/07/16		31.28	2,935.70
	03/11/16		31.33	2,935.65
	03/15/16		32.14	2,934.84
	03/18/16		31.34	2,935.64
	03/22/16		31.20	2,935.78
	03/25/16		36.51	2,930.47
	03/29/16		37.14	2,929.84
	04/01/16		37.46	2,929.52
	04/06/16		37.77	2,929.21
	04/11/16		37.32	2,929.66
	04/18/16		37.14	2,929.84
	04/25/16		37.79	2,929.19
	05/02/16		37.85	2,929.13
	05/09/16		36.44	2,930.54
	05/16/16		38.03	2,928.95
	05/23/16		37.11	2,929.87
	05/31/16		38.03	2,928.95
	06/06/16		38.31	2,928.67
	06/13/16		38.17	2,928.81
	06/20/16		38.31	2,928.67

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW23	02/10/16	2,966.33	27.41	2,938.92
	02/22/16		27.25	2,939.08
	03/01/16		34.80	2,931.53
	03/04/16		34.71	2,931.62
	03/07/16		35.00	2,931.33
	03/11/16		35.00	2,931.33
	03/15/16		31.03	2,935.30
	03/18/16		35.25	2,931.08
	03/22/16		34.50	2,931.83
	03/25/16		34.64	2,931.69
	03/29/16		34.84	2,931.49
	04/01/16		37.54	2,928.79
	04/06/16		35.74	2,930.59
	04/11/16		35.48	2,930.85
	04/18/16		35.23	2,931.10
	04/25/16		35.70	2,930.63
	05/02/16		35.24	2,931.09
	05/09/16		35.54	2,930.79
	05/16/16		35.42	2,930.91
	05/23/16		35.59	2,930.74
	05/31/16		35.23	2,931.10
	06/06/16		36.26	2,930.07
	06/13/16		34.93	2,931.40
	06/20/16		35.24	2,931.09
MW24	02/10/16	2,965.79	28.82	2,936.97
	02/22/16		28.78	2,937.01
	03/01/16		28.56	2,937.23
	03/04/16		27.69	2,938.10
	03/07/16		27.98	2,937.81
	03/11/16		28.15	2,937.64
	03/15/16		28.07	2,937.72
	03/18/16		28.23	2,937.56
	03/22/16		27.60	2,938.19
	03/25/16		28.36	2,937.43
	03/29/16		33.42	2,932.37
	04/01/16		30.66	2,935.13
	04/06/16		36.10	2,929.69

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW24 (Cont'd)	04/11/16	2,965.79	36.40	2,929.39
	04/18/16		36.25	2,929.54
	04/25/16		36.29	2,929.50
	05/02/16		36.39	2,929.40
	05/09/16		36.53	2,929.26
	05/16/16		36.55	2,929.24
	05/23/16		36.82	2,928.97
	05/31/16		36.78	2,929.01
	06/06/16		36.70	2,929.09
	06/13/16		36.40	2,929.39
	06/20/16		36.71	2,929.08
MW25	02/10/16	2,966.88	28.02	2,938.86
	02/22/16		27.97	2,938.91
	03/01/16		29.11	2,937.77
	03/04/16		29.85	2,937.03
	03/07/16		28.66	2,938.22
	03/11/16		28.83	2,938.05
	03/15/16		29.11	2,937.77
	03/18/16		28.66	2,938.22
	03/22/16		28.90	2,937.98
	03/25/16		29.45	2,937.43
	03/29/16		33.00	2,933.88
	04/01/16		35.18	2,931.70
	04/06/16		35.34	2,931.54
	04/11/16		35.48	2,931.40
	04/18/16		35.26	2,931.62
	04/25/16		35.80	2,931.08
	05/02/16		35.73	2,931.15
	05/09/16		35.60	2,931.28
	05/16/16		35.91	2,930.97
	05/23/16		34.62	2,932.26
	05/31/16		36.18	2,930.70
	06/06/16		36.19	2,930.69
	06/13/16		36.20	2,930.68
	06/20/16		36.40	2,930.48
MW26	02/10/16	2,965.54	28.65	2,936.89
	02/22/16		28.64	2,936.90

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW26 (Cont'd)	03/01/16	2,965.54	30.08	2,935.46
	03/04/16		29.52	2,936.02
	03/07/16		29.60	2,935.94
	03/11/16		29.55	2,935.99
	03/15/16		29.59	2,935.95
	03/18/16		29.72	2,935.82
	03/22/16		29.30	2,936.24
	03/25/16		34.21	2,931.33
	03/29/16		35.00	2,930.54
	04/01/16		35.21	2,930.33
	04/06/16		35.55	2,929.99
	04/11/16		35.63	2,929.91
	04/18/16		35.55	2,929.99
	04/25/16		35.43	2,930.11
	05/02/16		35.72	2,929.82
	05/09/16		35.83	2,929.71
	05/16/16		36.51	2,929.03
	05/23/16		37.71	2,927.83
	05/31/16		36.14	2,929.40
	06/06/16		35.98	2,929.56
	06/13/16		36.15	2,929.39
	06/20/16		36.25	2,929.29
MW27	02/10/16	2,966.28	26.32	2,939.96
	02/22/16		26.30	2,939.98
	03/01/16		24.88	2,941.40
	03/04/16		24.39	2,941.89
	03/07/16		24.59	2,941.69
	03/11/16		24.86	2,941.42
	03/15/16		25.08	2,941.20
	03/18/16		25.02	2,941.26
	03/22/16		24.90	2,941.38
	03/25/16		29.00	2,937.28
	03/29/16		29.54	2,936.74
	04/01/16		25.95	2,940.33
	04/06/16		30.34	2,935.94
	04/11/16		31.12	2,935.16
	04/18/16		31.02	2,935.26

Table 7 (Cont'd).

Summary of Corrective Action Plan Implementation Groundwater Elevation Data

Location	Date	Relative Top of Casing Elevation[1] (feet)	Depth to Groundwater[2] (feet)	Relative Groundwater Elevation (feet)
MW27 (Cont'd)	04/25/16	2,966.28	31.34	2,934.94
	05/02/16		32.05	2,934.23
	05/09/16		33.37	2,932.91
	05/16/16		33.75	2,932.53
	05/23/16		33.95	2,932.33
	05/31/16		33.95	2,932.33
	06/06/16		33.83	2,932.45
	06/13/16		33.85	2,932.43
	06/20/16		33.89	2,932.39
MW28	02/10/16	2,967.54	29.46	2,938.08
	02/22/16		29.39	2,938.15
	03/01/16		32.03	2,935.51
	03/04/16		30.93	2,936.61
	03/07/16		31.12	2,936.42
	03/11/16		31.13	2,936.41
	03/15/16		30.93	2,936.61
	03/18/16		31.21	2,936.33
	03/22/16		30.90	2,936.64
	03/25/16		35.81	2,931.73
	03/29/16		38.53	2,929.01
	04/01/16		36.30	2,931.24
	04/06/16		36.55	2,930.99
	04/11/16		36.60	2,930.94
	04/18/16		36.62	2,930.92
	04/25/16		36.92	2,930.62
	05/02/16		35.90	2,931.64
	05/09/16		35.09	2,932.45
	05/16/16		37.12	2,930.42
	05/23/16		37.12	2,930.42
	05/31/16		37.14	2,930.40
	06/06/16		37.18	2,930.36
	06/13/16		36.85	2,930.69
	06/20/16		37.12	2,930.42

[1]Elevations measured by Fork Mountain Surveying and Mapping, Inc. relative to an approximate site elevation of 2,968 feet.
[2]If free phase petroleum was observed, depth to groundwater was calculated using a site specific gasoline density of 0.7439 g/ml.

Table 8.

Summary of Corrective Action Plan Implementation Free Product Thicknesses

Location	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)
MW01A	02/10/16	27.09	30.03	2.94
	02/22/16	27.29	28.45	1.16
	03/01/16	NA[1]	29.46	0.00
	03/04/16	NA	28.54	0.00
	03/07/16	NA	29.55	0.00
	03/11/16	NA	29.37	0.00
	03/15/16	NA	29.32	0.00
	03/18/16	NA	29.78	0.00
	03/22/16	28.67	30.14	1.47
	03/25/16	NA	30.83	0.00
	03/29/16	33.52	33.55	0.03
	04/01/16	NA	34.33	0.00
	04/06/16	NA	34.32	0.00
	04/11/16	NA	34.44	0.00
	04/18/16	NA	32.96	0.00
	04/25/16	NA	33.25	0.00
	05/02/16	NA	34.07	0.00
	05/09/16	NA	32.65	0.00
	05/16/16	NA	34.15	0.00
	05/23/16	NA	33.78	0.00
	05/31/16	NA	33.83	0.00
	06/06/16	NA	33.74	0.00
	06/13/16	NA	33.48	0.00
	06/20/16	NA	33.51	0.00
MW02	02/10/16	27.69	29.45	1.76
	02/22/16	27.69	28.84	1.15
	03/01/16	NA	32.25	0.00
	03/04/16	NA	31.39	0.00
	03/07/16	NA	32.61	0.00
	03/11/16	NA	31.70	0.00
	03/15/16	NA	31.50	0.00
	03/18/16	NA	31.63	0.00
	03/22/16	NA	31.23	0.00
	03/25/16	NA	35.21	0.00
	03/29/16	NA	36.24	0.00
	04/01/16	NA	36.90	0.00
	04/06/16	NA	36.98	0.00

Table 8 (Cont'd).

Summary of Corrective Action Plan Implementation Free Product Thicknesses

Location	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)
MW02 (Cont'd)	04/11/16	NA	37.37	0.00
	04/18/16	NA	36.04	0.00
	04/25/16	NA	37.36	0.00
	05/02/16	NA	37.67	0.00
	05/09/16	NA	35.73	0.00
	05/16/16	NA	36.56	0.00
	05/23/16	NA	37.56	0.00
	05/31/16	NA	37.55	0.00
	06/06/16	NA	38.05	0.00
	06/13/16	NA	38.05	0.00
	06/20/16	NA	37.96	0.00
MW03	02/10/16	28.37	31.61	3.24
	02/22/16	28.33	31.49	3.16
	03/01/16	30.89	35.85	4.96
	03/04/16	NA	30.94	0.00
	03/07/16	NA	31.03	0.00
	03/11/16	NA	31.38	0.00
	03/15/16	NA	30.88	0.00
	03/18/16	NA	31.21	0.00
	03/22/16	NA	33.86	0.00
	03/25/16	33.70	33.78	0.08
	03/29/16	NA	36.70	0.00
	04/01/16	NA	36.88	0.00
	04/06/16	NA	38.29	0.00
	04/11/16	NA	38.36	0.00
	04/18/16	NA	36.61	0.00
	04/25/16	NA	36.33	0.00
	05/02/16	NA	36.65	0.00
	05/09/16	NA	35.81	0.00
	05/16/16	NA	37.30	0.00
	05/23/16	NA	36.84	0.00
	05/31/16	NA	37.74	0.00
	06/06/16	NA	37.81	0.00
	06/13/16	NA	37.77	0.00
	06/20/16	NA	38.03	0.00

Table 8 (Cont'd).

Summary of Corrective Action Plan Implementation Free Product Thicknesses

Location	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)
MW07	02/10/16	NA	27.86	0.00
	02/22/16	NA	27.76	0.00
	03/01/16	NA	27.79	0.00
	03/04/16	NA	26.46	0.00
	03/07/16	NA	27.57	0.00
	03/11/16	NA	27.42	0.00
	03/15/16	NA	27.62	0.00
	03/18/16	NA	27.60	0.00
	03/22/16	NA	26.75	0.00
	03/25/16	NA	27.30	0.00
	03/29/16	NA	33.05	0.00
	04/01/16	NA	29.08	0.00
	04/06/16	NA	35.25	0.00
	04/11/16	NA	35.79	0.00
	04/18/16	NA	35.82	0.00
	04/25/16	NA	36.54	0.00
	05/02/16	NA	36.05	0.00
	05/09/16	NA	36.52	0.00
	05/16/16	NA	36.07	0.00
	05/23/16	NA	35.57	0.00
	05/31/16	NA	36.45	0.00
	06/06/16	NA	36.34	0.00
	06/13/16	NA	36.20	0.00
	06/20/16	NA	36.19	0.00
MW12	02/10/16	27.12	28.96	1.84
	02/22/16	27.08	28.95	1.87
	03/01/16	NA	31.10	0.00
	03/04/16	NA	29.92	0.00
	03/07/16	NA	30.18	0.00
	03/11/16	NA	30.28	0.00
	03/15/16	NA	30.49	0.00
	03/18/16	NA	30.56	0.00
	03/22/16	30.14	31.24	1.10
	03/25/16	NA	34.33	0.00
	03/29/16	NA	34.89	0.00
	04/01/16	NA	35.76	0.00
	04/06/16	NA	35.69	0.00

Table 8 (Cont'd).

Summary of Corrective Action Plan Implementation Free Product Thicknesses

Location	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)
MW12 (Cont'd)	04/11/16	NA	35.63	0.00
	04/18/16	NA	35.71	0.00
	04/25/16	NA	36.14	0.00
	05/02/16	NA	35.75	0.00
	05/09/16	NA	35.74	0.00
	05/16/16	NA	36.09	0.00
	05/23/16	NA	36.45	0.00
	05/31/16	NA	34.73	0.00
	06/06/16	NA	36.35	0.00
	06/13/16	NA	35.87	0.00
	06/20/16	NA	36.15	0.00
MW14	02/10/16	28.84	30.85	2.01
	02/22/16	28.75	31.05	2.30
	03/01/16	NA	30.95	0.00
	03/04/16	NA	30.16	0.00
	03/07/16	NA	30.20	0.00
	03/11/16	NA	30.21	0.00
	03/15/16	NA	30.00	0.00
	03/18/16	NA	31.37	0.00
	03/22/16	NA	29.98	0.00
	03/25/16	NA	35.29	0.00
	03/29/16	NA	35.87	0.00
	04/01/16	NA	35.96	0.00
	04/06/16	NA	36.69	0.00
	04/11/16	NA	36.41	0.00
	04/18/16	NA	36.32	0.00
	04/25/16	NA	36.20	0.00
	05/02/16	NA	36.38	0.00
	05/09/16	NA	34.56	0.00
	05/16/16	NA	35.58	0.00
	05/23/16	NA	35.40	0.00
	05/31/16	NA	35.86	0.00
	06/06/16	NA	36.10	0.00
	06/13/16	NA	36.15	0.00
	06/20/16	NA	36.67	0.00

Table 8 (Cont'd).

Summary of Corrective Action Plan Implementation Free Product Thicknesses

Location	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)
MW15	02/10/16	29.64	32.20	2.56
	02/22/16	29.64	32.05	2.41
	03/01/16	NA	32.13	0.00
	03/04/16	NA	31.28	0.00
	03/07/16	NA	31.33	0.00
	03/11/16	NA	31.16	0.00
	03/15/16	NA	31.41	0.00
	03/18/16	NA	31.49	0.00
	03/22/16	NA	31.25	0.00
	03/25/16	NA	35.16	0.00
	03/29/16	NA	36.45	0.00
	04/01/16	NA	35.69	0.00
	04/06/16	NA	35.82	0.00
	04/11/16	NA	35.83	0.00
	04/18/16	NA	35.81	0.00
	04/25/16	NA	35.89	0.00
	05/02/16	NA	35.98	0.00
	05/09/16	NA	35.83	0.00
	05/16/16	NA	36.03	0.00
	05/23/16	NA	36.09	0.00
	05/31/16	NA	36.48	0.00
	06/06/16	NA	36.54	0.00
	06/13/16	NA	36.04	0.00
	06/20/16	NA	36.15	0.00
MW19	02/10/16	NA	30.27	0.00
	02/22/16	NA	30.27	0.00
	03/01/16	NA	28.49	0.00
	03/04/16	NA	27.96	0.00
	03/07/16	NA	27.97	0.00
	03/11/16	NA	27.94	0.00
	03/15/16	NA	28.14	0.00
	03/18/16	NA	28.23	0.00
	03/22/16	NA	28.30	0.00
	03/25/16	NA	30.74	0.00
	03/29/16	35.87	35.96	0.09
	04/01/16	NA	31.10	0.00
	04/06/16	NA	35.79	0.00

Table 8 (Cont'd).

Summary of Corrective Action Plan Implementation Free Product Thicknesses

Location	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)
MW19 (Cont'd)	04/11/16	NA	36.27	0.00
	04/18/16	NA	36.46	0.00
	04/25/16	NA	36.66	0.00
	05/02/16	NA	36.73	0.00
	05/09/16	NA	36.45	0.00
	05/16/16	NA	36.79	0.00
	05/23/16	NA	37.02	0.00
	05/31/16	NA	36.80	0.00
	06/06/16	NA	36.99	0.00
	06/13/16	NA	37.03	0.00
	06/20/16	NA	37.06	0.00
MW21	02/10/16	30.26	32.43	2.17
	02/22/16	30.26	32.33	2.07
	03/01/16	NA	32.51	0.00
	03/04/16	NA	31.75	0.00
	03/07/16	NA	31.62	0.00
	03/11/16	NA	31.86	0.00
	03/15/16	NA	31.79	0.00
	03/18/16	NA	32.00	0.00
	03/22/16	NA	31.84	0.00
	03/25/16	NA	36.12	0.00
	03/29/16	NA	37.50	0.00
	04/01/16	NA	36.68	0.00
	04/06/16	NA	36.81	0.00
	04/11/16	NA	36.76	0.00
	04/18/16	NA	36.84	0.00
	04/25/16	NA	36.95	0.00
	05/02/16	NA	36.95	0.00
	05/09/16	NA	36.92	0.00
	05/16/16	NA	36.95	0.00
	05/23/16	NA	36.86	0.00
	05/31/16	NA	37.04	0.00
	06/06/16	NA	37.10	0.00
	06/13/16	NA	36.92	0.00
	06/20/16	NA	37.10	0.00

Table 8 (Cont'd).

Summary of Corrective Action Plan Implementation Free Product Thicknesses

Location	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)
MW22	02/10/16	28.66	28.78	0.12
	02/22/16	28.63	28.68	0.05
	03/01/16	NA	32.29	0.00
	03/04/16	NA	31.24	0.00
	03/07/16	NA	31.28	0.00
	03/11/16	NA	31.33	0.00
	03/15/16	NA	32.14	0.00
	03/18/16	NA	31.34	0.00
	03/22/16	NA	31.20	0.00
	03/25/16	NA	36.51	0.00
	03/29/16	NA	37.14	0.00
	04/01/16	NA	37.46	0.00
	04/06/16	NA	37.77	0.00
	04/11/16	NA	37.32	0.00
	04/18/16	NA	37.14	0.00
	04/25/16	NA	37.79	0.00
	05/02/16	NA	37.85	0.00
	05/09/16	NA	36.44	0.00
	05/16/16	NA	38.03	0.00
	05/23/16	NA	37.11	0.00
	05/31/16	NA	38.03	0.00
	06/06/16	NA	38.31	0.00
	06/13/16	NA	38.17	0.00
	06/20/16	NA	38.31	0.00
MW23	02/10/16	26.76	29.30	2.54
	02/22/16	26.74	28.74	2.00
	03/01/16	NA	34.80	0.00
	03/04/16	NA	34.71	0.00
	03/07/16	NA	35.00	0.00
	03/11/16	NA	35.00	0.00
	03/15/16	NA	31.03	0.00
	03/18/16	NA	35.25	0.00
	03/22/16	NA	34.50	0.00
	03/25/16	NA	34.64	0.00
	03/29/16	NA	34.84	0.00
	04/01/16	NA	37.54	0.00
	04/06/16	NA	35.74	0.00

Table 8 (Cont'd).

Summary of Corrective Action Plan Implementation Free Product Thicknesses

Location	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)
MW23 (Cont'd)	04/11/16	NA	35.48	0.00
	04/18/16	NA	35.23	0.00
	04/25/16	NA	35.70	0.00
	05/02/16	NA	35.24	0.00
	05/09/16	NA	35.54	0.00
	05/16/16	NA	35.42	0.00
	05/23/16	NA	35.59	0.00
	05/31/16	NA	35.23	0.00
	06/06/16	NA	36.26	0.00
	06/13/16	NA	34.93	0.00
	06/20/16	NA	35.24	0.00
MW24	02/10/16	28.79	28.91	0.12
	02/22/16	28.77	28.79	0.02
	03/01/16	NA	28.56	0.00
	03/04/16	NA	27.69	0.00
	03/07/16	NA	27.98	0.00
	03/11/16	NA	28.15	0.00
	03/15/16	NA	28.07	0.00
	03/18/16	NA	28.23	0.00
	03/22/16	NA	27.60	0.00
	03/25/16	NA	28.36	0.00
	03/29/16	33.39	33.52	0.13
	04/01/16	NA	30.66	0.00
	04/06/16	NA	36.10	0.00
	04/11/16	NA	36.40	0.00
	04/18/16	NA	36.25	0.00
	04/25/16	NA	36.29	0.00
	05/02/16	NA	36.39	0.00
	05/09/16	NA	36.53	0.00
	05/16/16	NA	36.55	0.00
	05/23/16	NA	36.82	0.00
	05/31/16	NA	36.78	0.00
	06/06/16	NA	36.70	0.00
	06/13/16	NA	36.40	0.00
	06/20/16	NA	36.71	0.00

Table 8 (Cont'd).

Summary of Corrective Action Plan Implementation Free Product Thicknesses

Location	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)
MW25	02/10/16	NA	28.02	0.00
	02/22/16	NA	27.97	0.00
	03/01/16	NA	29.11	0.00
	03/04/16	NA	29.85	0.00
	03/07/16	NA	28.66	0.00
	03/11/16	NA	28.83	0.00
	03/15/16	NA	29.11	0.00
	03/18/16	NA	28.66	0.00
	03/22/16	NA	28.90	0.00
	03/25/16	NA	29.45	0.00
	03/29/16	NA	33.00	0.00
	04/01/16	NA	35.18	0.00
	04/06/16	NA	35.34	0.00
	04/11/16	NA	35.48	0.00
	04/18/16	NA	35.26	0.00
	04/25/16	NA	35.80	0.00
	05/02/16	NA	35.73	0.00
	05/09/16	NA	35.60	0.00
	05/16/16	NA	35.91	0.00
	05/23/16	NA	34.62	0.00
	05/31/16	NA	36.18	0.00
	06/06/16	NA	36.19	0.00
	06/13/16	NA	36.20	0.00
	06/20/16	NA	36.40	0.00
MW26	02/10/16	27.91	30.81	2.90
	02/22/16	27.90	30.79	2.89
	03/01/16	NA	30.08	0.00
	03/04/16	NA	29.52	0.00
	03/07/16	NA	29.60	0.00
	03/11/16	NA	29.55	0.00
	03/15/16	NA	29.59	0.00
	03/18/16	NA	29.72	0.00
	03/22/16	NA	29.30	0.00
	03/25/16	NA	34.21	0.00
	03/29/16	NA	35.00	0.00
	04/01/16	NA	35.21	0.00
	04/06/16	NA	35.55	0.00

Table 8 (Cont'd).

Summary of Corrective Action Plan Implementation Free Product Thicknesses

Location	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)
MW26 (Cont'd)	04/11/16	NA	35.63	0.00
	04/18/16	NA	35.55	0.00
	04/25/16	NA	35.43	0.00
	05/02/16	NA	35.72	0.00
	05/09/16	NA	35.83	0.00
	05/16/16	NA	36.51	0.00
	05/23/16	NA	37.71	0.00
	05/31/16	NA	36.14	0.00
	06/06/16	NA	35.98	0.00
	06/13/16	NA	36.15	0.00
	06/20/16	NA	36.25	0.00
MW27	02/10/16	NA	26.32	0.00
	02/22/16	NA	26.30	0.00
	03/01/16	NA	24.88	0.00
	03/04/16	NA	24.39	0.00
	03/07/16	NA	24.59	0.00
	03/11/16	NA	24.86	0.00
	03/15/16	NA	25.08	0.00
	03/18/16	NA	25.02	0.00
	03/22/16	NA	24.90	0.00
	03/25/16	NA	29.00	0.00
	03/29/16	NA	29.54	0.00
	04/01/16	NA	25.95	0.00
	04/06/16	NA	30.34	0.00
	04/11/16	NA	31.12	0.00
	04/18/16	NA	31.02	0.00
	04/25/16	NA	31.34	0.00
	05/02/16	NA	32.05	0.00
	05/09/16	NA	33.37	0.00
	05/16/16	NA	33.75	0.00
	05/23/16	NA	33.95	0.00
	05/31/16	NA	33.95	0.00
	06/06/16	NA	33.83	0.00
	06/13/16	NA	33.85	0.00
	06/20/16	NA	33.89	0.00

Table 8 (Cont'd).

Summary of Corrective Action Plan Implementation Free Product Thicknesses

Location	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)
MW28	02/10/16	29.19	30.24	1.05
	02/22/16	29.16	30.04	0.88
	03/01/16	NA	32.03	0.00
	03/04/16	NA	30.93	0.00
	03/07/16	NA	31.12	0.00
	03/11/16	NA	31.13	0.00
	03/15/16	NA	30.93	0.00
	03/18/16	NA	31.21	0.00
	03/22/16	NA	30.90	0.00
	03/25/16	NA	35.81	0.00
	03/29/16	NA	38.53	0.00
	04/01/16	NA	36.30	0.00
	04/06/16	NA	36.55	0.00
	04/11/16	NA	36.60	0.00
	04/18/16	NA	36.62	0.00
	04/25/16	NA	36.92	0.00
	05/02/16	NA	35.90	0.00
	05/09/16	NA	35.09	0.00
	05/16/16	NA	37.12	0.00
	05/23/16	NA	37.12	0.00
	05/31/16	NA	37.14	0.00
	06/06/16	NA	37.18	0.00
	06/13/16	NA	36.85	0.00
	06/20/16	NA	37.12	0.00

[1]NA = Not applicable.

Table 9.

Summary of Monitoring Well Dissolved Phase Analytical Results

Well Identification	Date	TPH-GRO[1]	TPH-DRO[2]	Benzene[3]	Toluene	Ethyl-benzene	Xylenes	MTBE	Naphthalene
MW01A	05/14/14	187,000	9,090	4,950	46,300	4,060	22,000	4,530	439
	11/05/14	158,000	NA[4]	6,470	36,100	3,880	21,500	17,500	438
	02/10/16	47,800[5]	NA	8,140	45,400	4,050	30,300	14,400	415
	06/13/16	187,000	NA	3,520	26,200	3,660	21,400	5,440	398[5]
MW02	05/14/14	190,000	11,300	6,280	42,900	4,170	22,000	11,700	912
	11/05/14	171,000	NA	8,330	43,400	4,030	21,600	17,500	ND[6]
	02/10/16	44,400[5]	NA	7,660	42,400	3,810	28,100	17,700	413
	06/13/16	53,500	NA	901	2,570	1,840	3,730	879	224
MW03	05/14/14	122,000	5,550	2,130	27,000	3,100	16,400	1,750	444
	11/05/14	158,000	NA	7,140	42,000	3,850	20,900	8,080	463
	02/10/16	124,000	NA	6,250	43,600	4,410	34,500	6,620	470
	06/13/16	99,400	NA	732	2,830	836	4,780	664	162
MW04	03/12/14	3,870	1,220	483	81.4	30.4	347	1,500	11.7
	05/14/14	4,130	1,220	532	23.2	14.6	303	1,150	ND
	11/05/14	4,920	NA	680	4.25	12.4	375	2,340	ND
	02/11/16	13,200	NA	1,130	2,080	439	3,336	2,830	421
	06/13/16	621	NA	20.9	ND	2.52	26.5	318	ND
MW05	03/12/14	4,080	607	501	47.2	81.9	590	1,350	9.77
	05/14/14	651	120	67.3	3.32	13.1	94.8	228	ND
	11/05/14	5,680	NA	739	51.5	185	1,630	1,460	21.5
	02/11/16	411[5]	NA	1,130	1,890	416	2,981	2,300	69.0[5]
	06/13/16	472	NA	17.3	ND	2.17	54.8	158	1.27[5]
MW06	03/12/14	136	230	ND	3.18	2.98	18.7	4.46	ND
	05/14/14	ND	289	ND	ND	ND	ND	1.12	ND
	11/05/14	391	NA	5.24	7.12	4.28	5.06	111	ND
	02/11/16	476[5]	NA	16.4	34.5	1.02	7.35	ND	ND
	06/13/16	ND	NA	ND	ND	ND	ND	ND	ND

Table 9 (Cont'd).

Summary of Monitoring Well Dissolved Phase Analytical Results

Well Identification	Date	TPH-GRO[1]	TPH-DRO[2]	Benzene[3]	Toluene	Ethyl-benzene	Xylenes	MTBE	Naphthalene
MW07	05/14/14	34,700	4,980	1,090	5,070	1,070	6,360	625	166
	11/05/14	63,200	NA	2,870	13,400	2,030	10,500	3,110	191
	02/11/16	55,600	NA	3,320	15,800	1,530	12,030	10,600	158
	06/13/16	61,800	NA	2,030	17,200	1,650	8,360	3,160	135
MW08	05/14/14	ND	145	ND	ND	ND	ND	1.32	ND
	11/06/14	ND	NA	ND	ND	ND	ND	ND	ND
	02/11/16	ND	NA	ND	1.31	ND	ND	ND	ND
	06/13/16	ND	NA	ND	ND	ND	ND	ND	ND
MW09	05/14/14	ND	ND	ND	ND	ND	ND	ND	ND
	11/06/14	ND	NA	ND	ND	ND	ND	ND	ND
	02/11/16	ND	NA	ND	ND	ND	ND	3.44[5]	ND
	06/13/16	ND	NA	ND	ND	ND	ND	1.97	ND
MW10	05/14/14	ND	ND	ND	ND	ND	ND	129	ND
	11/06/14	192	NA	ND	ND	ND	ND	238	ND
	02/11/16	ND	NA	ND	ND	ND	ND	188	ND
	06/13/16	ND	NA	ND	ND	ND	ND	50.7	ND
MW11	05/14/14	ND	107	ND	ND	ND	ND	ND	ND
	11/06/14	ND	NA	1.2	5.66	ND	ND	10	ND
	02/11/16	17,700	NA	1,170	4,960	757	4,270	ND	ND
	06/13/16	1,320	NA	43.3	29.3	25.7	319	17.0	2.26[5]
MW12	05/14/14	124,000	23,700	762	19,800	5,260	28,800	117	710
	11/05/14	71,200	NA	167	5,140	2,390	15,400	33.1	1,250
	02/10/16	96,800	NA	6,760	36,500	4,460	35,700	1,380	678
	06/13/16	1,090	NA	221	1,270	509	2,590	21.6	48.3
MW13	05/14/14	ND	ND	ND	ND	ND	ND	9.14	ND
	11/05/14	ND	NA	ND	ND	ND	ND	28.9	ND
	02/11/16	ND	NA	ND	ND	ND	ND	16.1	ND
	06/13/16	ND	NA	ND	ND	ND	1.18[5]	2.03	ND

Table 9 (Cont'd).

Summary of Monitoring Well Dissolved Phase Analytical Results

Well Identification	Date	TPH-GRO[1]	TPH-DRO[2]	Benzene[3]	Toluene	Ethyl-benzene	Xylenes	MTBE	Naphthalene
MW14	05/14/14	189,000	7,380	7,720	44,800	5,260	29,400	5,850	628
	11/05/14	154,000	NA	7,200	39,200	3,890	21,500	4,830	455
	02/10/16	92,800	NA	5,920	37,600	4,520	39,400	2,930	1,530
	06/13/16	57,000	NA	1,030	3,070	630	4,210	680	123[5]
MW15	05/14/14	178,000	8,500	9,310	48,700	5,160	27,500	4,040	547
	11/05/14	158,000	NA	7,890	41,200	3,980	21,700	2,270	472
	02/10/16	82,600	NA	7,250	34,300	4,040	31,200	973	ND
	06/13/16	138,000	NA	1,160	8,790	2,610	16,400	657	803
MW16	05/14/14	ND	ND	ND	ND	ND	ND	8.82	ND
	11/06/14	ND	NA	ND	ND	ND	ND	13.4	ND
	02/11/16	ND	NA	ND	ND	ND	ND	10.9	ND
	06/13/16	ND	NA	ND	ND	ND	2.12[5]	2.91	ND
MW17	05/14/14	ND	ND	ND	ND	ND	ND	ND	ND
	11/06/14	ND	NA	ND	ND	ND	ND	ND	ND
	02/11/16	ND	NA	ND	ND	ND	ND	ND	ND
	06/13/16	ND	NA	ND	ND	ND	ND	ND	ND
MW18	05/14/14	ND	234	1.65	ND	ND	3.97	ND	ND
	11/05/14	ND	NA	ND	ND	ND	ND	ND	ND
	02/11/16	ND	NA	ND	ND	ND	0.800[5]	ND	ND
	06/13/16	2,650	NA	781	7.94	51.2	260	ND	29.3
MW19	05/14/14	29,900	7,220	315	4,400	994	4,680	97.3	179
	11/05/14	17,000	NA	201	2,160	526	3,020	39.3	244
	02/11/16	14,600	NA	201	1,930	530	4,500	ND	66.6
	06/13/16	22,200	NA	320	2,850	458	3,100	12.4[5]	57.9[5]
MW20	11/06/14	146	NA	ND	ND	ND	ND	20.4	ND
	02/11/16	310[5]	NA	16.6	19.7	ND	29.0	ND	ND
	06/13/16	386	NA	23.7	3.92[5]	6.23	39.6	1.87	1.44[5]
MW21	11/05/14	154,000	NA	7,710	40,700	3,710	20,200	1,820	1,100
	02/10/16	85,900	NA	7,760	44,200	4,240	33,400	1,260	540
	06/13/16	27,000	NA	1,180	3,710	685	4,920	134	102[5]

Table 9 (Cont'd).

Summary of Monitoring Well Dissolved Phase Analytical Results

Well Identification	Date	TPH-GRO[1]	TPH-DRO[2]	Benzene[3]	Toluene	Ethyl-benzene	Xylenes	MTBE	Naphthalene
MW22	11/05/14	124,000	NA	5,060	26,200	3,580	18,000	2,030	527
	02/10/16	80,400	NA	5,890	34,800	4,250	33,700	4,330	887
	06/13/16	3,190	NA	21.1	126	21.0	418	67.5	80.8
MW23	11/05/14	142,000	NA	3,850	34,600	4,300	22,600	2,080	494
	02/10/16	75,800	NA	5,160	35,600	4,040	30,500	6,140	717
	06/13/16	40,400	NA	317	5,660	624	3,990	299	76.9
MW24	11/05/14	156,000	NA	5,800	36,700	4,000	23,200	2,350	731
	02/10/16	46,600[5]	NA	656	13,600	3,000	25,600	3,750	661
	06/13/16	59,700	NA	1,180	7,810	1,480	9,700	1,340	280[5]
MW25	11/05/14	135,000	NA	3,620	29,300	4,080	21,200	2,680	590
	02/11/16	11,100	NA	94.0[5]	1,770	465	3,960	411[5]	289
	06/13/16	4,210	NA	78.6	364	43.9	287	340	7.05[5]
MW26	11/05/14	158,000	NA	6,330	38,900	3,610	19,200	5,400	425
	02/10/16	92,800	NA	7,080	35,700	3,880	33,200	6,900	758
	06/13/16	58,200	NA	2,430	8,570	1,650	8,830	3,570	149[5]
MW27	11/05/14	755	NA	6.61	5.75	2.61	34.7	27.1	6.08
	02/11/16	ND	NA	ND	ND	ND	ND	ND	ND
	06/13/16	385	NA	ND	14.4	9.04	89.3	3.55	ND
MW28	11/05/14	99,600	NA	2,500	17,700	3,480	17,800	981	483
	02/10/16	69,800	NA	4,360	37,700	4,520	34,300	ND	798
	06/13/16	9,350	NA	38.9	315	55.3	901	7.72[5]	109

[1]TPH (gasoline range organics) analysis via U.S. EPA SW-846 method 8015B; reported in micrograms per liter (µg/L).
[2]TPH (diesel range organics) analysis via U.S. EPA SW-846 method 8015B; reported in µg/L.
[3]BTEX, MTBE, naphthalene analysis via U.S. EPA SW-846 method 8021B; reported in µg/L.
[4]NA = Not applicable.
[5]The reported result is an estimate. The reported concentration is less than the reported detection limit (RDL) but equal to or above the method detection limit (MDL).
[6]ND = Non detected at method detection limit.

Table 10.

Summary of the ¼-Mile Radius Receptor Survey Results

Receptor ID	Name/Address[1]	Well/Spring Location From UST System	Potential Receptor Information, Current Use, Installation Date, & Construction Details
DW01	Meadows of Dan Food Market 2609 Jeb Stuart Highway	~75 feet Northwest	Property maintains a drilled supply well with steel casing located within the store building. The date of installation and additional construction details are unknown.
DW02	Poor Farmer's Market 2616 Jeb Stuart Highway	~135 feet South	Property maintains a drilled supply well with steel casing located within the store building. The well was reportedly installed in 1962. Additional construction details are unknown. A residence is also located on the property, which obtains potable water from the same onsite supply well. Carbon filtration units have been installed as part of the VA DEQ alternate water supply program.
DW03	Jane's County Café 2588 Jeb Stuart Highway	~255 feet Southwest	Property maintains a drilled supply well with steel casing located within a well house behind the café. The date of installation and additional construction details are unknown. Carbon filtration units have been installed as part of the VA DEQ alternate water supply program.
DW04	Former Janie Stidham Property 2554 Jeb Stuart Highway	~375 feet Southwest	A drilled supply well is located beneath the wooden porch at the DW04 property. The drilled supply well provides potable water to the properties identified as DW04, DW05, and DW06. The date of installation and additional construction details are unknown. Carbon filtration units have been installed as part of the VA DEQ alternate water supply program.
DW05	Commercial Property (For Sale) Formerly Dan River Books 36 Concord Road		
DW06	Cassell Farms Property 10 Concord Road		
DW07	Mountain Meadow Farm & Craft (seasonal) 12134 Squirrel Spur Road	~1,210 feet Southwest	A spring/spring house is located on the DW08 property. The spring reportedly provides potable water to both the DW07 and DW08 properties.
DW08	Greenberry House Yarn 12206 Squirrel Spur Road	~730 feet Southwest	
DW09	Burnette Residence 282 Concord Road	~1,300 feet Southeast	Property maintains a spring/spring house that reportedly provides potable water to the property.
DW10	Meadows of Dan Community Center 2858 Jeb Stuart Highway	~1,350 feet East-Southeast	Property maintains a drilled supply well (DW10) located within the Meadows of Dan Community Center building. The date of installation and construction details are unknown.
DW23		~1,500 feet East-Southeast	Property maintains an additional drilled supply well (DW23) located on the property. Greene was unable to collect a sample during CAP IMP SP2 due to the pump having not yet been installed. The supply well was reportedly installed to a depth of 275 feet.

Table 10 (Cont'd).

Summary of the ¼-Mile Radius Receptor Survey Results

Receptor ID	Name/Address[1]	Well/Spring Location From UST System	Potential Receptor Information, Current Use, Installation Date, & Construction Details
DW11	Agee Residence 2883 Jeb Stuart Highway	~1,415 feet East-Northeast	Property maintains a drilled supply well with PVC casing located on the east side of the residence. The date of installation and additional construction details are unknown.
DW22		~1,415 feet East-Northeast	Property maintains an additional drilled supply well (DW22) located on the property. The supply well is currently being utilized to provide potable water to the residence and was reportedly to a depth of 225 feet.
DW12	Spangler Residence 2734 Jeb Stuart Highway	~630 feet East-Southeast	Property reportedly maintains a drilled supply well located on the south side of the residence. The supply well casing is reportedly buried and its exact location is unknown. The date of installation and additional construction details are unknown. Carbon filtration units have been installed as part of the VA DEQ alternate water supply program.
DW13	Stanley Residence 2727 Jeb Stuart Highway	~550 feet East-Northeast	Property maintains a drilled supply well with steel casing located on the south side of the residence. The supply well is reportedly 340 feet deep; however, the date of installation and additional construction details are unknown.
DW14	Private Residence 2685 Jeb Stuart Highway	~325 feet East	Property maintains a drilled supply well with PVC casing located on the south side of the residence. The supply well was reportedly installed in ~2008-2009. Additional construction details are unknown.
DW15	Nancy's Candy Company 2684 Jeb Stuart Highway	~470 feet Southeast	Property maintains a drilled supply well with steel casing located on the south side of the building. The supply well was installed in 1998 to approximately 405 feet below the ground surface. In addition, 105 feet of steel casing was installed and the well was grouted from 0-50 feet. Carbon filtration units have been installed as part of the VA DEQ alternate water supply program.
DW16	Commercial Property Former Mountain House Restaurant 2639 Jeb Stuart Highway	~175 feet East	Property maintains a drilled supply well with steel casing located within a well house on the east side of the property. The supply well was reportedly installed in 1982 to approximately 280 feet below the ground surface. Additional construction details are unknown.
DW17	Commercial Building (Multiple Businesses) 2577 Jeb Stuart Highway Meadows Merchant Building LLC	~200 feet Northwest	Property maintains a drilled supply well with steel casing located on the north side of the property. The top of casing is located below the ground within larger concrete casing. The date of installation and additional construction details are unknown.
DW18	Meadows of Dan Baptist Church 2511 Jeb Stuart Highway	~400 feet Northwest	Property maintains a drilled supply well with steel casing located within the parsonage. The date of installation and additional construction details are unknown.

Table 10 (Cont'd).

Summary of the ¼-Mile Radius Receptor Survey Results

Receptor ID	Name/Address[1]	Well/Spring Location From UST System	Potential Receptor Information, Current Use, Installation Date, & Construction Details
DW19	Century Link Property 2646 Jeb Stuart Highway	~190 feet Southeast	Property maintains a drilled supply well located on the north side of the property. The top of casing is located below the ground within a manway. The date of installation and additional construction details are unknown.
DW20	Pond	~1,130 feet Southwest	The pond is located on the DW07 property and drains to an intermittent tributary to Tuggle Creek.
DW21	Stanley Residence 2827 Jeb Stuart Highway	~1,150 feet Northeast	Property maintains a drilled supply well. The well was reportedly installed to a depth of 185 feet.
DW24	Unnamed Tributary	~950 feet East	Unnamed intermittent tributary to Tuggle Creek.
DW25	Unnamed Tributary	~1,030 feet Southwest	Unnamed intermittent tributary to Tuggle Creek.

[1]Addresses are located in Meadows of Dan, VA 24120

Table 11.

Summary of Drinking Water Dissolved Phase Analytical Results

Receptor ID	Sample Date	VOCs[1]	SVOCs[2]
DW01	01/31/14	ND[3] for all VOCs via 8260	NA[4]
	02/10/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	05/14/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	11/07/14	ND for all VOCs via 8260	NA
	02/11/16	ND for all VOCs via 8260	NA
	06/13/16	ND for all VOCs via 8260	NA
DW02 (outside hydrant)	01/31/14	MTBE = 76.9; ND for all other VOCs via 8260	NA
	02/07/14	MTBE = 74.6; ND for all other VOCs via 8260	NA
	02/10/14	NA	ND for all SVOCs via 8270
	02/19/14[5]	MTBE = 35.1; ND for all other VOCs via 8260	ND for all SVOCs via 8270
	05/15/14[5]	MTBE = 56.7 Diisopropyl ether (DIPE) = 0.7 ND for all other VOCs via 8260	NA

Table 11 (Cont'd).

Summary of Drinking Water Dissolved Phase Analytical Results

Receptor ID	Sample Date	VOCs[1]	SVOCs[2]
DW02 (outside hydrant)	08/26/14[5]	MTBE = 33.5; ND for all other VOCs via 8260	NA
	12/18/14[5]	MTBE = 14.9; ND for all other VOCs via 8260	NA
	04/23/15[5]	MTBE = 21.6; ND for all other VOCs via 8260	NA
	11/04/15[5]	DIPE = 0.7 MTBE = 98.1 TAME = 0.9 ND for all other VOCs via 8260	NA
	05/18/16[5]	MTBE = 28.0; ND for all other VOCs via 8260	NA
DW02 (kitchen faucet)	02/07/14	MTBE = 76.5; ND for all other VOCs via 8260	NA
	02/10/14	NA	ND for all SVOCs via 8270
DW03[6]	01/31/14	Benzene = 14.4 1,2-Dichloroethane = 1.24 MTBE = 38.7 ND for all other VOCs via 8260	NA
	02/07/14	MTBE = 2.71; ND for all other VOCs via 8260	NA
	02/10/14	NA	ND for all SVOCs via 8270
	02/17/14	MTBE = 1.83; ND for all other VOCs via 8260	ND for all SVOCs via 8270
	02/19/14[5]	MTBE = 5.0; ND for all other VOCs via 8260	ND for all SVOCs via 8270
	04/16/14[5]	MTBE = 4.4; ND for all other VOCs via 8260	NA
	10/30/14[5]	TAME = 0.8 Benzene = 6.7 1,2-Dichloroethane = 4.6 MTBE = 63.5 Xylenes = 7.9 ND for all other VOCs via 8260	NA
	04/23/15[5]	TAME = 0.6 Benzene = 22.6 1,2-Dichloroethane = 0.6 DIPE = 5.8 MTBE = 44.2 Naphthalene = 1.9 ND for all other VOCs via 8260	NA
	04/30/15[7]	ND for all VOCs via 8260	ND for all SVOCs via 8270
	05/12/15[7]	ND for all VOCs via 8260	ND for all SVOCs via 8270

Table 11 (Cont'd).

Summary of Drinking Water Dissolved Phase Analytical Results

Receptor ID	Sample Date	VOCs[1]	SVOCs[2]
DW03[6] (Cont'd)	05/12/15[5]	TAME = 0.7 Benzene = 44.2 1,2-Dichloroethane = 1.1 DIPE = 7.7 MTBE = 51.4 Naphthalene = 3.0 Xylenes = 46.7 ND for all other VOCs via 8260	Naphthalene = 2.7; ND for all other SVOCs via 8270
	11/04/15[5]	MTBE = 3.4; ND for all other VOCs via 8260	NA
	05/18/16[5]	MTBE = 1.2; ND for all other VOCs via 8260	NA
DW04 DW05 DW06	03/30/15	Benzene = 21.9 Isopropylbenzene = 0.960 MTBE = 47.6 Naphthalene = 1.81 Xylenes = 26.9 ND for all other VOCs via 8260	Bis(2-ethylhexl) phthalate = 7.10; ND for all other SVOCs via 8270
	04/20/15	Benzene = 16.0 MTBE = 34.9 Xylenes = 24.3 ND for all other VOCs via 8260	ND for all SVOCs via 8270
	05/12/15[5]	TAME = 0.9 Benzene = 62.4 DIPE = 8.3 MTBE = 55.3 Naphthalene = 3.1 Xylenes = 57.3 ND for all other VOCs via 8260	Naphthalene = 2.7; ND for all other SVOCs via 8270
	08/04/15[5]	1,2-Dichloroethane = 1.2 TAME = 1.3 TAA = 52.1 Benzene = 110 DIPE = 10.8 MTBE = 76.3 Naphthalene = 5.7 TBA = 27.1 Xylenes = 103 ND for all other VOCs via 8260	NA
	11/04/15[5]	1,2-Dichloroethane = 1.3 TAME = 1.4 TAA = 66.7 Benzene = 167 DIPE = 10.1 MTBE = 122 Naphthalene = 5.4 TBA = 35.6 Toluene = 3.0 Xylenes = 155 ND for all other VOCs via 8260	NA

Table 11 (Cont'd).

Summary of Drinking Water Dissolved Phase Analytical Results

Receptor ID	Sample Date	VOCs[1]	SVOCs[2]
DW04 DW05 DW06 (Cont'd)	05/18/16[5]	TAME = 1.3 TAA = 40.7 Benzene = 63.5 DIPE = 8.2 MTBE = 72.2 Naphthalene = 3.4 TBA = 20.7 Xylenes = 58.0 ND for all other VOCs via 8260	NA
DW07 DW08	03/12/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	05/14/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	11/07/14	ND for all VOCs via 8260	NA
	02/11/16	ND for all VOCs via 8260	NA
	06/13/16	ND for all VOCs via 8260	NA
DW09	02/25/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	03/12/14	ND for all VOCs via 8260	Bis(2-ethylhexl) phthalate = 21.0; ND for all other SVOCs via 8270
DW10	02/10/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
DW11	02/10/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
DW12	01/31/14	MTBE = 3.62; ND for all other VOCs via 8260	NA
	02/07/14	MTBE = 3.40; ND for all other VOCs via 8260	NA
	02/10/14	NA	ND for all SVOCs via 8270
	03/06/14[5]	MTBE = 3.5; ND for all other VOCs via 8260	ND for all SVOCs via 8270
	05/15/14[5]	MTBE = 3.4; ND for all other VOCs via 8260	NA
	10/30/14[5]	MTBE = 3.5; ND for all other VOCs via 8260	NA
	04/23/15[5]	MTBE = 3.7; ND for all other VOCs via 8260	NA
	11/04/15[5]	MTBE = 5.4; ND for all other VOCs via 8260	NA
	05/17/16[5]	MTBE = 3.1; ND for all other VOCs via 8260	NA
DW13	01/31/14	ND for all VOCs via 8260	NA
	02/10/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	05/14/14	ND for all VOCs via 8260	ND for all SVOCs via 8270

Table 11 (Cont'd).

Summary of Drinking Water Dissolved Phase Analytical Results

Receptor ID	Sample Date	VOCs[1]	SVOCs[2]
DW13 (Cont'd)	11/07/14	ND for all VOCs via 8260	NA
	02/11/16	Chloroform = 0.620[8] ND for all VOCs via 8260	NA
	06/13/16	ND for all VOCs via 8260	NA
DW14	01/31/14	ND for all VOCs via 8260	NA
	02/10/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	05/14/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	11/07/14	ND for all VOCs via 8260	NA
	02/11/16	ND for all VOCs via 8260	NA
	06/13/16	ND for all VOCs via 8260	NA
DW15	02/10/14	MTBE = 10.9; ND for all other VOCs via 8260	ND for all SVOCs via 8270
	02/17/14	MTBE = 15.5; ND for all other VOCs via 8260	ND for all SVOCs via 8270
	02/19/14[5]	MTBE = 15.7; ND for all other VOCs via 8260	ND for all SVOCs via 8270
	03/14/14[5]	Acetone = 1,270 2-Butanone (MEK) = 926 MTBE = 15.6 ND for all other VOCs via 8260	NA
	04/16/14[5]	MTBE = 18.8; ND for all other VOCs via 8260	NA
	05/15/14[5]	MTBE = 18.3; ND for all other VOCs via 8260	NA
	08/26/14[5]	MTBE = 25.2; ND for all other VOCs via 8260	NA
	12/18/14[5]	MTBE = 17.3; ND for all other VOCs via 8260	NA
	04/23/15[5]	MTBE = 21.8; ND for all other VOCs via 8260	NA
	11/04/15[5]	MTBE = 28.3; ND for all other VOCs via 8260	NA
	05/18/16[5]	MTBE = 27.3 TAME = 0.5 ND for all other VOCs via 8260	NA
DW16	01/31/14	ND for all VOCs via 8260	NA
	02/10/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	07/01/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	08/01/14	Chloroform = 1.84; ND for all other VOCs via 8260	ND for all SVOCs via 8270
	09/25/14	ND for all VOCs via 8260	ND for all SVOCs via 8270

Table 11 (Cont'd).

Summary of Drinking Water Dissolved Phase Analytical Results

Receptor ID	Sample Date	VOCs[1]	SVOCs[2]
DW17	01/31/14	ND for all VOCs via 8260	NA
	02/10/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	11/07/14	ND for all VOCs via 8260	NA
	03/04/16	ND for all VOCs via 8260	NA
	06/13/16	ND for all VOCs via 8260	NA
DW18	02/26/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	03/12/14	ND for all VOCs via 8260	Bis(2-ethylhexl) phthalate = 26.1; ND for all other SVOCs via 8270
DW19	02/25/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	03/12/14	ND for all VOCs via 8260	ND for all SVOCs via 8270
	06/25/14	ND for all VOCs via 8260	NA
	11/20/14	ND for all VOCs via 8260	NA
	02/11/16	Toluene = 3.87; ND for all other VOCs via 8260	NA
	02/26/16	DIPE = 1.41; ND for all other VOCs via 8260	NA
	03/15/16	1,1-Dichloroethane = 0.413[8] 1,2-Dichloroethane = 0.758[8] DIPE = 1.48 MTBE = 0.773[8] ND for all other VOCs via 8260	NA
DW21	02/11/16	ND for all VOCs via 8260	NA
DW22	02/26/16	ND for all VOCs via 8260	NA
DW23	06/13/16	2-Butanone (MEK) = 12.0; ND for all other VOCs via 8260	NA

[1]VOCs (Volatile Organic Compounds) analysis via U.S. EPA SW-846 method 8260B; reported in micrograms per liter (µg/L).
[2]SVOCs (Semi-Volatile Organic Compounds) analysis via U.S. EPA SW-846 method 8270C; reported in µg/L.
[3]ND = Non Detected at laboratory method detection limits.
[4]NA = Not Analyzed.
[5]Drinking water samples collected on behalf of the VA DEQ AWS program.
[6]Receptor ID DW03 has the ability to obtain potable water from the onsite well and from the well located at Receptor ID DW04.
[7]Confirmed drinking water samples collected by Greene from the onsite supply well located at Receptor ID DW03.
[8]The reported result is an estimate. The reported concentration is less than the reported detection limit (RDL) but equal to or above the method detection limit (MDL).

Table 12.
Summary of CAP IMP SP3 Vacuum Readings

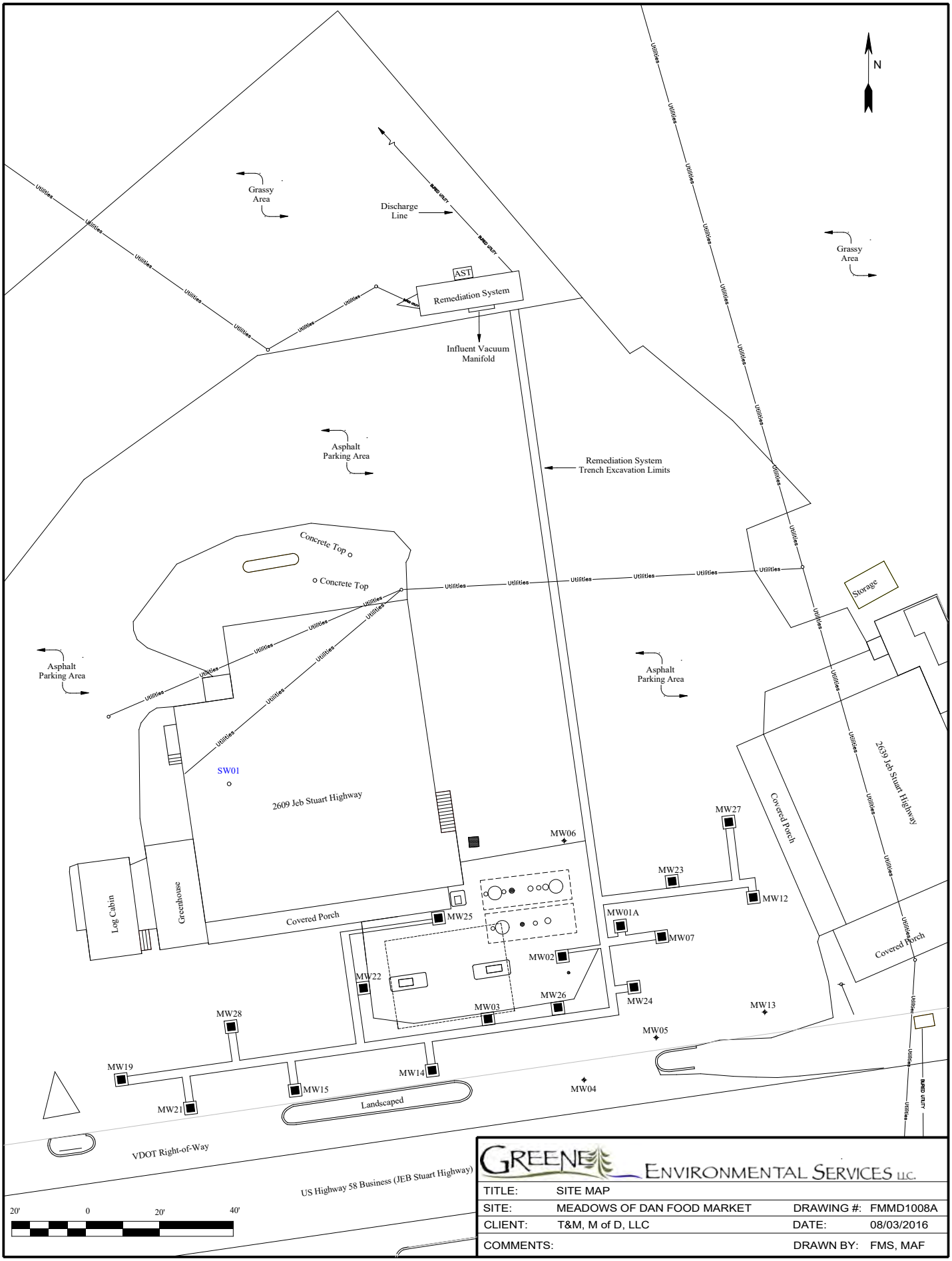
Well ID	Vacuum Readings (Inches of Water Column)												
	04/01/16	04/06/16	04/11/16	04/18/16	04/25/16	05/02/16	05/09/16	05/16/16	05/23/16	05/31/16	06/06/16	06/13/16	06/20/16
MW01A	190.34	183.55	176.75	190.34	190.34	190.34	190.34	176.75	190.34	190.34	176.75	176.75	163.15
MW02	163.15	149.56	156.35	176.75	183.55	190.34	156.35	163.15	149.56	190.34	217.54	224.33	NA[1]
MW03	163.15	163.15	149.56	176.75	190.34	190.34	169.95	149.56	163.15	190.34	163.15	176.75	163.15
MW04	8.00	6.60	6.20	4.40	7.60	8.00	8.30	6.40	7.90	7.20	6.90	7.10	7.20
MW05	5.80	3.10	4.00	2.60	5.20	4.80	5.20	2.40	5.20	4.20	5.20	4.40	4.60
MW06	0.50	0.22	0.40	0.15	0.48	0.80	0.42	0.60	0.60	0.50	0.60	0.45	0.45
MW07	176.75	163.15	149.56	176.75	163.15	176.75	163.15	163.15	176.75	176.75	176.75	169.95	NA
MW08	0.32	0.08	0.12	0.10	0.15	0.24	0.15	0.10	0.20	0.15	0.20	0.19	0.20
MW09	0.38	0.25	0.35	0.33	0.37	0.06	0.45	0.36	0.50	0.35	0.55	0.35	0.35
MW10	0.00	0.02	0.00	0.00	0.02	0.02	0.00	0.02	0.04	0.01	0.05	0.00	0.00
MW11	0.86	0.75	0.90	0.75	0.95	1.40	1.12	0.80	1.15	0.70	1.20	0.95	1.00
MW12	163.15	163.15	163.15	176.75	190.34	176.75	176.75	163.15	169.95	163.15	176.75	176.75	176.75
MW13	3.30	1.65	1.90	1.35	2.20	2.80	2.50	2.10	2.60	2.10	3.00	2.30	2.40
MW14	176.75	176.75	176.75	176.75	169.95	149.56	163.15	176.75	156.35	163.15	149.56	169.95	NA
MW15	163.15	135.96	163.15	149.56	163.15	163.15	163.15	149.56	149.56	163.15	163.15	176.75	163.15
MW16	0.10	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.00
MW17	0.00	0.00	0.01	0.02	0.00	0.01	0.00	0.06	0.05	0.02	0.00	0.02	0.00
MW18	4.80	3.10	3.40	0.90	4.25	4.20	3.30	3.60	2.90	2.90	4.60	4.00	4.20
MW19	176.75	176.75	163.15	190.34	183.55	176.75	176.75	163.15	190.34	163.15	176.75	163.15	163.15
MW20	0.95	0.70	0.75	0.73	0.90	0.88	1.00	0.80	1.00	0.70	1.40	0.74	1.10
MW21	163.15	163.15	156.35	163.15	197.14	163.15	156.35	149.56	NA	163.15	176.75	176.75	176.75
MW22	163.15	156.35	169.95	163.15	169.95	163.15	163.15	163.15	149.56	163.15	149.56	149.56	NA
MW23	203.94	176.75	183.55	190.34	183.55	190.34	169.95	190.34	197.14	190.34	176.75	176.75	176.75
MW24	NA	NA	NA	190.34	156.35	176.75	149.56	163.15	149.56	163.15	149.56	149.56	NA
MW25	176.75	176.75	156.35	163.15	156.35	163.15	135.96	163.15	149.56	135.96	149.56	129.16	NA
MW26	176.75	176.75	169.95	163.15	176.75	176.75	163.15	163.15	190.34	176.75	163.15	169.95	163.15
MW27	NA	NA	NA	190.34	135.96	108.77	156.35	149.56	163.15	190.34	163.15	163.15	176.75
MW28	190.34	176.75	176.75	176.75	183.55	163.15	149.56	149.56	NA	NA	NA	NA	NA

[1]NA = Not Applicable.

APPENDIX B

Maps

Site Map
Potential Receptors Location Map
CAP IMP SP3 Potentiometric Surface Map (04/18/2016)
CAP IMP SP3 Potentiometric Surface Map (05/16/2016)
CAP IMP SP3 Potentiometric Surface Map (06/13/2016)
CAP IMP SP3 Drawdown Map (04/18/2016)
CAP IMP SP3 Drawdown Map (05/16/2016)
CAP IMP SP3 Drawdown Map (06/13/2016)
CAP IMP SP3 Radius of Influence Map (04/18/2016)
CAP IMP SP3 Radius of Influence Map (05/16/2016)
CAP IMP SP3 Radius of Influence Map (06/13/2016)
CAP IMP SP3 TPH-GRO Isoconcentration Map
CAP IMP SP3 Benzene Isoconcentration Map
CAP IMP SP3 Toluene Isoconcentration Map
CAP IMP SP3 Ethylbenzene Isoconcentration Map
CAP IMP SP3 Xylenes Isoconcentration Map
CAP IMP SP3 MTBE Isoconcentration Map
CAP IMP SP3 Naphthalene Isoconcentration Map
CAP IMP SP3 Total BTEX Isoconcentration Map

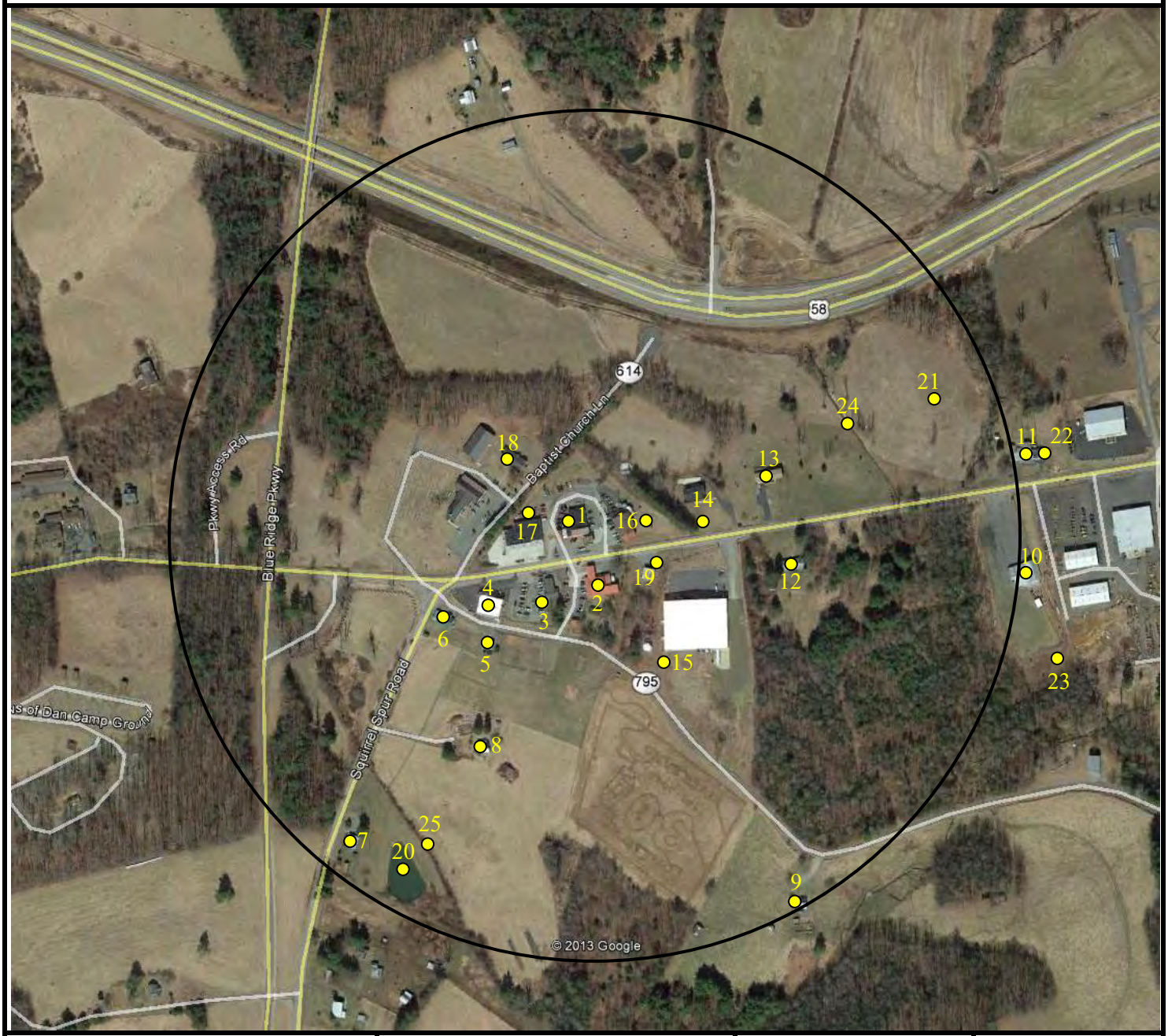


GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	SITE MAP		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008A
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:		DRAWN BY:	FMS, MAF

Potential Receptors Location Map

Meadows of Dan Food Market
2609 Jeb Stuart Highway
Meadows of Dan, Virginia 24120



GREENE ENVIRONMENTAL SERVICES LLC
200 Buckwheat Lane, Rocky Mount, Virginia 24151

Office: 540-483-3311 or 800-215-2596
Fax: 540-483-3381

www.greene-environmental.com

PATRICK COUNTY, VIRGINIA

Source: Google Earth

Scale: Not to Scale

Project: CAP IMP SP3

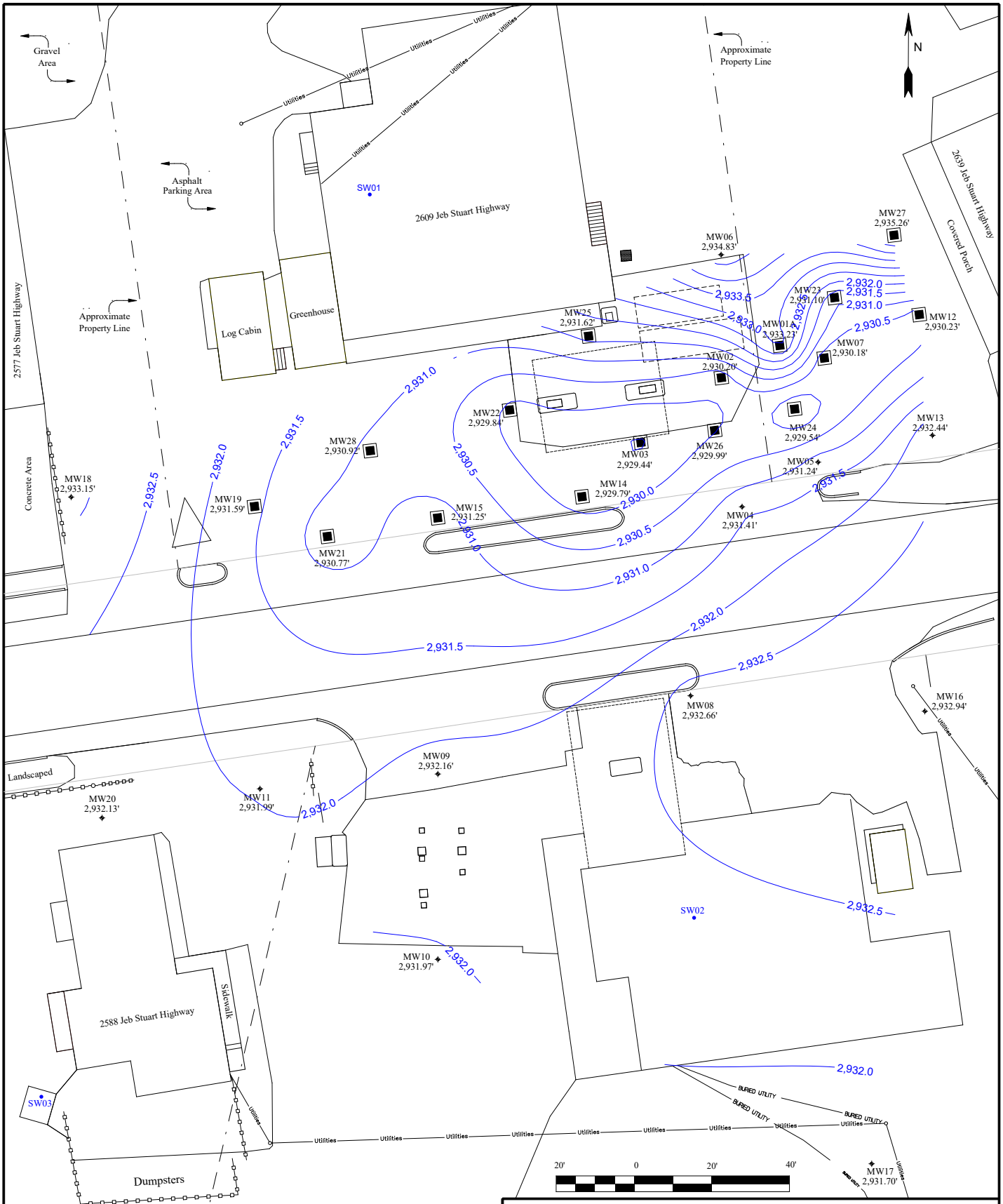
Client: T&M, M of D, L.L.C.

Greene Job #: FMMD1008

Date: August 3, 2016

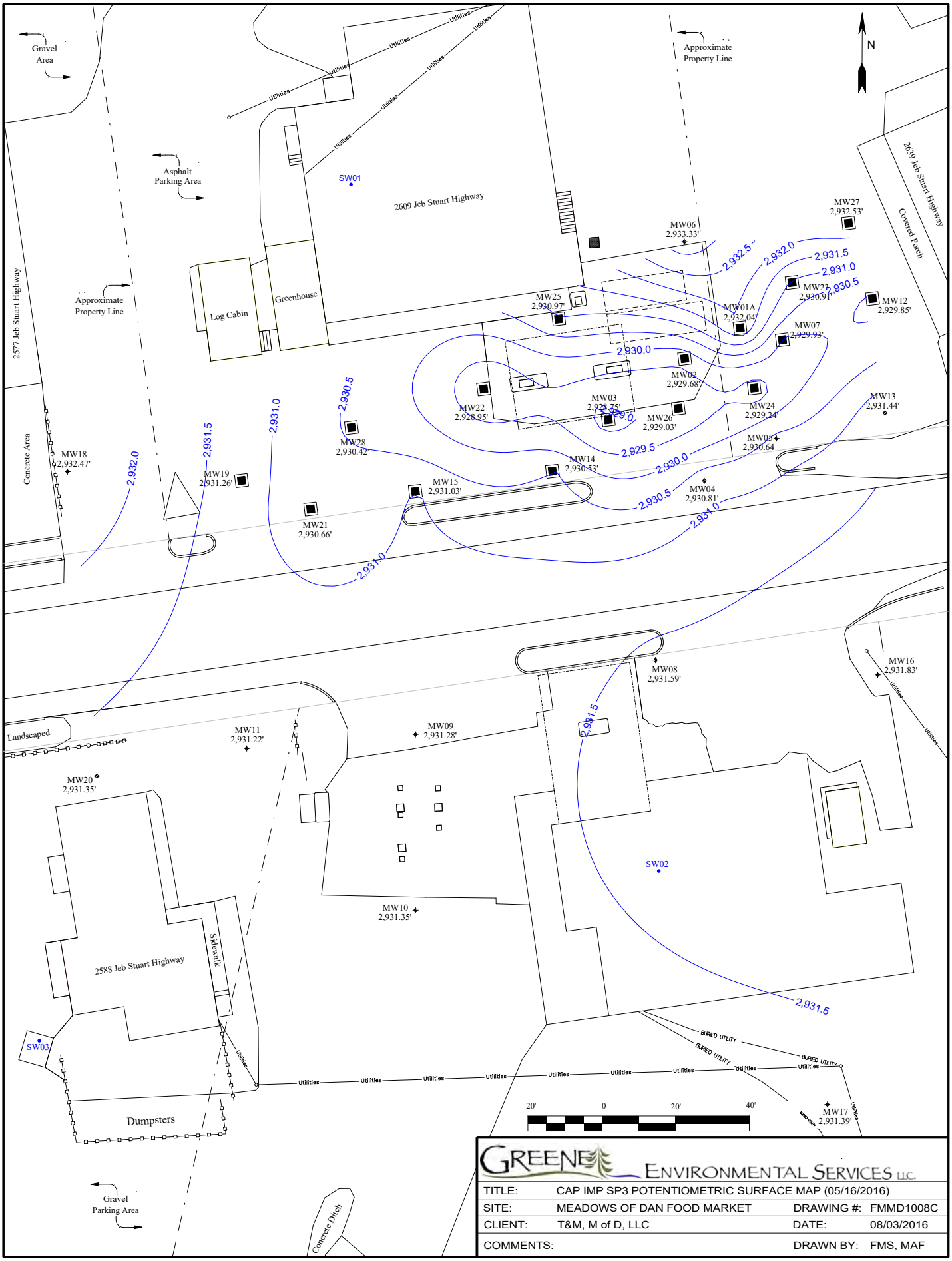
N
W E
S

Latitude:
036.7353972° N
Longitude:
080.4077838° W



GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 POTENTIOMETRIC SURFACE MAP (04/18/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008B
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:		DRAWN BY:	FMS, MAF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Gravel Area
Asphalt Parking Area
Approximate Property Line
2577 Jeb Stuart Highway
2609 Jeb Stuart Highway
2639 Jeb Stuart Highway
Covered Porch
Log Cabin
Greenhouse
Concrete Area
Landscaped
2588 Jeb Stuart Highway
Sidewalk
Dumpsters
Gravel Parking Area
Concrete Ditch
Utilities
BURED UTILITY
SW01
SW02
SW03
MW01A 2,932.04'
MW02 2,929.68'
MW03 2,928.25'
MW04 2,930.81'
MW05 2,930.64'
MW06 2,933.33'
MW07 2,929.93'
MW08 2,931.59'
MW09 2,931.28'
MW10 2,931.35'
MW11 2,931.22'
MW12 2,929.85'
MW13 2,931.44'
MW14 2,930.53'
MW15 2,931.03'
MW16 2,931.83'
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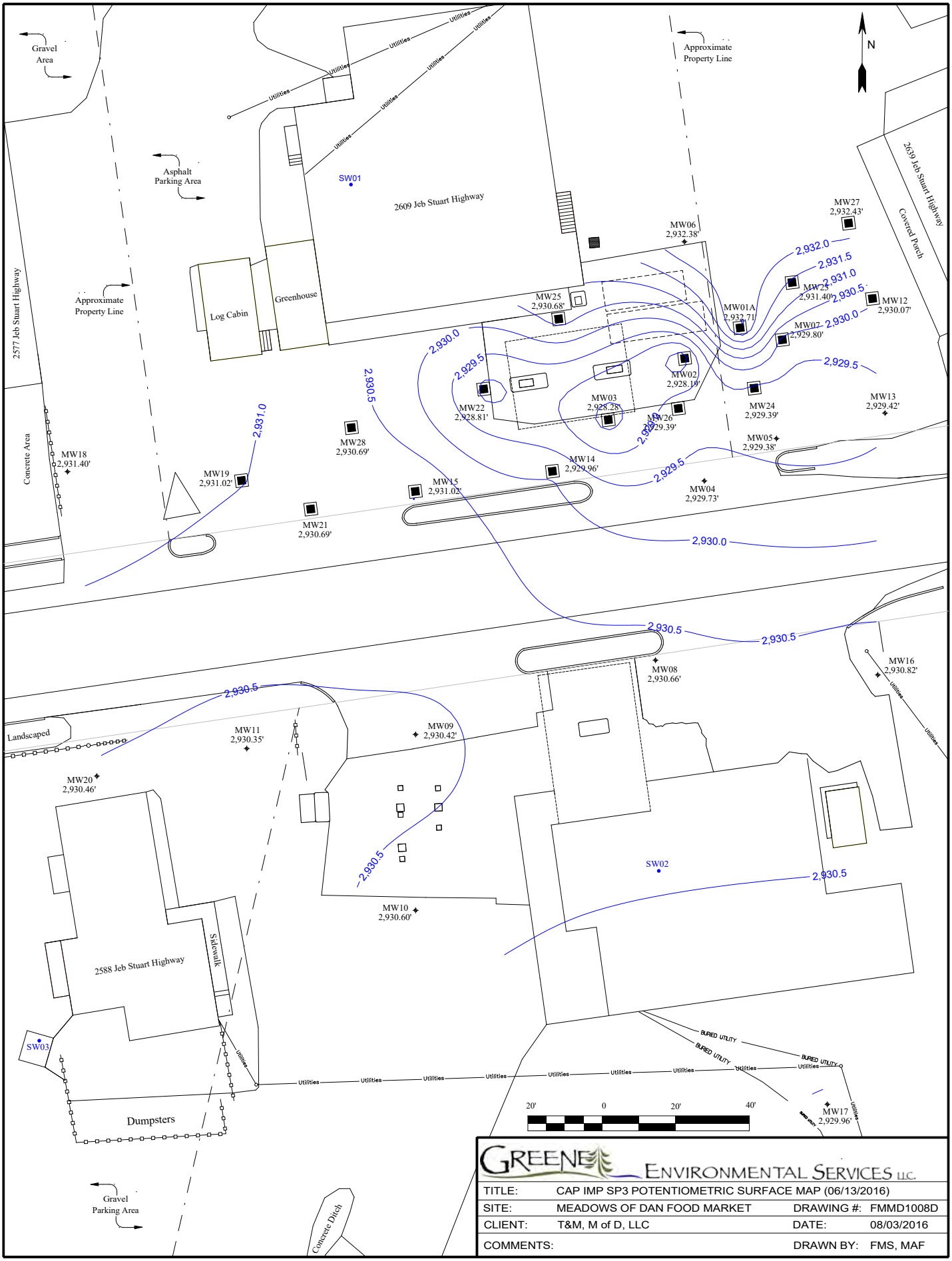
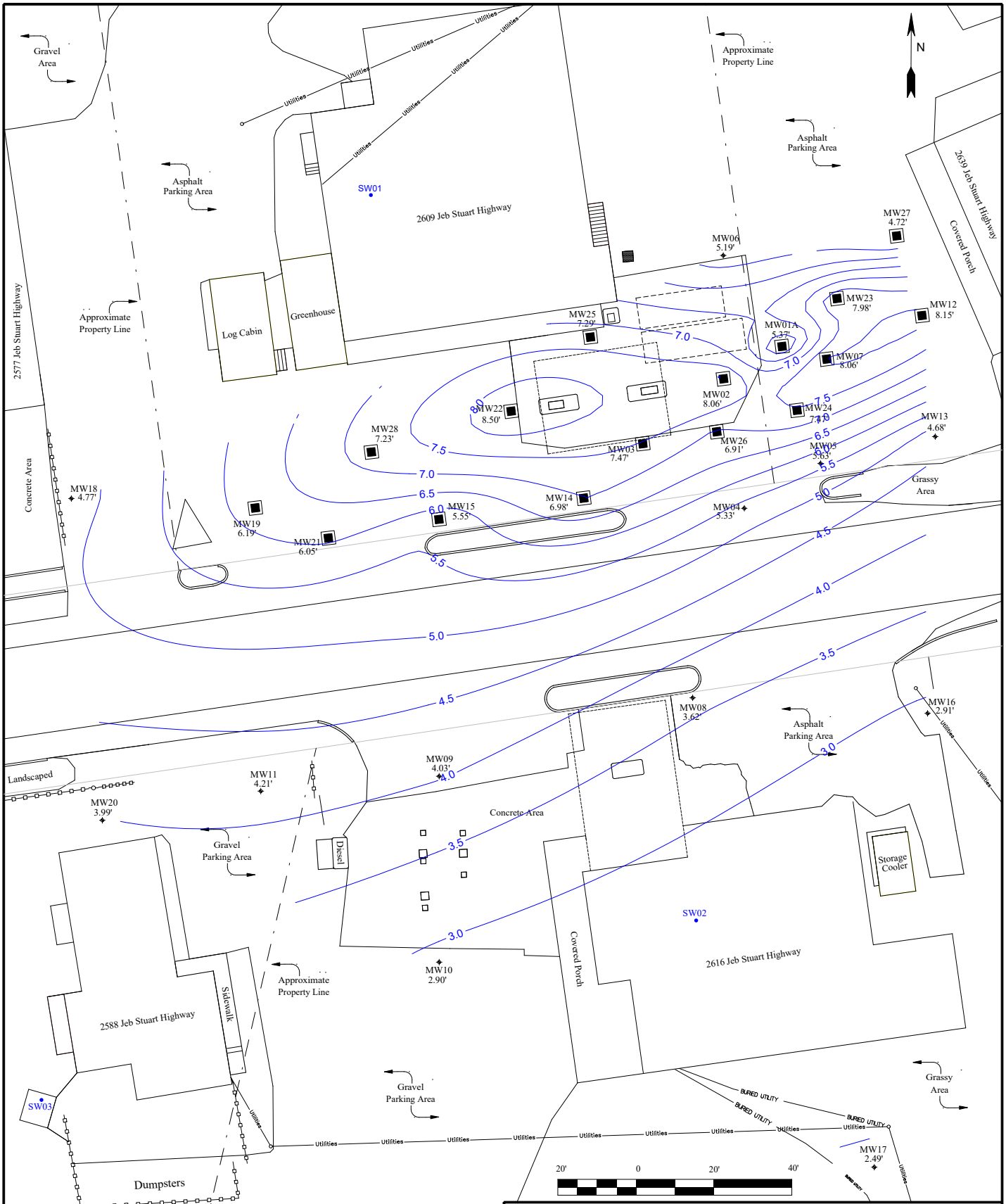
MW18 2,932.47'
MW19 2,931.26'
MW20 2,931.35'
MW21 2,930.66'
MW22 2,928.95'
MW23 2,930.91'
MW24 2,929.24'
MW25 2,930.97'
MW26 2,929.03'
MW27 2,932.53'
MW28 2,930.42'
2,932.5
2,932.0
2,931.5
2,931.0
2,930.5
2,930.0
2,929.5
20' 0 20' 40'
GREENE ENVIRONMENTAL SERVICES LLC.
TITLE: CAP IMP SP3 POTENTIOMETRIC SURFACE MAP (05/16/2016)
SITE: MEADOWS OF DAN FOOD MARKET
DRAWING #: FMMD1008C
CLIENT: T&M, M of D, LLC
DATE: 08/03/2016
COMMENTS:
DRAWN BY: FMS, MAF



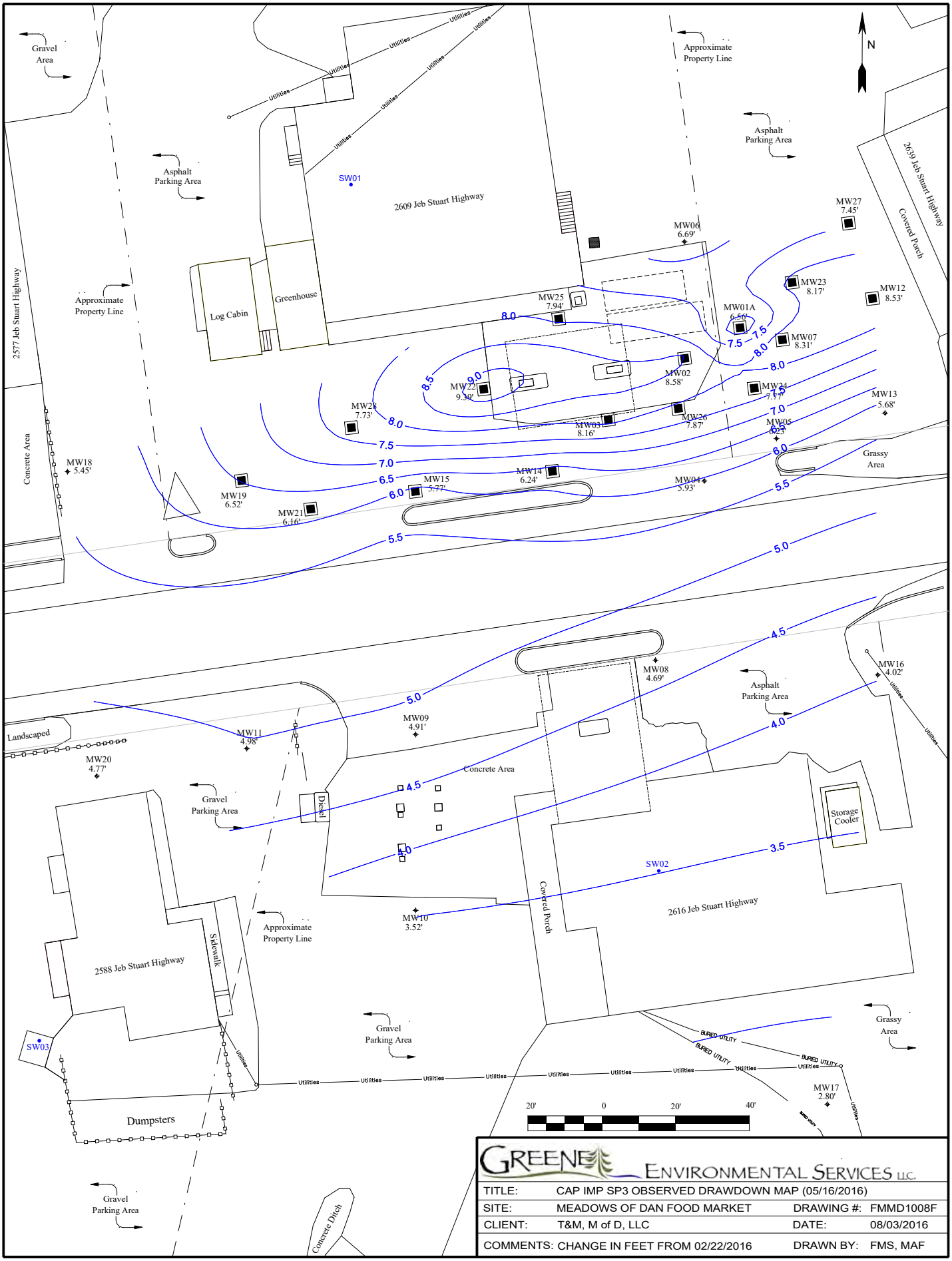
GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 POTENTIOMETRIC SURFACE MAP (06/13/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008D
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:		DRAWN BY:	FMS, MAF



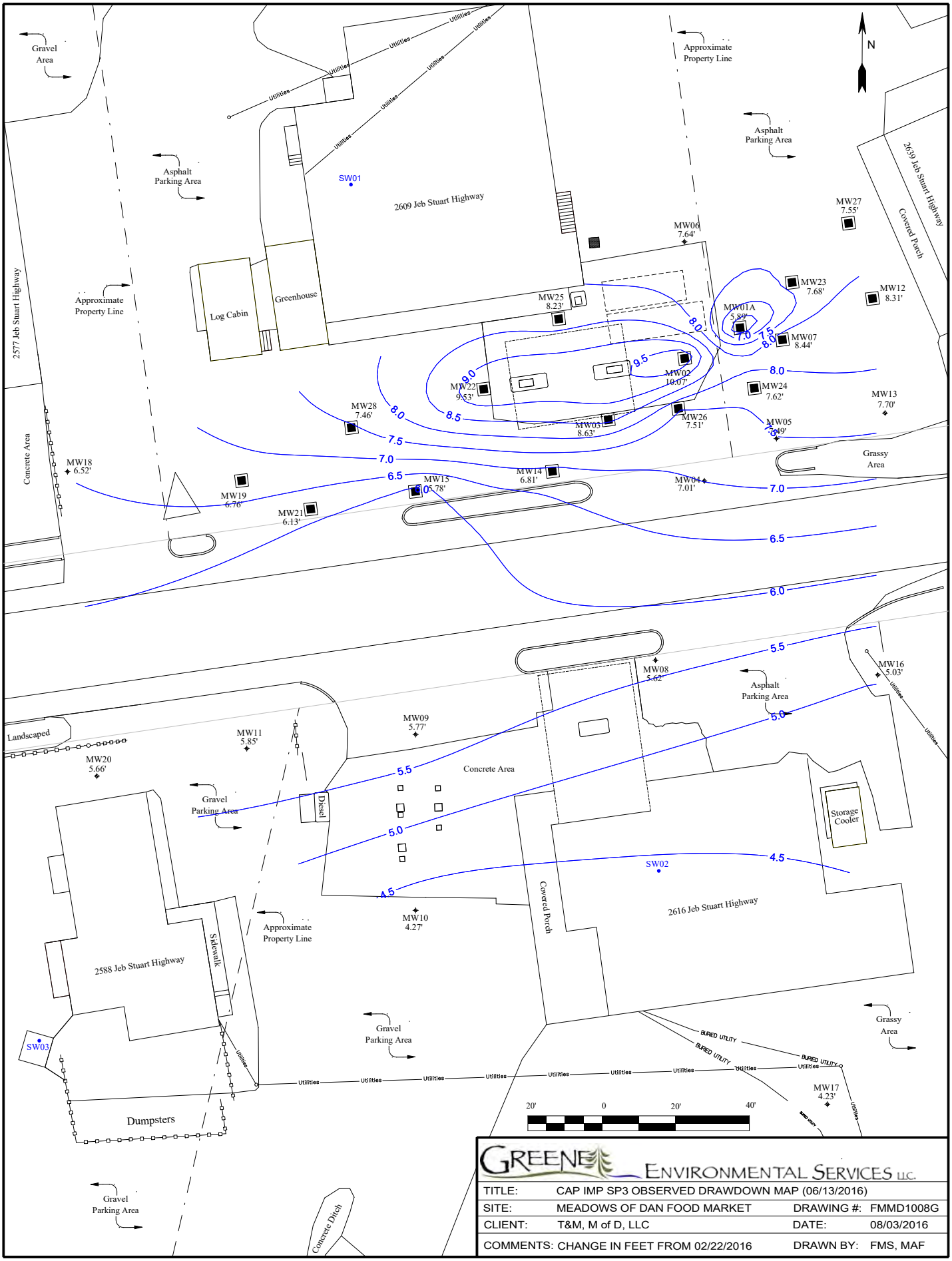
GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 OBSERVED DRAWDOWN MAP (04/18/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008E
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:	CHANGE IN FEET FROM 02/22/2016	DRAWN BY:	FMS, MAF



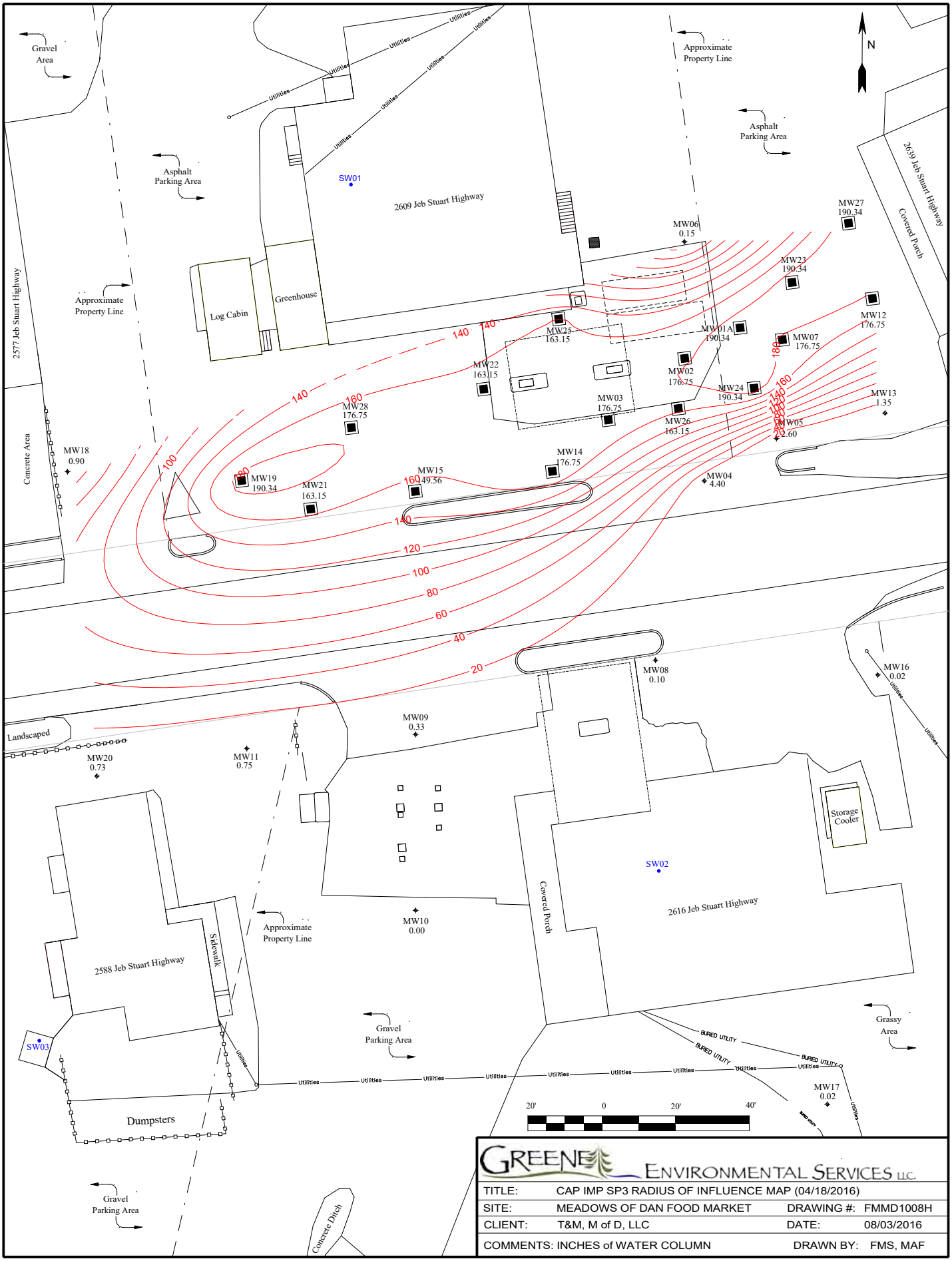
GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 OBSERVED DRAWDOWN MAP (05/16/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008F
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:	CHANGE IN FEET FROM 02/22/2016	DRAWN BY:	FMS, MAF



GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 OBSERVED DRAWDOWN MAP (06/13/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008G
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:	CHANGE IN FEET FROM 02/22/2016	DRAWN BY:	FMS, MAF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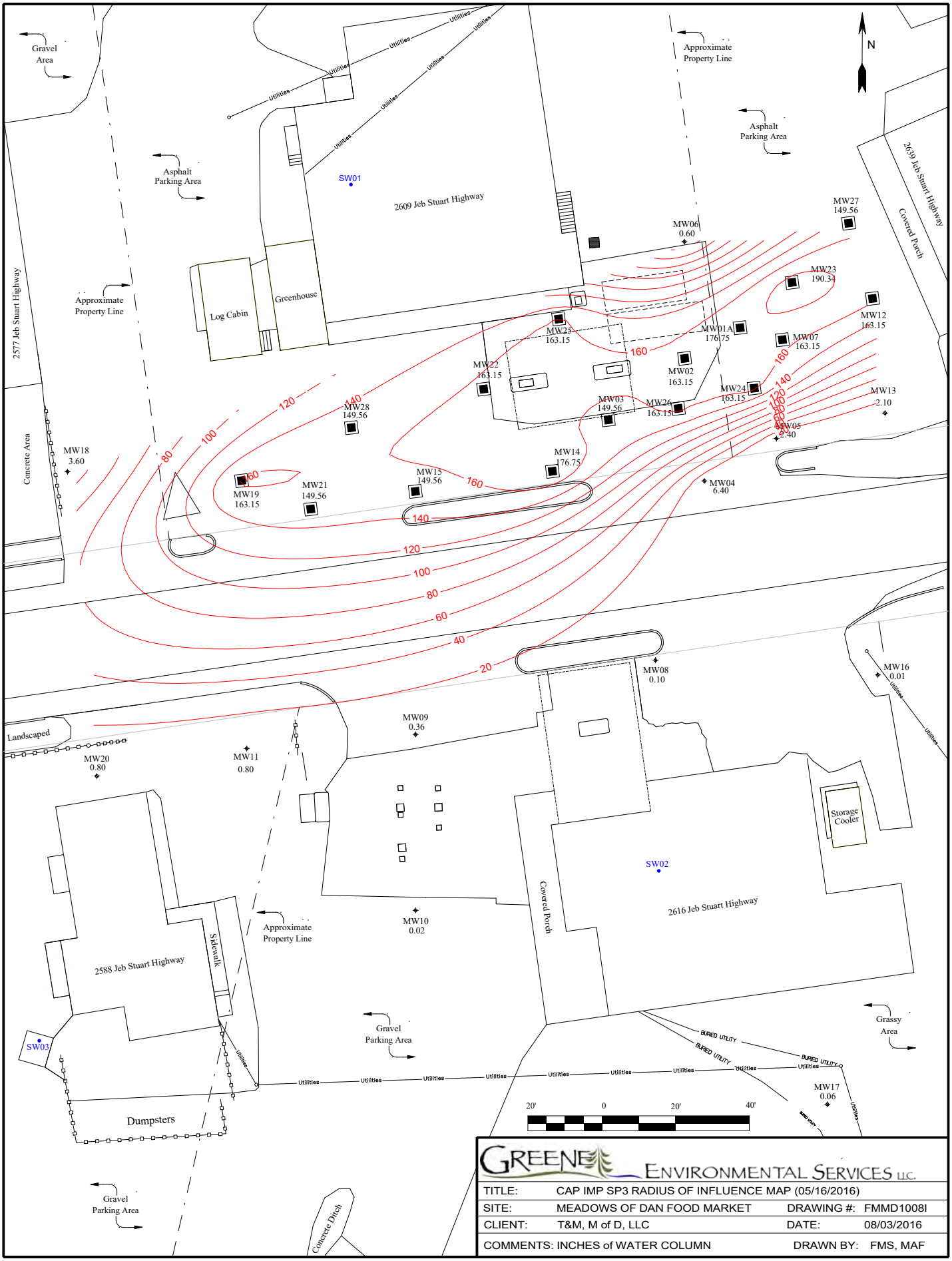
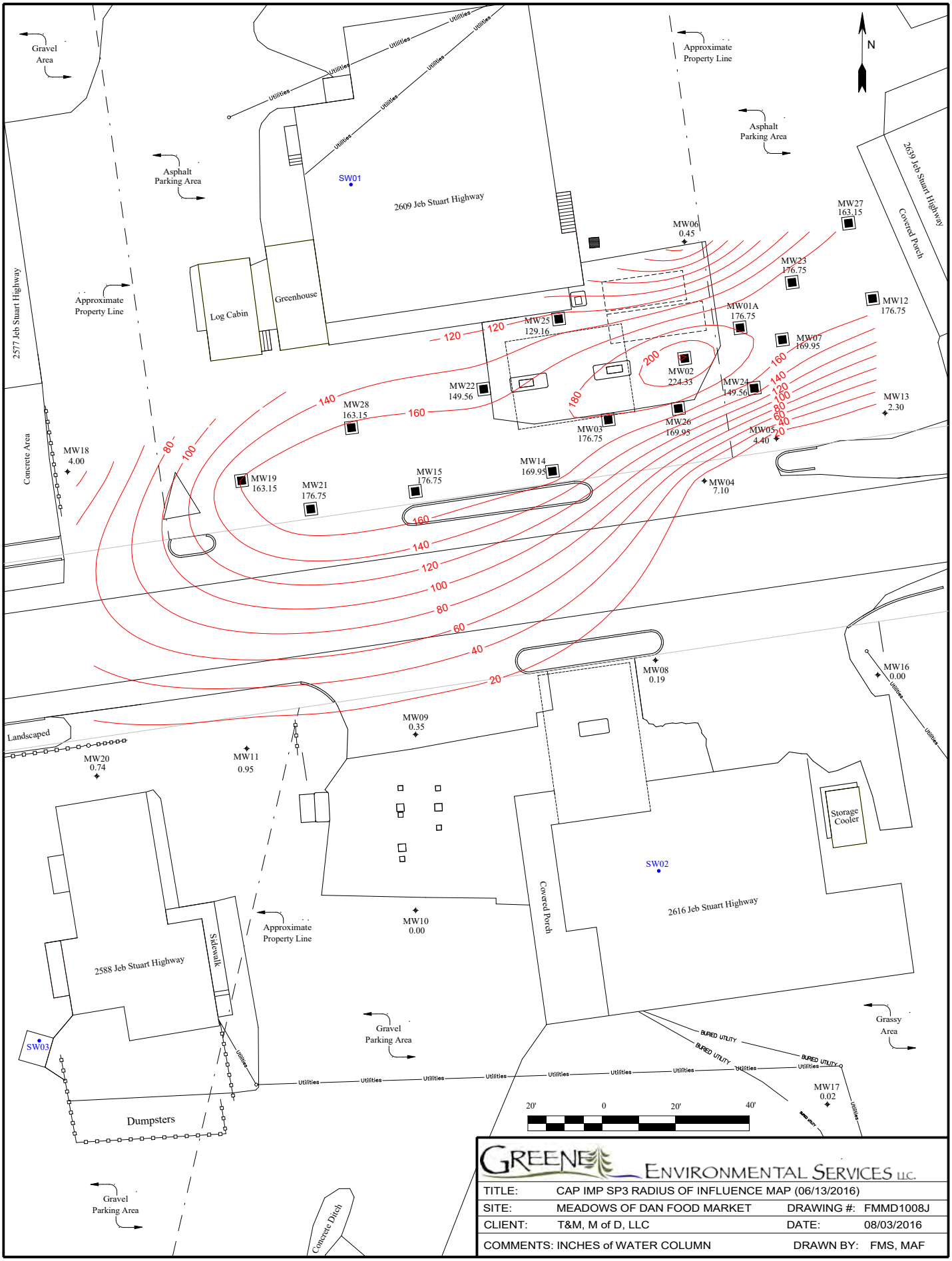
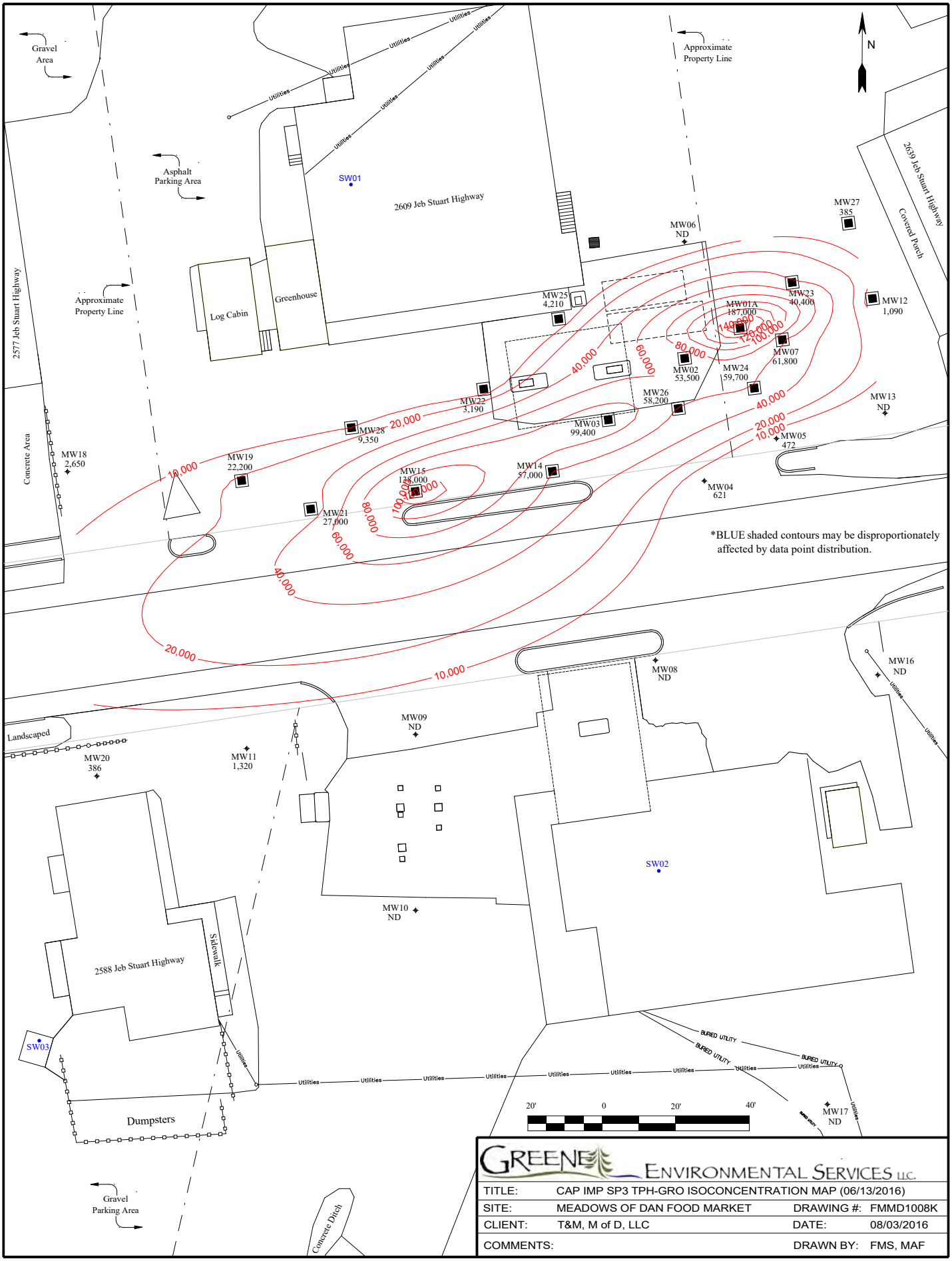
Gravel Area
Approximate Property Line
Asphalt Parking Area
Asphalt Parking Area
2609 Jeb Stuart Highway
SW01
Log Cabin
Greenhouse
2577 Jeb Stuart Highway
Approximate Property Line
2639 Jeb Stuart Highway
Covered Porch
MW27 190.34
MW06 0.15
MW23 190.34
MW12 176.75
MW07 176.75
MW01A 190.34
MW25 163.15
MW22 163.15
MW02 176.75
MW24 190.34
MW03 176.75
MW26 163.15
MW13 1.35
MW05 22.60
MW28 176.75
MW14 176.75
MW04 4.40
MW15 149.56
MW21 163.15
MW19 190.34
MW18 0.90
Concrete Area
MW08 0.10
MW16 0.02
MW09 0.33
Landscaped
MW20 0.73
MW11 0.75
Storage Cooler
SW02
2616 Jeb Stuart Highway
Covered Porch
MW10 0.00
Approximate Property Line
2588 Jeb Stuart Highway
Sidewalk
SW03
Gravel Parking Area
Grassy Area
BURIED UTILITY
Utilities
MW17 0.02
Dumpsters
20' 0 20' 40'
Gravel Parking Area
Concrete Ditch
GREENE ENVIRONMENTAL SERVICES LLC.
TITLE: CAP IMP SP3 RADIUS OF INFLUENCE MAP (04/18/2016)
SITE: MEADOWS OF DAN FOOD MARKET
DRAWING #: FMMD1008H
CLIENT: T&M, M of D, LLC
DATE: 08/03/2016
COMMENTS: INCHES of WATER COLUMN
DRAWN BY: FMS, MAF



GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 RADIUS OF INFLUENCE MAP (05/16/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008I
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS: INCHES of WATER COLUMN		DRAWN BY:	FMS, MAF


N
Gravel Area
Approximate Property Line
Asphalt Parking Area
Asphalt Parking Area
Approximate Property Line
2577 Jeb Stuart Highway
2609 Jeb Stuart Highway
2639 Jeb Stuart Highway
Covered Porch
Log Cabin
Greenhouse
SW01
Utilities
MW27 163.15
MW06 0.45
MW23 176.75
MW12 176.75
MW01A 176.75
MW25 129.16
MW07 169.95
MW02 224.33
MW24 149.56
MW22 149.56
MW13 2.30
MW28 163.15
MW03 176.75
MW26 169.95
MW05 4.40
MW18 4.00
Concrete Area
MW19 163.15
MW21 176.75
MW15 176.75
MW14 169.95
MW04 7.10
MW08 0.19
MW16 0.00
MW09 0.35
Landscaped
MW20 0.74
MW11 0.95
Storage Cooler
SW02
2616 Jeb Stuart Highway
Covered Porch
MW10 0.00
Approximate Property Line
2588 Jeb Stuart Highway
Sidewalk
Gravel Parking Area
Grassy Area
SW03
BURIED UTILITY
MW17 0.02
Dumpsters
20' 0 20' 40'
Gravel Parking Area
Concrete Ditch
GREENE ENVIRONMENTAL SERVICES LLC.
TITLE: CAP IMP SP3 RADIUS OF INFLUENCE MAP (06/13/2016)
SITE: MEADOWS OF DAN FOOD MARKET
DRAWING #: FMMD1008J
CLIENT: T&M, M of D, LLC
DATE: 08/03/2016
COMMENTS: INCHES of WATER COLUMN
DRAWN BY: FMS, MAF



GREENE ENVIRONMENTAL SERVICES LLC.

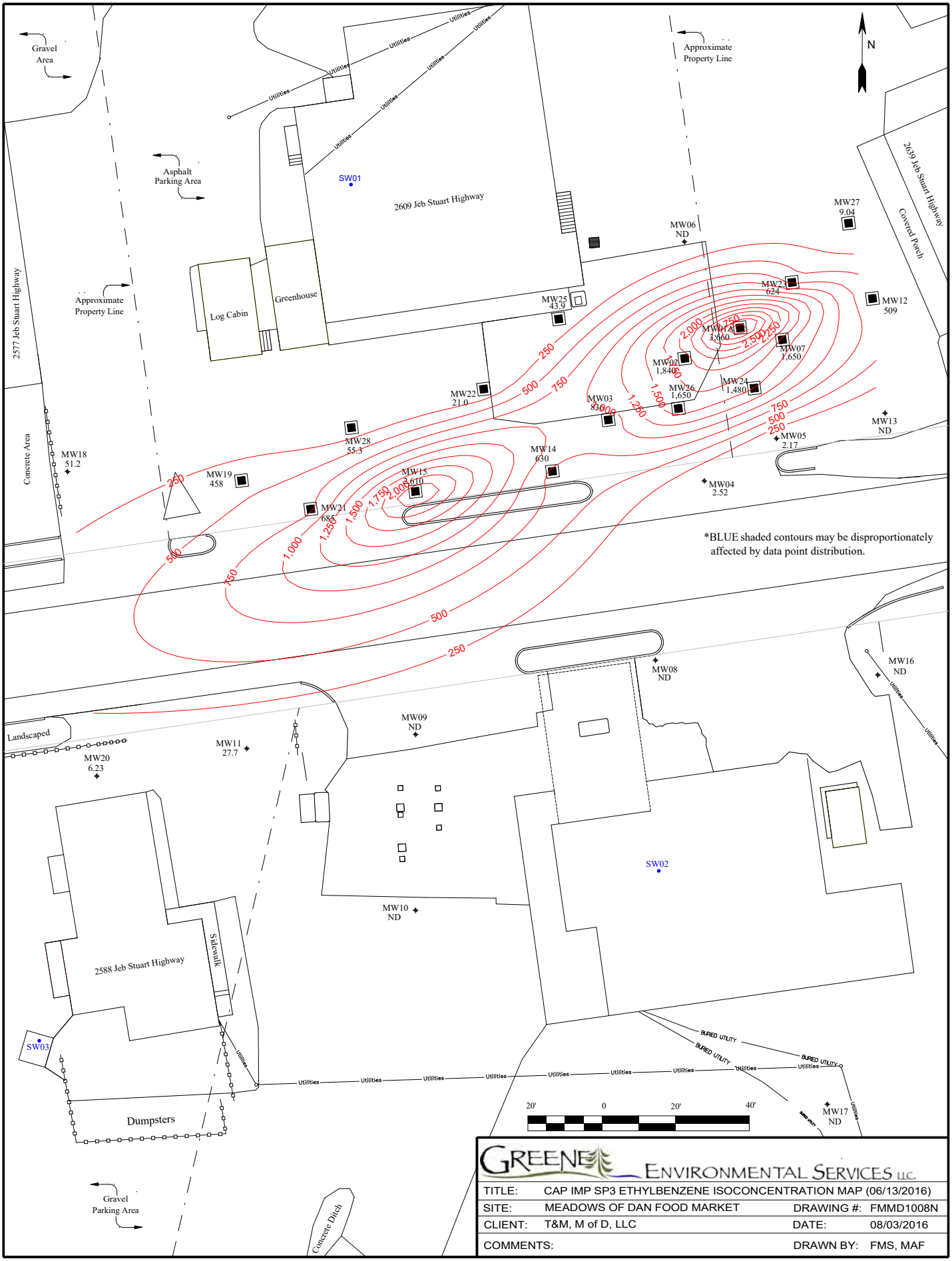
TITLE:	CAP IMP SP3 TPH-GRO ISOCONCENTRATION MAP (06/13/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008K
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:		DRAWN BY:	FMS, MAF

GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 BENZENE ISOCONCENTRATION MAP (06/13/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008L
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:		DRAWN BY:	FMS, MAF

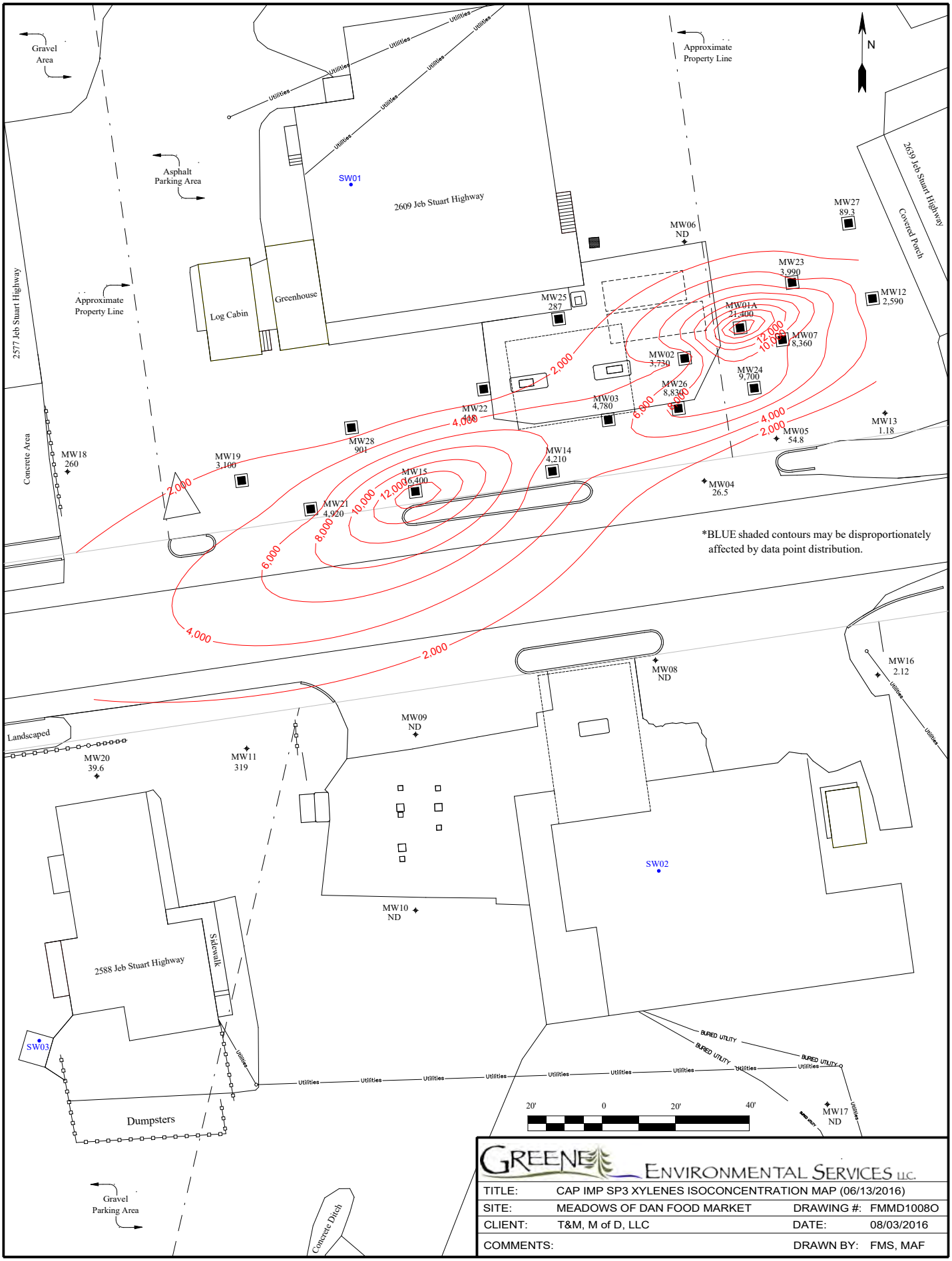
GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 TOLUENE ISOCONCENTRATION MAP (06/13/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008M
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:		DRAWN BY:	FMS, MAF



GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 ETHYLBENZENE ISOCONCENTRATION MAP (06/13/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008N
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:		DRAWN BY:	FMS, MAF

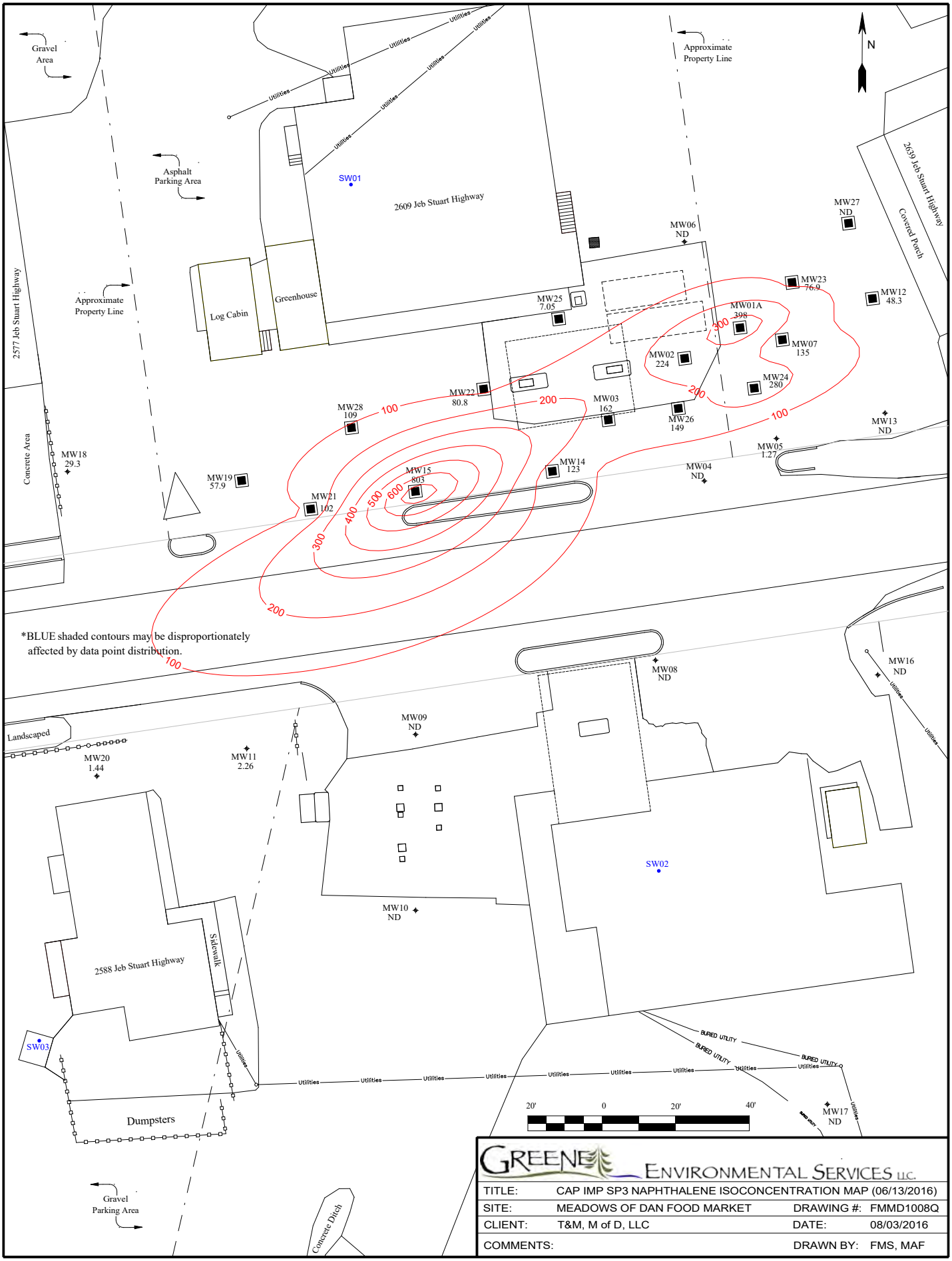


GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 XYLENES ISOCONCENTRATION MAP (06/13/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008O
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:		DRAWN BY:	FMS, MAF

GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 MTBE ISOCONCENTRATION MAP (06/13/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008P
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:		DRAWN BY:	FMS, MAF



GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 NAPHTHALENE ISOCONCENTRATION MAP (06/13/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008Q
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:		DRAWN BY:	FMS, MAF

GREENE ENVIRONMENTAL SERVICES LLC.

TITLE:	CAP IMP SP3 TOTAL BTEX ISOCONCENTRATION MAP (06/13/2016)		
SITE:	MEADOWS OF DAN FOOD MARKET	DRAWING #:	FMMD1008R
CLIENT:	T&M, M of D, LLC	DATE:	08/03/2016
COMMENTS:		DRAWN BY:	FMS, MAF

APPENDIX C

Laboratory Data

Laboratory Test Results
Chain of Custody Documentation

ANALYTICAL REPORT

April 21, 2016

Greene Env. Services, LLC

Sample Delivery Group:	L829271
Samples Received:	04/13/2016
Project Number:	FMMD1008
Description:	Meadows of Dan Food Market
Report To:	Mr. Trev Greene 129 Bunny Ridge Lane Rocky Mount, VA 24151

Entire Report Reviewed By:

Terrie Fudge
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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RCP08 L829271-01 Air

Collected by: AF | Collected date/time: 04/11/16 10:10 | Received date/time: 04/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method M18-Mod	WG864479	4000	04/14/16 03:34	04/14/16 03:34	SNH
Volatile Organic Compounds (MS) by Method M18-Mod	WG864917	20000	04/14/16 20:11	04/14/16 20:11	SNH

INF07 L829271-02 GW

Collected by: AF | Collected date/time: 04/11/16 10:20 | Received date/time: 04/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG864513	250	04/14/16 02:21	04/14/16 02:21	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG864980	1	04/19/16 08:21	04/19/16 08:21	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG866044	50	04/20/16 07:54	04/20/16 07:54	ACG

MID01 L829271-03 GW

Collected by: AF | Collected date/time: 04/11/16 10:30 | Received date/time: 04/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG864903	5	04/14/16 23:05	04/14/16 23:05	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG864980	5	04/19/16 08:40	04/19/16 08:40	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG866044	20	04/20/16 08:19	04/20/16 08:19	ACG

EFF07 L829271-04 GW

Collected by: AF | Collected date/time: 04/11/16 10:40 | Received date/time: 04/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG864513	1	04/14/16 03:06	04/14/16 03:06	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG864980	1	04/19/16 08:59	04/19/16 08:59	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG866044	20	04/20/16 08:43	04/20/16 08:43	JHH

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Terrie Fudge

Terrie Fudge
Technical Service Representative

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	800	2560	34900	111000		4000	WG864479
Toluene	108-88-3	92.10	4000	15100	362000	1360000		20000	WG864917
Ethylbenzene	100-41-4	106	800	3470	66500	288000		4000	WG864479
m&p-Xylene	1330-20-7	106	1600	6940	222000	961000		4000	WG864479
o-Xylene	95-47-6	106	800	3470	74200	322000		4000	WG864479
Methyl tert-butyl ether	1634-04-4	88.10	800	2880	6610	23800		4000	WG864479
TPH (GC/MS) Low Fraction	8006-61-9	101	200000	826000	3160000	13100000		4000	WG864479
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*105*				WG864479

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	32400		7850	25000	250	04/14/2016 02:21	WG864513
(S) a,a,a-Trifluorotoluene(FID)	*98.0*			*62.0-128*		*04/14/2016 02:21*	WG864513

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	255		16.6	50.0	50	04/20/2016 07:54	WG866044
Ethylbenzene	924		19.2	50.0	50	04/20/2016 07:54	WG866044
Methyl tert-butyl ether	736		18.4	50.0	50	04/20/2016 07:54	WG866044
Naphthalene	553		50.0	250	50	04/20/2016 07:54	WG866044
Toluene	3630		39.0	250	50	04/20/2016 07:54	WG866044
Xylenes, Total	5800		53.0	150	50	04/20/2016 07:54	WG866044
Ethanol	932		42.0	500	1	04/19/2016 08:21	WG864980
(S) Toluene-d8	*99.1*			*90.0-115*		*04/19/2016 08:21*	WG864980
(S) Dibromofluoromethane	*97.1*			*79.0-121*		*04/19/2016 08:21*	WG864980
(S) a,a,a-Trifluorotoluene	*94.6*			*90.4-116*		*04/19/2016 08:21*	WG864980
(S) 4-Bromofluorobenzene	*101*			*80.1-120*		*04/19/2016 08:21*	WG864980

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	2320		157	500	5	04/14/2016 23:05	WG864903
(S) a,a,a-Trifluorotoluene(FID)	*98.8*			*62.0-128*		*04/14/2016 23:05*	WG864903

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	8.67	J	6.62	20.0	20	04/20/2016 08:19	WG866044
Ethylbenzene	28.6		7.68	20.0	20	04/20/2016 08:19	WG866044
Methyl tert-butyl ether	264		1.84	5.00	5	04/19/2016 08:40	WG864980
Naphthalene	227		20.0	100	20	04/20/2016 08:19	WG866044
Toluene	117		15.6	100	20	04/20/2016 08:19	WG866044
Xylenes, Total	226		21.2	60.0	20	04/20/2016 08:19	WG866044
Ethanol	555	J	210	2500	5	04/19/2016 08:40	WG864980
(S) Toluene-d8	*105*			*90.0-115*		*04/19/2016 08:40*	WG864980
(S) Dibromofluoromethane	*98.5*			*79.0-121*		*04/19/2016 08:40*	WG864980
(S) a,a,a-Trifluorotoluene	*102*			*90.4-116*		*04/19/2016 08:40*	WG864980
(S) 4-Bromofluorobenzene	*101*			*80.1-120*		*04/19/2016 08:40*	WG864980

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	495		31.4	100	1	04/14/2016 03:06	WG864513
(S) a,a,a-Trifluorotoluene(FID)	*99.0*			*62.0-128*		*04/14/2016 03:06*	WG864513

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	04/19/2016 08:59	WG864980
Ethylbenzene	U		7.68	20.0	20	04/20/2016 08:43	WG866044
Methyl tert-butyl ether	281		7.34	20.0	20	04/20/2016 08:43	WG866044
Naphthalene	U		20.0	100	20	04/20/2016 08:43	WG866044
Toluene	U		15.6	100	20	04/20/2016 08:43	WG866044
Xylenes, Total	U		21.2	60.0	20	04/20/2016 08:43	WG866044
Ethanol	76.1	J	42.0	500	1	04/19/2016 08:59	WG864980
(S) Toluene-d8	*102*			*90.0-115*		*04/19/2016 08:59*	WG864980
(S) Dibromofluoromethane	*98.4*			*79.0-121*		*04/19/2016 08:59*	WG864980
(S) a,a,a-Trifluorotoluene	*98.8*			*90.4-116*		*04/19/2016 08:59*	WG864980
(S) 4-Bromofluorobenzene	*99.5*			*80.1-120*		*04/19/2016 08:59*	WG864980

Sample Narrative:

8260B L829271-04 WG866044: Target compounds too high to run at a lower dilution.

Method Blank (MB)

(MB) R3128985-3 04/14/16 02:49

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0460	0.200
Ethylbenzene	U		0.0506	0.200
MTBE	U		0.0505	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
TPH (GC/MS) Low Fraction	U		6.91	50.0
(S) 1,4-Bromofluorobenzene	*102*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3128985-1 04/14/16 01:17 • (LCSD) R3128985-2 04/14/16 02:02

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
MTBE	3.75	4.31	4.36	115	116	70.0-130			1.28	25
Benzene	3.75	4.39	4.52	117	120	70.0-130			2.85	25
Ethylbenzene	3.75	4.53	4.59	121	122	70.0-130			1.35	25
m&p-Xylene	7.50	9.00	9.17	120	122	70.0-130			1.88	25
o-Xylene	3.75	4.48	4.56	119	122	70.0-130			1.79	25
TPH (GC/MS) Low Fraction	150	158	161	105	108	70.0-130			2.30	25
(S) 1,4-Bromofluorobenzene				*101*	*102*	*60.0-140*				

Method Blank (MB)

(MB) R3129306-2 04/14/16 16:23

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Toluene	U		0.0499	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3129306-1 04/14/16 15:36 • (LCSD) R3129306-3 04/14/16 18:36

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Toluene	3.75	4.44	4.87	118	130	70.0-130			9.33	25

Method Blank (MB)

(MB) R3128888-3 04/13/16 13:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	*98.2*			*62.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3128888-1 04/13/16 12:47 • (LCSD) R3128888-2 04/13/16 13:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.49	5.54	99.9	101	67.0-132			0.840	20
(S) a,a,a-Trifluorotoluene(FID)				*104*	*104*	*62.0-128*				

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L828250-01 04/13/16 20:30 • (MS) R3128888-4 04/13/16 19:23 • (MSD) R3128888-5 04/13/16 19:46

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	0.406	4.43	4.60	73.2	76.2	1	50.0-143			3.67	20
(S) a,a,a-Trifluorotoluene(FID)					*101*	*102*		*62.0-128*				

Method Blank (MB)

(MB) R3129241-3 04/14/16 14:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	*98.7*			*62.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3129241-1 04/14/16 13:01 • (LCSD) R3129241-2 04/14/16 13:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	4.30	4.35	78.2	79.1	67.0-132			1.17	20
(S) a,a,a-Trifluorotoluene(FID)				*97.5*	*97.9*	*62.0-128*				

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L829258-02 04/14/16 18:55 • (MS) R3129241-4 04/14/16 17:46 • (MSD) R3129241-5 04/14/16 18:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	0.305	5.17	5.44	88.4	93.4	1	50.0-143			5.17	20
(S) a,a,a-Trifluorotoluene(FID)					*97.2*	*96.6*		*62.0-128*				

Method Blank (MB)

(MB) R3130050-3 04/19/16 04:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000331	0.00100
Ethanol	U		0.0420	0.500
Methyl tert-butyl ether	U		0.000367	0.00100
(S) Toluene-d8	*103*			*90.0-115*
(S) Dibromofluoromethane	*102*			*79.0-121*
(S) α,α,α-Trifluorotoluene	*98.1*			*90.4-116*
(S) 4-Bromofluorobenzene	*96.4*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3130050-1 04/19/16 03:14 • (LCSD) R3130050-2 04/19/16 03:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0281	0.0279	113	112	73.0-122			0.940	20
Methyl tert-butyl ether	0.0250	0.0260	0.0265	104	106	70.1-125			2.02	20
(S) Toluene-d8				*103*	*102*	*90.0-115*				
(S) Dibromofluoromethane				*103*	*103*	*79.0-121*				
(S) α,α,α-Trifluorotoluene				*97.9*	*98.0*	*90.4-116*				
(S) 4-Bromofluorobenzene				*93.5*	*95.1*	*80.1-120*				

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L829566-04 04/19/16 08:02 • (MS) R3130050-4 04/19/16 07:06 • (MSD) R3130050-5 04/19/16 07:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	ND	0.0265	0.0274	106	110	1	58.6-133			3.50	20
Methyl tert-butyl ether	0.0250	ND	0.0268	0.0292	107	117	1	61.4-136			8.52	20
(S) Toluene-d8					*102*	*102*		*90.0-115*				
(S) Dibromofluoromethane					*103*	*104*		*79.0-121*				
(S) α,α,α-Trifluorotoluene					*98.3*	*97.7*		*90.4-116*				
(S) 4-Bromofluorobenzene					*96.4*	*96.4*		*80.1-120*				

Method Blank (MB)

(MB) R3130361-5 04/20/16 04:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000331	0.00100
Ethylbenzene	U		0.000384	0.00100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
Toluene	U		0.000780	0.00500
Xylenes, Total	U		0.00106	0.00300

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3130361-3 04/20/16 02:34 • (LCSD) R3130361-4 04/20/16 03:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0203	0.0236	81.3	94.5	73.0-122			15.0	20
Ethylbenzene	0.0250	0.0258	0.0279	103	112	80.9-121			7.99	20
Methyl tert-butyl ether	0.0250	0.0211	0.0228	84.2	91.0	70.1-125			7.75	20
Naphthalene	0.0250	0.0248	0.0259	99.4	103	69.7-134			4.01	20
Toluene	0.0250	0.0209	0.0236	83.7	94.4	77.9-116			12.0	20
Xylenes, Total	0.0750	0.0755	0.0850	101	113	79.2-122			11.9	20

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L830271-01 04/20/16 16:47 • (MS) R3130361-8 04/20/16 17:36 • (MSD) R3130361-9 04/20/16 18:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	ND	0.0213	0.0200	85.2	80.1	1	58.6-133			6.08	20
Ethylbenzene	0.0250	0.00837	0.0360	0.0345	111	105	1	62.7-136			4.26	20
Methyl tert-butyl ether	0.0250	0.00136	0.0202	0.0192	75.5	71.3	1	61.4-136			5.29	20
Naphthalene	0.0250	0.0136	0.0479	0.0460	137	129	1	61.8-143			4.20	20
Toluene	0.0250	0.0447	0.0569	0.0579	48.8	52.7	1	67.8-124	J6	J6	1.67	20
Xylenes, Total	0.0750	ND	0.131	0.129	175	172	1	65.6-133	J5	J5	1.96	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

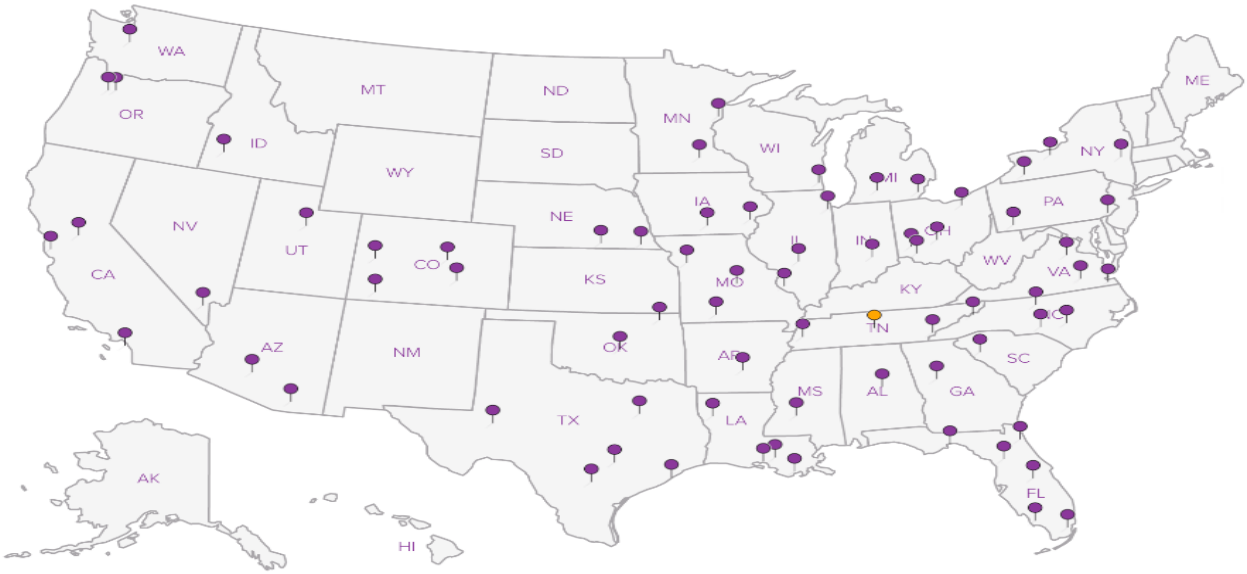
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project # FMMD1008

Lab Project #

Collected by (print): AF

Site/Facility ID #

P.O. # GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L829271
Table D188
Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, MTBE via Method 18	TVPH via Method 18	BTEX, MTBE, Naphthalene, Ethanol via V8260	TPH-GRO via 8015	Rem./Contaminant	Sample # (lab only)
RCP08	Grab	Air		04/11/16	1010	1	X	X				-01
INF07	Grab	GW		04/11/16	1020	6			X	X		-02
MID01	Grab	GW		04/11/16	1030	6			X	X		-03
EFF07	Grab	GW		04/11/16	1040	6			X	X		-04

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks: 6645-0393-3496

Hold #

Condition: (lab use only) JW 7 OK

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Carl Harris	4/12/16	0150a	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Jessica Rotie

Samples returned via: ☐ UPS ✓ FedEx ☐ Courier ☐ _____

Temp: 3.1 °C Bottles Received: 18+ Tedlar

Date: 4-13-16 Time: 9:00

COC Seal Intact: ✓ Y ___N ___NA

pH Checked: NCF:

ANALYTICAL REPORT

May 17, 2016

Greene Env. Services, LLC

Sample Delivery Group:	L834223
Samples Received:	04/13/2016
Project Number:	FMMD1008
Description:	Meadows of Dan Food Market
Report To:	Mr. Trev Greene 129 Bunny Ridge Lane Rocky Mount, VA 24151

Entire Report Reviewed By:

Terrie Fudge
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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EFF07 L834223-01 GW

Collected by	Collected date/time	Received date/time
AF	04/11/16 10:40	04/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG872028	1	05/13/16 22:25	05/13/16 22:25	GLN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG873015	20	05/17/16 14:12	05/17/16 14:12	JHH

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Terrie Fudge

Terrie Fudge
Technical Service Representative

Sample Handling and Receiving

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Sample ID	Project Sample ID	Method
L834223-01	EFF07	8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	18.4	J	10.0	50.0	1	05/13/2016 22:25	WG872028
Acrolein	U		8.87	50.0	1	05/13/2016 22:25	WG872028
Acrylonitrile	U		1.87	10.0	1	05/13/2016 22:25	WG872028
Benzene	U		0.331	1.00	1	05/13/2016 22:25	WG872028
Bromobenzene	U		0.352	1.00	1	05/13/2016 22:25	WG872028
Bromodichloromethane	U		0.380	1.00	1	05/13/2016 22:25	WG872028
Bromoform	U		0.469	1.00	1	05/13/2016 22:25	WG872028
Bromomethane	U	J4	0.866	5.00	1	05/13/2016 22:25	WG872028
n-Butylbenzene	U		0.361	1.00	1	05/13/2016 22:25	WG872028
sec-Butylbenzene	U		0.365	1.00	1	05/13/2016 22:25	WG872028
tert-Butylbenzene	U		0.399	1.00	1	05/13/2016 22:25	WG872028
Carbon tetrachloride	U		0.379	1.00	1	05/13/2016 22:25	WG872028
Chlorobenzene	U		0.348	1.00	1	05/13/2016 22:25	WG872028
Chlorodibromomethane	U		0.327	1.00	1	05/13/2016 22:25	WG872028
Chloroethane	U		0.453	5.00	1	05/13/2016 22:25	WG872028
2-Chloroethyl vinyl ether	U	J4	3.01	50.0	1	05/13/2016 22:25	WG872028
Chloroform	U		0.324	5.00	1	05/13/2016 22:25	WG872028
Chloromethane	U		0.276	2.50	1	05/13/2016 22:25	WG872028
2-Chlorotoluene	U		0.375	1.00	1	05/13/2016 22:25	WG872028
4-Chlorotoluene	U		0.351	1.00	1	05/13/2016 22:25	WG872028
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	05/13/2016 22:25	WG872028
1,2-Dibromoethane	U		0.381	1.00	1	05/13/2016 22:25	WG872028
Dibromomethane	U		0.346	1.00	1	05/13/2016 22:25	WG872028
1,2-Dichlorobenzene	U		0.349	1.00	1	05/13/2016 22:25	WG872028
1,3-Dichlorobenzene	U		0.220	1.00	1	05/13/2016 22:25	WG872028
1,4-Dichlorobenzene	U		0.274	1.00	1	05/13/2016 22:25	WG872028
Dichlorodifluoromethane	U		0.551	5.00	1	05/13/2016 22:25	WG872028
1,1-Dichloroethane	U		0.259	1.00	1	05/13/2016 22:25	WG872028
1,2-Dichloroethane	U		0.361	1.00	1	05/13/2016 22:25	WG872028
1,1-Dichloroethene	U		0.398	1.00	1	05/13/2016 22:25	WG872028
cis-1,2-Dichloroethene	U		5.20	20.0	20	05/17/2016 14:12	WG873015
trans-1,2-Dichloroethene	U		0.396	1.00	1	05/13/2016 22:25	WG872028
1,2-Dichloropropane	U		0.306	1.00	1	05/13/2016 22:25	WG872028
1,1-Dichloropropene	U		0.352	1.00	1	05/13/2016 22:25	WG872028
1,3-Dichloropropane	U	J4	0.366	1.00	1	05/13/2016 22:25	WG872028
cis-1,3-Dichloropropene	U		0.418	1.00	1	05/13/2016 22:25	WG872028
trans-1,3-Dichloropropene	U		0.419	1.00	1	05/13/2016 22:25	WG872028
2,2-Dichloropropane	U		0.321	1.00	1	05/13/2016 22:25	WG872028
Di-isopropyl ether	1.37		0.320	1.00	1	05/13/2016 22:25	WG872028
Ethylbenzene	U		0.384	1.00	1	05/13/2016 22:25	WG872028
Hexachloro-1,3-butadiene	U		0.256	1.00	1	05/13/2016 22:25	WG872028
Isopropylbenzene	U		0.326	1.00	1	05/13/2016 22:25	WG872028
p-Isopropyltoluene	U		0.350	1.00	1	05/13/2016 22:25	WG872028
2-Butanone (MEK)	7.76	J	3.93	10.0	1	05/13/2016 22:25	WG872028
Methylene Chloride	U		1.00	5.00	1	05/13/2016 22:25	WG872028
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	05/13/2016 22:25	WG872028
Methyl tert-butyl ether	299		7.34	20.0	20	05/17/2016 14:12	WG873015
Naphthalene	U		1.00	5.00	1	05/13/2016 22:25	WG872028
n-Propylbenzene	U		0.349	1.00	1	05/13/2016 22:25	WG872028
Styrene	U		0.307	1.00	1	05/13/2016 22:25	WG872028
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	05/13/2016 22:25	WG872028
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	05/13/2016 22:25	WG872028
Tetrachloroethene	U		0.372	1.00	1	05/13/2016 22:25	WG872028
Toluene	1.76	J	0.780	5.00	1	05/13/2016 22:25	WG872028
1,2,3-Trichlorobenzene	U		0.230	1.00	1	05/13/2016 22:25	WG872028
1,2,4-Trichlorobenzene	U		0.355	1.00	1	05/13/2016 22:25	WG872028

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.319	1.00	1	05/13/2016 22:25	WG872028
1,1,2-Trichloroethane	U		0.383	1.00	1	05/13/2016 22:25	WG872028
Trichloroethene	U		7.96	20.0	20	05/17/2016 14:12	WG873015
Trichlorofluoromethane	U		1.20	5.00	1	05/13/2016 22:25	WG872028
1,2,3-Trichloropropane	U		0.807	2.50	1	05/13/2016 22:25	WG872028
1,2,3-Trimethylbenzene	0.433	J	0.321	1.00	1	05/13/2016 22:25	WG872028
1,2,4-Trimethylbenzene	0.806	J	0.373	1.00	1	05/13/2016 22:25	WG872028
1,3,5-Trimethylbenzene	U		0.387	1.00	1	05/13/2016 22:25	WG872028
1,1,2-Trichlorotrifluoroethane	U		0.303	15.0	1	05/13/2016 22:25	WG872028
Vinyl chloride	U		0.259	1.00	1	05/13/2016 22:25	WG872028
Xylenes, Total	1.93	J	1.06	3.00	1	05/13/2016 22:25	WG872028
Acetonitrile	U		15.0	50.0	1	05/13/2016 22:25	WG872028
Allyl chloride	U		1.70	5.00	1	05/13/2016 22:25	WG872028
Carbon disulfide	U		0.275	1.00	1	05/13/2016 22:25	WG872028
Chloroprene	U		1.70	50.0	1	05/13/2016 22:25	WG872028
Cyclohexanone	U		3.40	10.0	1	05/13/2016 22:25	WG872028
trans-1,4-Dichloro-2-butene	U		0.866	5.00	1	05/13/2016 22:25	WG872028
1,4-Dioxane	U		36.0	100	1	05/13/2016 22:25	WG872028
Ethyl methacrylate	U		1.40	5.00	1	05/13/2016 22:25	WG872028
2-Hexanone	U		3.82	10.0	1	05/13/2016 22:25	WG872028
Iodomethane	U		1.71	10.0	1	05/13/2016 22:25	WG872028
Isobutanol	U		39.0	100	1	05/13/2016 22:25	WG872028
Methacrylonitrile	U		13.0	50.0	1	05/13/2016 22:25	WG872028
Methyl methacrylate	U		1.20	50.0	1	05/13/2016 22:25	WG872028
Pentachloroethane	U		3.60	50.0	1	05/13/2016 22:25	WG872028
Propionitrile	U		13.0	50.0	1	05/13/2016 22:25	WG872028
Vinyl acetate	U		1.63	10.0	1	05/13/2016 22:25	WG872028
Ethyl ether	U		0.389	1.00	1	05/13/2016 22:25	WG872028
Tetrahydrofuran	13.4		1.82	5.00	1	05/13/2016 22:25	WG872028
Bromoethane	U		0.380	1.00	1	05/13/2016 22:25	WG872028
cis-1,4-Dichloro-2-butene	U		1.30	25.0	1	05/13/2016 22:25	WG872028
Ethanol	55.1	J	42.0	500	1	05/13/2016 22:25	WG872028
tert-Butyl alcohol	426		48.0	100	20	05/17/2016 14:12	WG873015
(S) Toluene-d8	*102*			*90.0-115*		*05/17/2016 14:12*	WG873015
(S) Toluene-d8	*107*			*90.0-115*		*05/13/2016 22:25*	WG872028
(S) Dibromofluoromethane	*96.1*			*79.0-121*		*05/13/2016 22:25*	WG872028
(S) Dibromofluoromethane	*105*			*79.0-121*		*05/17/2016 14:12*	WG873015
(S) α,α,α-Trifluorotoluene	*101*			*90.4-116*		*05/17/2016 14:12*	WG873015
(S) α,α,α-Trifluorotoluene	*106*			*90.4-116*		*05/13/2016 22:25*	WG872028
(S) 4-Bromofluorobenzene	*101*			*80.1-120*		*05/13/2016 22:25*	WG872028
(S) 4-Bromofluorobenzene	*97.3*			*80.1-120*		*05/17/2016 14:12*	WG873015

Method Blank (MB)

(MB) R3136987-2 05/13/16 17:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Acrolein	U		8.87	50.0
Acrylonitrile	U		1.87	10.0
Benzene	U		0.331	1.00
Bromobenzene	U		0.352	1.00
Bromodichloromethane	U		0.380	1.00
Bromoethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
n-Butylbenzene	U		0.361	1.00
sec-Butylbenzene	U		0.365	1.00
tert-Butylbenzene	U		0.399	1.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
2-Chloroethyl vinyl ether	U		3.01	50.0
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
2-Chlorotoluene	U		0.375	1.00
4-Chlorotoluene	U		0.351	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
Dibromomethane	U		0.346	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
trans-1,4-Dichloro-2-butene	U		0.866	5.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
1,1-Dichloropropene	U		0.352	1.00

Method Blank (MB)

(MB) R3136987-2 05/13/16 17:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,3-Dichloropropane	U		0.366	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
2,2-Dichloropropane	U		0.321	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00
Ethanol	U		42.0	500
Ethyl ether	U		0.389	1.00
Hexachloro-1,3-butadiene	U		0.256	1.00
2-Hexanone	U		3.82	10.0
Iodomethane	U		1.71	10.0
Isopropylbenzene	U		0.326	1.00
p-Isopropyltoluene	U		0.350	1.00
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.349	1.00
Styrene	U		0.307	1.00
1,1,1,2-Tetrachloroethane	U		0.385	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00
Tetrahydrofuran	U		1.82	5.00
Toluene	U		0.780	5.00
1,1,2-Trichlorotrifluoroethane	U		0.303	15.0
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichlorofluoromethane	U		1.20	5.00
1,2,3-Trichloropropane	U		0.807	2.50
1,2,3-Trimethylbenzene	U		0.321	1.00
1,2,4-Trimethylbenzene	U		0.373	1.00
1,3,5-Trimethylbenzene	U		0.387	1.00
Vinyl acetate	U		1.63	10.0
Vinyl chloride	U		0.259	1.00

Method Blank (MB)

(MB) R3136987-2 05/13/16 17:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Xylenes, Total	U		1.06	3.00
Allyl Chloride	U		1.70	5.00
Acetonitrile	U		15.0	50.0
Chloroprene	U		1.70	50.0
Ethyl methacrylate	U		1.40	5.00
Cyclohexanone	U		3.40	10.0
Isobutanol	U		39.0	100
Methacrylonitrile	U		13.0	50.0
Methyl methacrylate	U		1.20	50.0
Pentachloroethane	U		3.60	50.0
Propionitrile	U		13.0	50.0
1,4-Dioxane	U		36.0	100
cis-1,4-Dichloro-2-butene	U		1.30	25.0
(S) Toluene-d8	*101*			*90.0-115*
(S) Dibromofluoromethane	*92.7*			*79.0-121*
(S) α,α,α-Trifluorotoluene	*105*			*90.4-116*
(S) 4-Bromofluorobenzene	*101*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3136987-1 05/13/16 15:57 • (LCSD) R3136987-3 05/13/16 17:58

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	81.7	93.4	65.3	74.7	28.7-175			13.4	20.9
Acrolein	125	109	112	87.0	89.9	40.4-172			3.25	20
Acrylonitrile	125	123	115	98.6	91.7	58.2-145			7.21	20
Benzene	25.0	23.4	22.3	93.7	89.2	73.0-122			4.92	20
Bromobenzene	25.0	26.6	26.2	106	105	81.5-115			1.35	20
Bromodichloromethane	25.0	23.7	24.7	94.6	99.0	75.5-121			4.53	20
Bromoform	25.0	29.4	28.5	118	114	71.5-131			3.16	20
Bromomethane	25.0	150	151	598	605	22.4-187	J4	J4	1.16	20
n-Butylbenzene	25.0	25.0	27.8	99.9	111	75.9-134			10.8	20
sec-Butylbenzene	25.0	26.7	27.0	107	108	80.6-126			0.990	20
tert-Butylbenzene	25.0	27.7	26.4	111	105	79.3-127			4.92	20
Carbon disulfide	25.0	19.5	20.2	78.0	80.7	53.0-134			3.37	20
Carbon tetrachloride	25.0	25.3	24.0	101	96.0	70.9-129			5.12	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3136987-1 05/13/16 15:57 • (LCSD) R3136987-3 05/13/16 17:58

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chlorobenzene	25.0	28.5	28.0	114	112	79.7-122			1.91	20
Chlorodibromomethane	25.0	29.6	28.6	118	114	78.2-124			3.56	20
Chloroethane	25.0	30.4	30.9	122	124	41.2-153			1.47	20
2-Chloroethyl vinyl ether	125	ND	ND	0.000	0.000	23.4-162	J4	J4	0.000	23.5
Chloroform	25.0	24.1	22.9	96.4	91.5	73.2-125			5.21	20
Chloromethane	25.0	25.5	25.5	102	102	55.8-134			0.0800	20
2-Chlorotoluene	25.0	27.1	27.5	108	110	76.4-125			1.43	20
4-Chlorotoluene	25.0	25.8	25.9	103	104	81.5-121			0.210	20
1,2-Dibromo-3-Chloropropane	25.0	22.0	21.3	87.8	85.3	64.8-131			2.95	20
1,2-Dibromoethane	25.0	28.0	26.2	112	105	79.8-122			6.44	20
Dibromomethane	25.0	25.8	26.6	103	106	79.5-118			2.90	20
1,2-Dichlorobenzene	25.0	26.1	24.8	104	99.1	84.7-118			5.00	20
1,3-Dichlorobenzene	25.0	28.3	28.7	113	115	77.6-127			1.26	20
1,4-Dichlorobenzene	25.0	25.3	26.1	101	104	82.2-114			3.24	20
trans-1,4-Dichloro-2-butene	25.0	24.6	25.0	98.4	100	58.3-129			1.62	20
Dichlorodifluoromethane	25.0	28.6	28.7	114	115	56.0-134			0.370	20
1,1-Dichloroethane	25.0	25.3	23.9	101	95.6	71.7-127			5.52	20
1,2-Dichloroethane	25.0	24.4	23.7	97.6	94.7	65.3-126			3.03	20
1,1-Dichloroethene	25.0	22.5	22.0	89.8	88.1	59.9-137			1.89	20
trans-1,2-Dichloroethene	25.0	22.7	22.4	90.8	89.6	72.6-125			1.30	20
1,2-Dichloropropane	25.0	25.7	26.9	103	108	77.4-125			4.50	20
1,1-Dichloropropene	25.0	23.7	22.5	94.8	89.9	72.5-127			5.37	20
1,3-Dichloropropane	25.0	29.0	27.8	116	111	80.6-115	J4		4.19	20
cis-1,3-Dichloropropene	25.0	25.1	26.7	100	107	77.7-124			6.20	20
trans-1,3-Dichloropropene	25.0	26.1	27.1	104	108	73.5-127			3.48	20
2,2-Dichloropropane	25.0	23.5	22.3	94.1	89.1	61.3-134			5.48	20
Di-isopropyl ether	25.0	26.4	24.8	106	99.3	65.1-135			6.24	20
Ethylbenzene	25.0	27.4	26.4	110	106	80.9-121			3.51	20
Ethyl ether	25.0	24.1	22.7	96.3	90.7	56.6-136			5.98	20
Hexachloro-1,3-butadiene	25.0	25.7	24.0	103	96.0	73.7-133			6.89	20
2-Hexanone	125	124	124	99.6	99.0	59.4-151			0.610	20
Iodomethane	125	128	125	102	99.7	64.6-137			2.51	20
Isopropylbenzene	25.0	26.3	25.0	105	100	81.6-124			4.92	20
p-Isopropyltoluene	25.0	29.5	29.7	118	119	77.6-129			0.580	20
2-Butanone (MEK)	125	105	111	84.1	88.5	46.4-155			5.03	20
Methylene Chloride	25.0	21.9	21.3	87.7	85.4	69.5-120			2.66	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3136987-1 05/13/16 15:57 • (LCSD) R3136987-3 05/13/16 17:58

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	125	147	148	118	119	63.3-138			0.870	20
Naphthalene	25.0	29.7	28.3	119	113	69.7-134			4.49	20
n-Propylbenzene	25.0	26.4	26.1	106	104	81.9-122			1.37	20
Styrene	25.0	28.0	26.2	112	105	79.9-124			6.67	20
1,1,1,2-Tetrachloroethane	25.0	29.9	29.2	119	117	78.5-125			2.23	20
1,1,2,2-Tetrachloroethane	25.0	25.0	25.1	99.8	100	79.3-123			0.470	20
Tetrachloroethene	25.0	27.7	27.7	111	111	73.5-130			0.0100	20
Tetrahydrofuran	25.0	22.7	22.2	90.8	88.7	54.0-134			2.30	20
Toluene	25.0	21.9	23.5	87.6	94.0	77.9-116			7.01	20
1,1,2-Trichlorotrifluoroethane	25.0	23.7	22.8	94.9	91.3	62.0-141			3.79	20
1,2,3-Trichlorobenzene	25.0	25.8	27.2	103	109	75.7-134			5.15	20
1,2,4-Trichlorobenzene	25.0	24.0	26.3	96.2	105	76.1-136			9.10	20
1,1,1-Trichloroethane	25.0	23.9	22.6	95.7	90.5	71.1-129			5.52	20
1,1,2-Trichloroethane	25.0	27.0	25.4	108	102	81.6-120			6.30	20
Trichlorofluoromethane	25.0	25.3	24.3	101	97.1	49.1-157			3.96	20
1,2,3-Trichloropropane	25.0	28.8	28.8	115	115	74.9-124			0.140	20
1,2,3-Trimethylbenzene	25.0	25.1	25.9	101	104	79.9-118			3.16	20
1,2,4-Trimethylbenzene	25.0	26.5	26.3	106	105	79.0-122			0.430	20
1,3,5-Trimethylbenzene	25.0	25.6	26.5	102	106	81.0-123			3.70	20
Vinyl acetate	125	137	143	110	114	41.7-159			4.25	20
Vinyl chloride	25.0	26.9	25.1	108	100	61.5-134			7.15	20
Xylenes, Total	75.0	78.4	77.7	105	104	79.2-122			0.870	20
(S) Toluene-d8				*98.5*	*106*	*90.0-115*				
(S) Dibromofluoromethane				*98.2*	*94.6*	*79.0-121*				
(S) α,α,α-Trifluorotoluene				*100*	*107*	*90.4-116*				
(S) 4-Bromofluorobenzene				*102*	*100*	*80.1-120*				

L834204-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L834204-13 05/13/16 21:13 • (MS) R3136987-4 05/13/16 19:36 • (MSD) R3136987-5 05/13/16 20:00

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	125	ND	59.0	63.8	47.2	51.1	1	25.0-156			7.91	21.5
Acrolein	125	ND	122	130	97.4	104	1	34.0-194			6.27	21.5
Acrylonitrile	125	ND	137	137	110	110	1	55.9-161			0.190	20
Benzene	25.0	ND	22.9	24.2	91.5	97.0	1	58.6-133			5.79	20

L834204-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L834204-13 05/13/16 21:13 • (MS) R3136987-4 05/13/16 19:36 • (MSD) R3136987-5 05/13/16 20:00

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromobenzene	25.0	ND	26.0	25.6	104	102	1	70.6-125			1.61	20
Bromodichloromethane	25.0	ND	22.6	23.4	90.5	93.7	1	69.2-127			3.54	20
Bromoform	25.0	ND	28.3	28.3	113	113	1	66.3-140			0.0500	20
Bromomethane	25.0	ND	151	159	603	635	1	16.6-183	J5	J5	5.30	20.5
n-Butylbenzene	25.0	ND	26.3	26.7	105	107	1	64.8-145			1.70	20
sec-Butylbenzene	25.0	ND	27.8	27.8	111	111	1	66.8-139			0.170	20
tert-Butylbenzene	25.0	ND	27.7	26.5	111	106	1	67.1-138			4.40	20
Carbon disulfide	25.0	ND	18.9	19.4	75.7	77.5	1	34.9-138			2.39	20
Carbon tetrachloride	25.0	ND	25.3	27.6	101	111	1	60.6-139			8.86	20
Chlorobenzene	25.0	ND	28.5	27.2	114	109	1	70.1-130			4.44	20
Chlorodibromomethane	25.0	ND	29.4	28.2	117	113	1	71.6-132			4.14	20
Chloroethane	25.0	ND	31.3	32.9	125	132	1	33.3-155			5.18	20
2-Chloroethyl vinyl ether	125	ND	ND	ND	0.000	0.000	1	5.00-149	J6	J6	0.000	40
Chloroform	25.0	ND	24.6	25.0	98.4	100	1	66.1-133			1.75	20
Chloromethane	25.0	ND	25.8	26.4	103	106	1	40.7-139			2.42	20
2-Chlorotoluene	25.0	ND	27.0	27.5	108	110	1	66.9-134			1.92	20
4-Chlorotoluene	25.0	ND	25.3	24.9	101	99.5	1	66.8-134			1.67	20
1,2-Dibromo-3-Chloropropane	25.0	ND	22.7	22.4	90.7	89.5	1	63.9-142			1.22	20.2
1,2-Dibromoethane	25.0	ND	26.5	26.8	106	107	1	73.8-131			1.41	20
Dibromomethane	25.0	ND	25.6	26.2	102	105	1	72.8-127			2.44	20
1,2-Dichlorobenzene	25.0	ND	25.9	24.7	104	98.9	1	77.4-127			4.74	20
1,3-Dichlorobenzene	25.0	ND	27.9	27.0	112	108	1	67.9-136			3.08	20
1,4-Dichlorobenzene	25.0	ND	25.8	24.4	103	97.7	1	74.4-123			5.58	20
trans-1,4-Dichloro-2-butene	25.0	ND	23.3	25.4	93.0	102	1	57.6-136			8.94	20
Dichlorodifluoromethane	25.0	ND	30.2	31.6	121	126	1	42.2-146			4.59	20
1,1-Dichloroethane	25.0	ND	24.8	26.2	99.1	105	1	64.0-134			5.46	20
1,2-Dichloroethane	25.0	ND	24.1	24.4	96.3	97.7	1	60.7-132			1.46	20
1,1-Dichloroethene	25.0	ND	23.2	24.0	92.7	95.8	1	48.8-144			3.33	20
trans-1,2-Dichloroethene	25.0	ND	23.4	23.8	93.4	95.0	1	61.0-132			1.73	20
1,2-Dichloropropane	25.0	ND	25.5	27.0	102	108	1	69.7-130			5.70	20
1,1-Dichloropropene	25.0	ND	25.0	25.7	100	103	1	61.5-136			2.67	20
1,3-Dichloropropane	25.0	ND	27.9	27.6	112	110	1	74.3-123			1.16	20
cis-1,3-Dichloropropene	25.0	ND	24.4	25.1	97.8	100	1	71.1-129			2.56	20
trans-1,3-Dichloropropene	25.0	ND	25.4	25.5	102	102	1	66.3-136			0.210	20
2,2-Dichloropropane	25.0	ND	24.7	25.1	98.7	100	1	54.9-142			1.72	20
Di-isopropyl ether	25.0	ND	26.4	27.0	106	108	1	59.9-140			2.39	20

L834204-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L834204-13 05/13/16 21:13 • (MS) R3136987-4 05/13/16 19:36 • (MSD) R3136987-5 05/13/16 20:00

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	ND	26.8	26.1	107	104	1	62.7-136			2.47	20
Ethyl ether	25.0	ND	23.9	24.7	95.6	98.8	1	50.2-141			3.28	20
Hexachloro-1,3-butadiene	25.0	ND	25.7	24.5	103	98.0	1	61.1-144			4.85	20.1
2-Hexanone	125	ND	114	112	91.4	89.7	1	59.4-154			1.92	20.1
Iodomethane	125	ND	128	133	102	106	1	55.2-140			3.81	20
Isopropylbenzene	25.0	ND	26.7	26.0	107	104	1	67.4-136			2.57	20
p-Isopropyltoluene	25.0	ND	30.2	29.2	121	117	1	62.8-143			3.56	20
2-Butanone (MEK)	125	ND	96.3	105	77.0	83.8	1	45.0-156			8.44	20.8
Methylene Chloride	25.0	ND	21.6	22.3	86.6	89.3	1	61.5-125			3.08	20
4-Methyl-2-pentanone (MIBK)	125	ND	151	151	121	121	1	60.7-150			0.340	20
Naphthalene	25.0	ND	28.9	27.1	116	108	1	61.8-143			6.47	20
n-Propylbenzene	25.0	ND	26.4	26.4	106	106	1	63.2-139			0.0700	20
Styrene	25.0	ND	26.4	25.8	106	103	1	68.2-133			2.38	20
1,1,1,2-Tetrachloroethane	25.0	ND	30.2	28.0	121	112	1	70.5-132			7.69	20
1,1,2,2-Tetrachloroethane	25.0	ND	25.4	25.9	102	104	1	64.9-145			1.98	20
Tetrachloroethene	25.0	ND	28.2	27.2	113	109	1	57.4-141			3.63	20
Tetrahydrofuran	25.0	ND	24.7	26.6	98.9	107	1	45.9-153			7.47	20.5
Toluene	25.0	ND	22.9	22.0	91.7	88.2	1	67.8-124			3.91	20
1,1,2-Trichlorotrifluoroethane	25.0	ND	25.5	26.1	102	105	1	53.7-150			2.55	20
1,2,3-Trichlorobenzene	25.0	ND	26.5	25.3	106	101	1	65.7-143			4.75	20
1,2,4-Trichlorobenzene	25.0	ND	23.9	23.7	95.8	95.0	1	67.0-146			0.800	20
1,1,1-Trichloroethane	25.0	ND	24.1	25.4	96.3	102	1	58.7-134			5.46	20
1,1,2-Trichloroethane	25.0	ND	27.1	25.8	108	103	1	74.1-130			4.63	20
Trichlorofluoromethane	25.0	ND	26.2	26.9	105	108	1	39.9-165			2.67	20
1,2,3-Trichloropropane	25.0	ND	30.4	29.5	121	118	1	71.5-134			2.90	20
1,2,3-Trimethylbenzene	25.0	ND	24.9	24.2	99.7	96.6	1	62.7-133			3.06	20
1,2,4-Trimethylbenzene	25.0	ND	25.8	25.9	103	104	1	60.5-137			0.410	20
1,3,5-Trimethylbenzene	25.0	ND	26.3	26.8	105	107	1	67.9-134			1.84	20
Vinyl acetate	125	ND	151	161	121	129	1	42.8-181			6.00	20
Vinyl chloride	25.0	ND	27.6	28.0	110	112	1	44.3-143			1.64	20
Xylenes, Total	75.0	ND	78.5	77.4	105	103	1	65.6-133			1.36	20
(S) Toluene-d8					*101*	*101*		*90.0-115*				
(S) Dibromofluoromethane					*100*	*101*		*79.0-121*				
(S) α,α,α-Trifluorotoluene					*104*	*102*		*90.4-116*				
(S) 4-Bromofluorobenzene					*102*	*100*		*80.1-120*				

Method Blank (MB)

(MB) R3137400-3 05/17/16 07:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
cis-1,2-Dichloroethene	U		0.260	1.00
Methyl tert-butyl ether	U		0.367	1.00
Trichloroethene	U		0.398	1.00
tert-Butyl alcohol	U		2.40	5.00
(S) Toluene-d8	*102*			*90.0-115*
(S) Dibromofluoromethane	*107*			*79.0-121*
(S) α,α,α-Trifluorotoluene	*98.6*			*90.4-116*
(S) 4-Bromofluorobenzene	*99.0*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3137400-1 05/17/16 06:28 • (LCSD) R3137400-2 05/17/16 06:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
cis-1,2-Dichloroethene	25.0	23.2	23.1	92.9	92.2	77.3-122			0.750	20
Methyl tert-butyl ether	25.0	23.3	22.8	93.4	91.3	70.1-125			2.23	20
Trichloroethene	25.0	21.6	21.2	86.4	85.0	79.5-121			1.66	20
(S) Toluene-d8				*105*	*105*	*90.0-115*				
(S) Dibromofluoromethane				*107*	*108*	*79.0-121*				
(S) α,α,α-Trifluorotoluene				*99.5*	*100*	*90.4-116*				
(S) 4-Bromofluorobenzene				*101*	*99.1*	*80.1-120*				

L835717-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L835717-01 05/17/16 14:32 • (MS) R3137400-4 05/17/16 13:15 • (MSD) R3137400-5 05/17/16 13:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
cis-1,2-Dichloroethene	25.0	ND	18.2	18.8	73.0	75.1	1	60.6-136			2.87	20
Methyl tert-butyl ether	25.0	ND	18.1	18.7	72.3	74.7	1	61.4-136			3.26	20
Trichloroethene	25.0	ND	20.3	20.9	81.2	83.5	1	48.9-148			2.83	20
(S) Toluene-d8					*108*	*109*		*90.0-115*				
(S) Dibromofluoromethane					*86.7*	*87.5*		*79.0-121*				
(S) α,α,α-Trifluorotoluene					*100*	*99.9*		*90.4-116*				
(S) 4-Bromofluorobenzene					*102*	*102*		*80.1-120*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

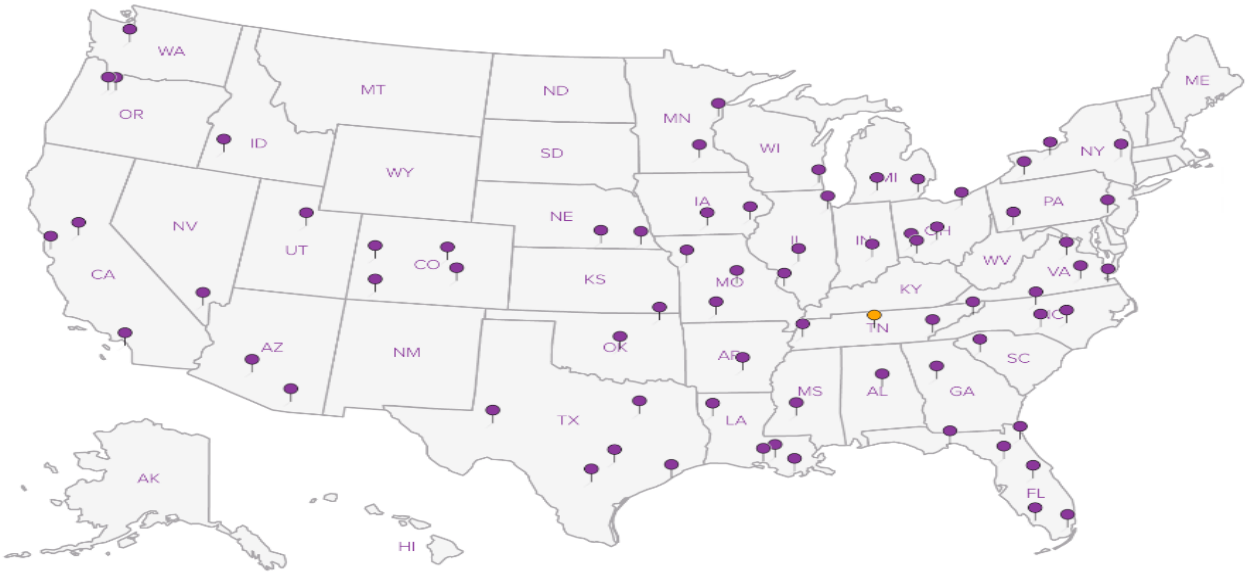
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project #: FMMD1008

Lab Project #

Collected by (print): AF

Site/Facility ID #

P.O. #: GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABS SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L829221
Table D188
Acctnum:
Template:
Prelogin:
TSR: 834223
PB:
Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, MTBE via Method 18	TVPH via Method 18	BTEX, MTBE, Naphthalene, Ethanol via V8260	TPH-GRO via 8015	Rem./Contaminant	Sample # (lab only)
RCP08	Grab	Air		04/11/16	1010	1	X	X				-01
INF07	Grab	GW		04/11/16	1020	6			X	X		-02
MID01	Grab	GW		04/11/16	1030	6			X	X		-03
EFF07	Grab	GW		04/11/16	1040	6			X	X		-04

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

Remarks: 6645-0393-3496

pH ___ Temp ___
Flow ___ Other ___

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Carl Ferris	4/12/16	0500	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Jessica Petie

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ ___

Temp: 3.1 °C Bottles Received: 18+ Tedlar

Date: 4-13-16 Time: 9:00

Hold #

Condition: (lab use only) R JW7 OK

COC Seal Intact: ✓ Y ___N ___NA

pH Checked: NCF:

Matt Shacklock

From:	Terrie Fudge
Sent:	Monday, May 09, 2016 3:28 PM
To:	Login
Cc:	Terrie Fudge
Subject:	L829271-04 GREENENVA

Please re-log the -04 EFF07 sample for V8260MISC

Thank you,

Terrie Fudge
ESC Lab Sciences
ESC Project Mgr.
Direct: **615-773-9674**
Toll Free: **800-767-5859 + ext (9674)**
Email: **tfudge@esclabsciences.com**

ANALYTICAL REPORT

April 29, 2016

Greene Env. Services, LLC

Sample Delivery Group:	L832036
Samples Received:	04/28/2016
Project Number:	FMMD1008
Description:	Meadows of Dan Food Market
Report To:	Mr. Trev Greene 129 Bunny Ridge Lane Rocky Mount, VA 24151

Entire Report Reviewed By:

Terrie Fudge
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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RCP09 L832036-01 Air

Collected by: AF
Collected date/time: 04/25/16 10:50
Received date/time: 04/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method M18-Mod	WG868280	4000	04/28/16 19:47	04/28/16 19:47	MBF

EFF07 L832036-02 GW

Collected by: AF
Collected date/time: 04/25/16 10:45
Received date/time: 04/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9040C	WG867940	1	04/28/16 13:22	04/28/16 13:22	KK

DW23 L832036-03 GW

Collected by: AF
Collected date/time: 04/25/16 15:15
Received date/time: 04/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG868456	1	04/29/16 11:39	04/29/16 11:39	ACG

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Terrie Fudge

Terrie Fudge
Technical Service Representative

Sample Handling and Receiving

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Sample ID	Project Sample ID	Method
L832036-02	EFF07	9040C

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	800	2560	13600	43600		4000	WG868280
Toluene	108-88-3	92.10	800	3010	174000	654000		4000	WG868280
Ethylbenzene	100-41-4	106	800	3470	33600	146000		4000	WG868280
m&p-Xylene	1330-20-7	106	1600	6940	123000	535000		4000	WG868280
o-Xylene	95-47-6	106	800	3470	41900	182000		4000	WG868280
Methyl tert-butyl ether	1634-04-4	88.10	800	2880	2440	8780		4000	WG868280
TPH (GC/MS) Low Fraction	8006-61-9	101	200000	826000	1950000	8070000		4000	WG868280
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*101*				WG868280

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	su				
pH	6.15		1	04/28/2016 13:22	WG867940

Sample Narrative:

9040C L832036-02 WG867940: 6.15 at 20.2c

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	04/29/2016 11:39	WG868456
Acrolein	U		8.87	50.0	1	04/29/2016 11:39	WG868456
Acrylonitrile	U		1.87	10.0	1	04/29/2016 11:39	WG868456
Benzene	U		0.331	1.00	1	04/29/2016 11:39	WG868456
Bromobenzene	U		0.352	1.00	1	04/29/2016 11:39	WG868456
Bromodichloromethane	U		0.380	1.00	1	04/29/2016 11:39	WG868456
Bromoform	U		0.469	1.00	1	04/29/2016 11:39	WG868456
Bromomethane	U		0.866	5.00	1	04/29/2016 11:39	WG868456
n-Butylbenzene	U		0.361	1.00	1	04/29/2016 11:39	WG868456
sec-Butylbenzene	U		0.365	1.00	1	04/29/2016 11:39	WG868456
tert-Butylbenzene	U		0.399	1.00	1	04/29/2016 11:39	WG868456
Carbon tetrachloride	U		0.379	1.00	1	04/29/2016 11:39	WG868456
Chlorobenzene	U		0.348	1.00	1	04/29/2016 11:39	WG868456
Chlorodibromomethane	U		0.327	1.00	1	04/29/2016 11:39	WG868456
Chloroethane	U		0.453	5.00	1	04/29/2016 11:39	WG868456
2-Chloroethyl vinyl ether	U		3.01	50.0	1	04/29/2016 11:39	WG868456
Chloroform	U		0.324	5.00	1	04/29/2016 11:39	WG868456
Chloromethane	U		0.276	2.50	1	04/29/2016 11:39	WG868456
2-Chlorotoluene	U		0.375	1.00	1	04/29/2016 11:39	WG868456
4-Chlorotoluene	U		0.351	1.00	1	04/29/2016 11:39	WG868456
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	04/29/2016 11:39	WG868456
1,2-Dibromoethane	U		0.381	1.00	1	04/29/2016 11:39	WG868456
Dibromomethane	U		0.346	1.00	1	04/29/2016 11:39	WG868456
1,2-Dichlorobenzene	U		0.349	1.00	1	04/29/2016 11:39	WG868456
1,3-Dichlorobenzene	U		0.220	1.00	1	04/29/2016 11:39	WG868456
1,4-Dichlorobenzene	U		0.274	1.00	1	04/29/2016 11:39	WG868456
Dichlorodifluoromethane	U		0.551	5.00	1	04/29/2016 11:39	WG868456
1,1-Dichloroethane	U		0.259	1.00	1	04/29/2016 11:39	WG868456
1,2-Dichloroethane	U		0.361	1.00	1	04/29/2016 11:39	WG868456
1,1-Dichloroethene	U		0.398	1.00	1	04/29/2016 11:39	WG868456
cis-1,2-Dichloroethene	U		0.260	1.00	1	04/29/2016 11:39	WG868456
trans-1,2-Dichloroethene	U		0.396	1.00	1	04/29/2016 11:39	WG868456
1,2-Dichloropropane	U		0.306	1.00	1	04/29/2016 11:39	WG868456
1,1-Dichloropropene	U		0.352	1.00	1	04/29/2016 11:39	WG868456
1,3-Dichloropropane	U		0.366	1.00	1	04/29/2016 11:39	WG868456
cis-1,3-Dichloropropene	U		0.418	1.00	1	04/29/2016 11:39	WG868456
trans-1,3-Dichloropropene	U		0.419	1.00	1	04/29/2016 11:39	WG868456
2,2-Dichloropropane	U		0.321	1.00	1	04/29/2016 11:39	WG868456
Di-isopropyl ether	U		0.320	1.00	1	04/29/2016 11:39	WG868456
Ethylbenzene	U		0.384	1.00	1	04/29/2016 11:39	WG868456
Hexachloro-1,3-butadiene	U		0.256	1.00	1	04/29/2016 11:39	WG868456
Isopropylbenzene	U		0.326	1.00	1	04/29/2016 11:39	WG868456
p-Isopropyltoluene	U		0.350	1.00	1	04/29/2016 11:39	WG868456
2-Butanone (MEK)	12.0		3.93	10.0	1	04/29/2016 11:39	WG868456
Methylene Chloride	U		1.00	5.00	1	04/29/2016 11:39	WG868456
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	04/29/2016 11:39	WG868456
Methyl tert-butyl ether	U		0.367	1.00	1	04/29/2016 11:39	WG868456
Naphthalene	U		1.00	5.00	1	04/29/2016 11:39	WG868456
n-Propylbenzene	U		0.349	1.00	1	04/29/2016 11:39	WG868456
Styrene	U		0.307	1.00	1	04/29/2016 11:39	WG868456
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	04/29/2016 11:39	WG868456
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	04/29/2016 11:39	WG868456
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	04/29/2016 11:39	WG868456
Tetrachloroethene	U		0.372	1.00	1	04/29/2016 11:39	WG868456
Toluene	U		0.780	5.00	1	04/29/2016 11:39	WG868456
1,2,3-Trichlorobenzene	U		0.230	1.00	1	04/29/2016 11:39	WG868456

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.355	1.00	1	04/29/2016 11:39	WG868456
1,1,1-Trichloroethane	U		0.319	1.00	1	04/29/2016 11:39	WG868456
1,1,2-Trichloroethane	U		0.383	1.00	1	04/29/2016 11:39	WG868456
Trichloroethene	U		0.398	1.00	1	04/29/2016 11:39	WG868456
Trichlorofluoromethane	U		1.20	5.00	1	04/29/2016 11:39	WG868456
1,2,3-Trichloropropane	U		0.807	2.50	1	04/29/2016 11:39	WG868456
1,2,4-Trimethylbenzene	U		0.373	1.00	1	04/29/2016 11:39	WG868456
1,2,3-Trimethylbenzene	U		0.321	1.00	1	04/29/2016 11:39	WG868456
1,3,5-Trimethylbenzene	U		0.387	1.00	1	04/29/2016 11:39	WG868456
Vinyl chloride	U		0.259	1.00	1	04/29/2016 11:39	WG868456
Xylenes, Total	U		1.06	3.00	1	04/29/2016 11:39	WG868456
(S) Toluene-d8	*104*			*90.0-115*		*04/29/2016 11:39*	WG868456
(S) Dibromofluoromethane	*106*			*79.0-121*		*04/29/2016 11:39*	WG868456
(S) 4-Bromofluorobenzene	*101*			*80.1-120*		*04/29/2016 11:39*	WG868456

Original Sample (OS) • Duplicate (DUP)

(OS) L831710-01 04/28/16 13:22 • (DUP) WG867940-3 04/28/16 13:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.85	6.84	1	0.146		1

Original Sample (OS) • Duplicate (DUP)

(OS) L832036-02 04/28/16 13:22 • (DUP) WG867940-4 04/28/16 13:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.15	6.16	1	0.162		1

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG867940-1 04/28/16 13:22 • (LCSD) WG867940-2 04/28/16 13:22

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	6.43	6.41	6.41	99.7	99.7	98.5-102			0.000	1

Method Blank (MB)

(MB) R3132439-3 04/28/16 09:50

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0460	0.200
Ethylbenzene	U		0.0506	0.200
MTBE	U		0.0505	0.200
Toluene	U		0.0499	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
TPH (GC/MS) Low Fraction	10.3		6.91	50.0
(S) 1,4-Bromofluorobenzene	*98.1*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3132439-1 04/28/16 08:26 • (LCSD) R3132439-2 04/28/16 09:07

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
MTBE	3.75	4.18	4.08	111	109	70.0-130			2.45	25
Benzene	3.75	4.13	4.16	110	111	70.0-130			0.610	25
Toluene	3.75	4.24	4.26	113	114	70.0-130			0.450	25
Ethylbenzene	3.75	4.21	4.24	112	113	70.0-130			0.870	25
m&p-Xylene	7.50	8.67	8.70	116	116	70.0-130			0.270	25
o-Xylene	3.75	4.17	4.23	111	113	70.0-130			1.36	25
TPH (GC/MS) Low Fraction	150	168	169	112	112	70.0-130			0.280	25
(S) 1,4-Bromofluorobenzene				*103*	*103*	*60.0-140*				

Method Blank (MB)

(MB) R3132568-3 04/29/16 04:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
2-Chloroethyl vinyl ether	U		0.00301	0.0500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100

Method Blank (MB)

(MB) R3132568-3 04/29/16 04:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000780	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*105*			*90.0-115*
(S) Dibromofluoromethane	*107*			*79.0-121*
(S) 4-Bromofluorobenzene	*100*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3132568-1 04/29/16 02:14 • (LCSD) R3132568-2 04/29/16 02:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.105	0.104	84.1	83.0	28.7-175			1.25	20.9
Acrolein	0.125	0.109	0.108	87.3	86.3	40.4-172			1.22	20
Acrylonitrile	0.125	0.120	0.114	95.9	91.0	58.2-145			5.23	20
Benzene	0.0250	0.0220	0.0220	87.8	87.9	73.0-122			0.110	20
Bromobenzene	0.0250	0.0235	0.0241	93.9	96.4	81.5-115			2.61	20
Bromodichloromethane	0.0250	0.0227	0.0226	90.7	90.6	75.5-121			0.100	20
Bromoform	0.0250	0.0235	0.0240	93.9	95.9	71.5-131			2.12	20
Bromomethane	0.0250	0.0295	0.0303	118	121	22.4-187			2.64	20
n-Butylbenzene	0.0250	0.0231	0.0231	92.5	92.3	75.9-134			0.210	20
sec-Butylbenzene	0.0250	0.0245	0.0248	98.0	99.3	80.6-126			1.27	20
tert-Butylbenzene	0.0250	0.0246	0.0253	98.3	101	79.3-127			3.10	20
Carbon tetrachloride	0.0250	0.0211	0.0212	84.4	84.6	70.9-129			0.260	20
Chlorobenzene	0.0250	0.0246	0.0249	98.5	99.5	79.7-122			0.970	20
Chlorodibromomethane	0.0250	0.0241	0.0246	96.6	98.3	78.2-124			1.73	20
Chloroethane	0.0250	0.0269	0.0269	108	108	41.2-153			0.0200	20
2-Chloroethyl vinyl ether	0.125	0.101	0.103	81.0	82.0	23.4-162			1.25	23.5
Chloroform	0.0250	0.0230	0.0231	91.9	92.6	73.2-125			0.750	20
Chloromethane	0.0250	0.0212	0.0206	84.6	82.5	55.8-134			2.50	20
2-Chlorotoluene	0.0250	0.0248	0.0259	99.1	104	76.4-125			4.68	20
4-Chlorotoluene	0.0250	0.0244	0.0249	97.5	99.7	81.5-121			2.19	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0211	0.0214	84.6	85.8	64.8-131			1.45	20
1,2-Dibromoethane	0.0250	0.0243	0.0247	97.2	98.6	79.8-122			1.45	20
Dibromomethane	0.0250	0.0236	0.0237	94.5	95.0	79.5-118			0.490	20
1,2-Dichlorobenzene	0.0250	0.0243	0.0245	97.3	98.1	84.7-118			0.810	20
1,3-Dichlorobenzene	0.0250	0.0249	0.0253	99.5	101	77.6-127			1.62	20
1,4-Dichlorobenzene	0.0250	0.0231	0.0232	92.4	92.9	82.2-114			0.540	20
Dichlorodifluoromethane	0.0250	0.0273	0.0269	109	108	56.0-134			1.37	20
1,1-Dichloroethane	0.0250	0.0229	0.0229	91.5	91.7	71.7-127			0.310	20
1,2-Dichloroethane	0.0250	0.0239	0.0240	95.5	95.9	65.3-126			0.460	20
1,1-Dichloroethene	0.0250	0.0226	0.0226	90.6	90.2	59.9-137			0.430	20
cis-1,2-Dichloroethene	0.0250	0.0234	0.0237	93.7	94.9	77.3-122			1.22	20
trans-1,2-Dichloroethene	0.0250	0.0231	0.0231	92.2	92.5	72.6-125			0.300	20
1,2-Dichloropropane	0.0250	0.0229	0.0227	91.4	90.8	77.4-125			0.730	20
1,1-Dichloropropene	0.0250	0.0236	0.0234	94.4	93.5	72.5-127			0.990	20
1,3-Dichloropropane	0.0250	0.0243	0.0250	97.3	100	80.6-115			2.86	20
cis-1,3-Dichloropropene	0.0250	0.0243	0.0240	97.1	96.1	77.7-124			1.01	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3132568-1 04/29/16 02:14 • (LCSD) R3132568-2 04/29/16 02:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	0.0250	0.0240	0.0238	95.9	95.2	73.5-127			0.700	20
2,2-Dichloropropane	0.0250	0.0223	0.0229	89.3	91.7	61.3-134			2.65	20
Di-isopropyl ether	0.0250	0.0218	0.0218	87.0	87.3	65.1-135			0.310	20
Ethylbenzene	0.0250	0.0241	0.0245	96.2	98.0	80.9-121			1.79	20
Hexachloro-1,3-butadiene	0.0250	0.0230	0.0224	92.1	89.6	73.7-133			2.80	20
Isopropylbenzene	0.0250	0.0232	0.0237	92.7	94.6	81.6-124			2.07	20
p-Isopropyltoluene	0.0250	0.0255	0.0262	102	105	77.6-129			2.56	20
2-Butanone (MEK)	0.125	0.107	0.106	85.7	85.1	46.4-155			0.720	20
Methylene Chloride	0.0250	0.0220	0.0224	87.9	89.7	69.5-120			2.01	20
4-Methyl-2-pentanone (MIBK)	0.125	0.114	0.113	90.8	90.2	63.3-138			0.690	20
Methyl tert-butyl ether	0.0250	0.0227	0.0228	90.9	91.2	70.1-125			0.410	20
Naphthalene	0.0250	0.0236	0.0237	94.5	94.9	69.7-134			0.400	20
n-Propylbenzene	0.0250	0.0245	0.0249	98.0	99.5	81.9-122			1.50	20
Styrene	0.0250	0.0251	0.0253	100	101	79.9-124			0.850	20
1,1,1,2-Tetrachloroethane	0.0250	0.0237	0.0245	94.7	97.9	78.5-125			3.31	20
1,1,2,2-Tetrachloroethane	0.0250	0.0231	0.0235	92.3	93.9	79.3-123			1.71	20
Tetrachloroethene	0.0250	0.0235	0.0241	93.8	96.4	73.5-130			2.68	20
Toluene	0.0250	0.0219	0.0220	87.5	87.9	77.9-116			0.430	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0230	0.0236	92.1	94.4	62.0-141			2.46	20
1,2,3-Trichlorobenzene	0.0250	0.0242	0.0238	96.9	95.2	75.7-134			1.79	20
1,2,4-Trichlorobenzene	0.0250	0.0245	0.0243	97.9	97.3	76.1-136			0.590	20
1,1,1-Trichloroethane	0.0250	0.0233	0.0234	93.4	93.7	71.1-129			0.310	20
1,1,2-Trichloroethane	0.0250	0.0240	0.0246	96.1	98.6	81.6-120			2.59	20
Trichloroethene	0.0250	0.0237	0.0233	94.8	93.2	79.5-121			1.80	20
Trichlorofluoromethane	0.0250	0.0225	0.0227	90.2	90.7	49.1-157			0.540	20
1,2,3-Trichloropropane	0.0250	0.0243	0.0242	97.1	96.7	74.9-124			0.440	20
1,2,3-Trimethylbenzene	0.0250	0.0230	0.0231	92.2	92.4	79.9-118			0.250	20
1,2,4-Trimethylbenzene	0.0250	0.0243	0.0251	97.3	101	79.0-122			3.26	20
1,3,5-Trimethylbenzene	0.0250	0.0243	0.0249	97.3	99.5	81.0-123			2.29	20
Vinyl chloride	0.0250	0.0242	0.0243	96.6	97.1	61.5-134			0.470	20
Xylenes, Total	0.0750	0.0715	0.0724	95.3	96.6	79.2-122			1.35	20
(S) Toluene-d8				*106*	*106*	*90.0-115*				
(S) Dibromofluoromethane				*106*	*106*	*79.0-121*				
(S) 4-Bromofluorobenzene				*106*	*107*	*80.1-120*				

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L831222-20 04/29/16 07:53 • (MS) R3132568-4 04/29/16 04:52 • (MSD) R3132568-5 04/29/16 05:15

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	ND	0.0789	0.0628	63.2	50.3	1	25.0-156		J3	22.7	21.5
Acrolein	0.125	ND	0.124	0.121	98.8	96.5	1	34.0-194			2.37	21.5
Acrylonitrile	0.125	ND	0.129	0.126	103	100	1	55.9-161			2.80	20
Benzene	0.0250	0.00194	0.0255	0.0254	94.4	93.8	1	58.6-133			0.640	20
Bromobenzene	0.0250	ND	0.0256	0.0253	102	101	1	70.6-125			1.25	20
Bromodichloromethane	0.0250	ND	0.0234	0.0235	93.7	93.9	1	69.2-127			0.130	20
Bromoform	0.0250	ND	0.0248	0.0248	99.2	99.0	1	66.3-140			0.190	20
Bromomethane	0.0250	ND	0.0367	0.0327	147	131	1	16.6-183			11.5	20.5
n-Butylbenzene	0.0250	ND	0.0251	0.0252	100	101	1	64.8-145			0.380	20
sec-Butylbenzene	0.0250	0.000454	0.0266	0.0265	105	104	1	66.8-139			0.720	20
tert-Butylbenzene	0.0250	ND	0.0265	0.0265	106	106	1	67.1-138			0.240	20
Carbon tetrachloride	0.0250	ND	0.0231	0.0233	92.5	93.0	1	60.6-139			0.580	20
Chlorobenzene	0.0250	ND	0.0264	0.0263	106	105	1	70.1-130			0.240	20
Chlorodibromomethane	0.0250	ND	0.0252	0.0253	101	101	1	71.6-132			0.510	20
Chloroethane	0.0250	ND	0.0299	0.0278	119	111	1	33.3-155			7.11	20
2-Chloroethyl vinyl ether	0.125	ND	0.112	0.110	89.3	88.2	1	5.00-149			1.25	40
Chloroform	0.0250	ND	0.0243	0.0243	97.4	97.1	1	66.1-133			0.290	20
Chloromethane	0.0250	ND	0.0223	0.0235	89.1	93.9	1	40.7-139			5.18	20
2-Chlorotoluene	0.0250	ND	0.0269	0.0266	107	106	1	66.9-134			1.02	20
4-Chlorotoluene	0.0250	ND	0.0264	0.0261	105	104	1	66.8-134			0.940	20
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.0234	0.0240	93.6	96.1	1	63.9-142			2.55	20.2
1,2-Dibromoethane	0.0250	ND	0.0262	0.0257	105	103	1	73.8-131			2.13	20
Dibromomethane	0.0250	ND	0.0249	0.0249	99.5	99.8	1	72.8-127			0.280	20
1,2-Dichlorobenzene	0.0250	ND	0.0252	0.0250	101	99.8	1	77.4-127			1.03	20
1,3-Dichlorobenzene	0.0250	ND	0.0266	0.0263	106	105	1	67.9-136			1.04	20
1,4-Dichlorobenzene	0.0250	ND	0.0247	0.0248	98.6	99.1	1	74.4-123			0.500	20
Dichlorodifluoromethane	0.0250	ND	0.0260	0.0274	104	110	1	42.2-146			5.09	20
1,1-Dichloroethane	0.0250	ND	0.0241	0.0245	96.5	97.9	1	64.0-134			1.49	20
1,2-Dichloroethane	0.0250	ND	0.0254	0.0249	102	99.7	1	60.7-132			2.06	20
1,1-Dichloroethene	0.0250	ND	0.0244	0.0249	97.8	99.5	1	48.8-144			1.72	20
cis-1,2-Dichloroethene	0.0250	ND	0.0248	0.0255	99.0	102	1	60.6-136			2.90	20
trans-1,2-Dichloroethene	0.0250	ND	0.0254	0.0253	102	101	1	61.0-132			0.580	20
1,2-Dichloropropane	0.0250	ND	0.0232	0.0234	92.9	93.7	1	69.7-130			0.830	20
1,1-Dichloropropene	0.0250	ND	0.0259	0.0262	104	105	1	61.5-136			1.22	20
1,3-Dichloropropane	0.0250	ND	0.0256	0.0259	102	103	1	74.3-123			0.980	20
cis-1,3-Dichloropropene	0.0250	ND	0.0252	0.0255	101	102	1	71.1-129			1.29	20

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L831222-20 04/29/16 07:53 • (MS) R3132568-4 04/29/16 04:52 • (MSD) R3132568-5 04/29/16 05:15

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	0.0250	ND	0.0250	0.0248	100	99.1	1	66.3-136			0.850	20
2,2-Dichloropropane	0.0250	ND	0.0241	0.0240	96.3	95.9	1	54.9-142			0.460	20
Di-isopropyl ether	0.0250	ND	0.0224	0.0229	89.6	91.7	1	59.9-140			2.25	20
Ethylbenzene	0.0250	0.000420	0.0266	0.0265	105	105	1	62.7-136			0.110	20
Hexachloro-1,3-butadiene	0.0250	ND	0.0250	0.0249	99.8	99.7	1	61.1-144			0.0900	20.1
Isopropylbenzene	0.0250	ND	0.0252	0.0253	101	101	1	67.4-136			0.610	20
p-Isopropyltoluene	0.0250	0.00210	0.0304	0.0300	113	112	1	62.8-143			1.18	20
2-Butanone (MEK)	0.125	ND	0.0953	0.0862	76.2	68.9	1	45.0-156			10.0	20.8
Methylene Chloride	0.0250	ND	0.0234	0.0235	93.6	94.0	1	61.5-125			0.460	20
4-Methyl-2-pentanone (MIBK)	0.125	ND	0.121	0.119	96.7	95.4	1	60.7-150			1.33	20
Methyl tert-butyl ether	0.0250	ND	0.0236	0.0239	94.3	95.8	1	61.4-136			1.60	20
Naphthalene	0.0250	ND	0.0265	0.0264	106	106	1	61.8-143			0.480	20
n-Propylbenzene	0.0250	0.000355	0.0271	0.0270	107	107	1	63.2-139			0.160	20
Styrene	0.0250	ND	0.0269	0.0270	108	108	1	68.2-133			0.290	20
1,1,1,2-Tetrachloroethane	0.0250	ND	0.0251	0.0249	101	99.7	1	70.5-132			0.910	20
1,1,2,2-Tetrachloroethane	0.0250	ND	0.0252	0.0251	101	100	1	64.9-145			0.480	20
Tetrachloroethene	0.0250	ND	0.0261	0.0264	104	105	1	57.4-141			1.14	20
Toluene	0.0250	ND	0.0239	0.0239	95.6	95.7	1	67.8-124			0.0700	20
1,1,2-Trichlorotrifluoroethane	0.0250	ND	0.0250	0.0254	100	102	1	53.7-150			1.45	20
1,2,3-Trichlorobenzene	0.0250	ND	0.0272	0.0269	109	108	1	65.7-143			0.920	20
1,2,4-Trichlorobenzene	0.0250	ND	0.0261	0.0263	104	105	1	67.0-146			0.690	20
1,1,1-Trichloroethane	0.0250	ND	0.0250	0.0249	99.9	99.5	1	58.7-134			0.380	20
1,1,2-Trichloroethane	0.0250	ND	0.0255	0.0253	102	101	1	74.1-130			0.920	20
Trichloroethene	0.0250	ND	0.0253	0.0250	101	100	1	48.9-148			1.03	20
Trichlorofluoromethane	0.0250	ND	0.0265	0.0267	106	107	1	39.9-165			0.740	20
1,2,3-Trichloropropane	0.0250	ND	0.0270	0.0262	108	105	1	71.5-134			2.95	20
1,2,3-Trimethylbenzene	0.0250	0.00848	0.0319	0.0320	93.8	94.1	1	62.7-133			0.240	20
1,2,4-Trimethylbenzene	0.0250	0.00800	0.0337	0.0330	103	100	1	60.5-137			1.99	20
1,3,5-Trimethylbenzene	0.0250	0.000732	0.0271	0.0268	105	104	1	67.9-134			1.09	20
Vinyl chloride	0.0250	ND	0.0268	0.0268	107	107	1	44.3-143			0.150	20
Xylenes, Total	0.0750	0.00111	0.0788	0.0777	104	102	1	65.6-133			1.47	20
(S) Toluene-d8					*105*	*106*		*90.0-115*				
(S) Dibromofluoromethane					*105*	*105*		*79.0-121*				
(S) 4-Bromofluorobenzene					*107*	*107*		*80.1-120*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

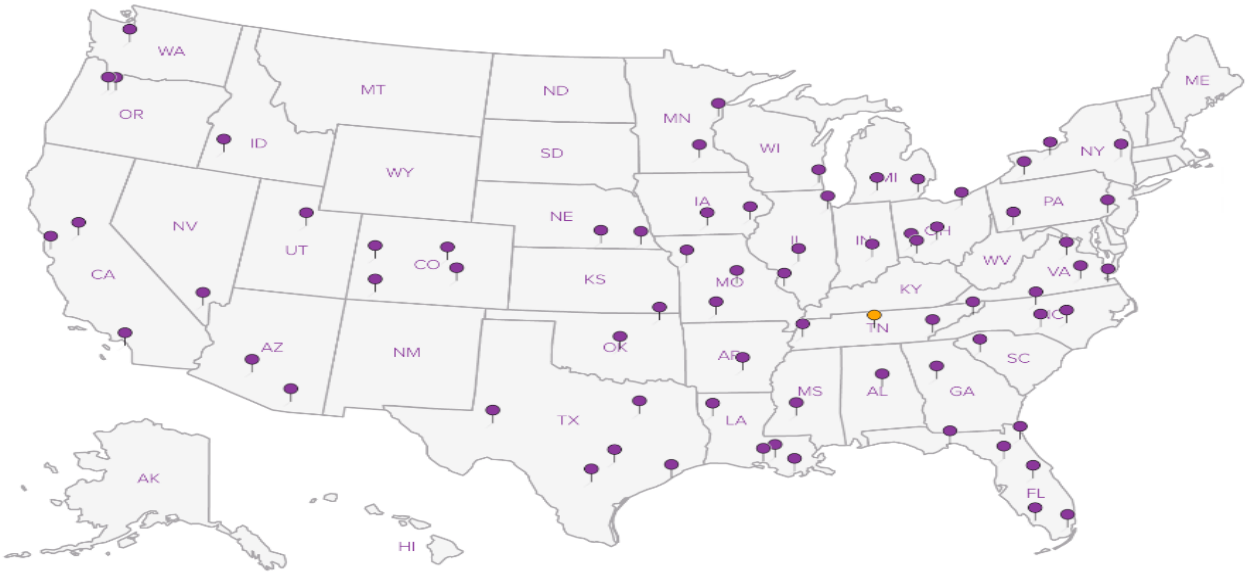
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project # FMMD1008

Lab Project #

Collected by (print): AF

Site/Facility ID #

P.O. # GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L832036

G052

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, MTBE via Method 18	TVPH via Method 18	pH	VOCs via 8260	Rem./Contaminant	Sample # (lab only)
RCP09	Grab	Air		04/25/16	1050	1	X	X				-01
EFF07	Grab	GW		04/25/16	1045	1			X			-02
DW23	Grab	GW		04/25/16	1515	4				X		-03

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
[signature]	4-27-16	1000	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
			[signature]
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 3.1 °C Bottles Received: 6

Date: 4/28/16 Time: 900

Condition: (lab use only) OK JW7

COC Seal Intact: ____Y ____N ____NA

pH Checked: NCF:

ANALYTICAL REPORT

May 19, 2016

Greene Env. Services, LLC

Sample Delivery Group:	L834537
Samples Received:	05/11/2016
Project Number:	FMMD1008
Description:	Meadows of Dan Food Market
Report To:	Mr.Trev Greene 129 Bunny Ridge Lane Rocky Mount, VA 24151

Entire Report Reviewed By:

Terrie Fudge
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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RCP09 L834537-01 Air

Collected by: AF
Collected date/time: 05/10/16 16:10
Received date/time: 05/11/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method M18-Mod	WG871605	4000	05/11/16 17:01	05/11/16 17:01	MBF

INF08 L834537-02 GW

Collected by: AF
Collected date/time: 05/10/16 16:20
Received date/time: 05/11/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG871828	10	05/12/16 13:09	05/12/16 13:09	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG872092	10	05/14/16 04:47	05/14/16 04:47	GLN

MID02 L834537-03 GW

Collected by: AF
Collected date/time: 05/10/16 16:25
Received date/time: 05/11/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG871828	1	05/12/16 13:31	05/12/16 13:31	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG872092	10	05/14/16 05:07	05/14/16 05:07	GLN

EFF08 L834537-04 GW

Collected by: AF
Collected date/time: 05/10/16 16:30
Received date/time: 05/11/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG871828	1	05/12/16 13:52	05/12/16 13:52	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG872092	1	05/14/16 05:27	05/14/16 05:27	GLN
Wet Chemistry by Method 9040C	WG871701	1	05/12/16 17:03	05/12/16 17:03	MAJ

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Terrie Fudge

Terrie Fudge
Technical Service Representative

Sample Handling and Receiving

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Sample ID	Project Sample ID	Method
L834537-04	EFF08	9040C

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	800	2560	8870	28300		4000	WG871605
Toluene	108-88-3	92.10	800	3010	122000	458000		4000	WG871605
Ethylbenzene	100-41-4	106	800	3470	23200	100000		4000	WG871605
m&p-Xylene	1330-20-7	106	1600	6940	81900	355000		4000	WG871605
o-Xylene	95-47-6	106	800	3470	28300	123000		4000	WG871605
Methyl tert-butyl ether	1634-04-4	88.10	800	2880	1520	5490		4000	WG871605
TPH (GC/MS) Low Fraction	8006-61-9	101	200000	826000	1510000	6220000		4000	WG871605
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*99.5*				WG871605

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	11800		314	1000	10	05/12/2016 13:09	WG871828
(S) a,a,a-Trifluorotoluene(FID)	*99.7*			*62.0-128*		*05/12/2016 13:09*	WG871828

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	87.7		3.31	10.0	10	05/14/2016 04:47	WG872092
Ethylbenzene	359		3.84	10.0	10	05/14/2016 04:47	WG872092
Naphthalene	219		10.0	50.0	10	05/14/2016 04:47	WG872092
Toluene	1500		7.80	50.0	10	05/14/2016 04:47	WG872092
Xylenes, Total	2360		10.6	30.0	10	05/14/2016 04:47	WG872092
Ethanol	U		420	1000	10	05/14/2016 04:47	WG872092
Methyl tert-butyl ether	204		3.67	10.0	10	05/14/2016 04:47	WG872092
(S) Toluene-d8	*96.9*			*90.0-115*		*05/14/2016 04:47*	WG872092
(S) Dibromofluoromethane	*92.0*			*79.0-121*		*05/14/2016 04:47*	WG872092
(S) 4-Bromofluorobenzene	*88.1*			*80.1-120*		*05/14/2016 04:47*	WG872092

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1080		31.4	100	1	05/12/2016 13:31	WG871828
(S) a,a,a-Trifluorotoluene(FID)	*102*			*62.0-128*		*05/12/2016 13:31*	WG871828

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		3.31	10.0	10	05/14/2016 05:07	WG872092
Ethylbenzene	18.9		3.84	10.0	10	05/14/2016 05:07	WG872092
Naphthalene	89.4		10.0	50.0	10	05/14/2016 05:07	WG872092
Toluene	83.4		7.80	50.0	10	05/14/2016 05:07	WG872092
Xylenes, Total	152		10.6	30.0	10	05/14/2016 05:07	WG872092
Ethanol	U		420	1000	10	05/14/2016 05:07	WG872092
Methyl tert-butyl ether	67.9		3.67	10.0	10	05/14/2016 05:07	WG872092
(S) Toluene-d8	*98.0*			*90.0-115*		*05/14/2016 05:07*	WG872092
(S) Dibromofluoromethane	*93.6*			*79.0-121*		*05/14/2016 05:07*	WG872092
(S) 4-Bromofluorobenzene	*88.4*			*80.1-120*		*05/14/2016 05:07*	WG872092

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.14		1	05/12/2016 17:03	WG871701

Sample Narrative:

9040C L834537-04 WG871701: 6.14 at 15.0c

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	122		31.4	100	1	05/12/2016 13:52	WG871828
(S) α,α,α-Trifluorotoluene(FID)	*100*			*62.0-128*		*05/12/2016 13:52*	WG871828

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	05/14/2016 05:27	WG872092
Ethylbenzene	U		0.384	1.00	1	05/14/2016 05:27	WG872092
Naphthalene	U		1.00	5.00	1	05/14/2016 05:27	WG872092
Toluene	1.22	J	0.780	5.00	1	05/14/2016 05:27	WG872092
Xylenes, Total	1.40	J	1.06	3.00	1	05/14/2016 05:27	WG872092
Ethanol	U		42.0	100	1	05/14/2016 05:27	WG872092
Methyl tert-butyl ether	121		0.367	1.00	1	05/14/2016 05:27	WG872092
(S) Toluene-d8	*99.2*			*90.0-115*		*05/14/2016 05:27*	WG872092
(S) Dibromofluoromethane	*94.7*			*79.0-121*		*05/14/2016 05:27*	WG872092
(S) 4-Bromofluorobenzene	*89.8*			*80.1-120*		*05/14/2016 05:27*	WG872092

L834537-04 Original Sample (OS) • Duplicate (DUP)

(OS) L834537-04 05/12/16 17:03 • (DUP) WG871701-1 05/12/16 17:03

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	6.14	6.13	1	0.163		1

L834814-06 Original Sample (OS) • Duplicate (DUP)

(OS) L834814-06 05/12/16 17:03 • (DUP) WG871701-4 05/12/16 17:03

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.43	7.45	1	0.269		1

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG871701-2 05/12/16 17:03 • (LCSD) WG871701-3 05/12/16 17:03

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	su	su	su	%	%	%			%	%
pH	6.43	6.37	6.36	99.1	98.9	98.5-102			0.157	1

Method Blank (MB)

(MB) R3135932-2 05/11/16 10:11

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0460	0.200
Ethylbenzene	U		0.0506	0.200
MTBE	U		0.0505	0.200
Toluene	U		0.0499	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
TPH (GC/MS) Low Fraction	U		6.91	50.0
(S) 1,4-Bromofluorobenzene	*97.4*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3135932-1 05/11/16 09:29 • (LCSD) R3135932-3 05/11/16 11:19

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
MTBE	3.75	4.13	3.89	110	104	70.0-130			5.93	25
Benzene	3.75	4.02	3.97	107	106	70.0-130			1.24	25
Toluene	3.75	4.24	4.14	113	110	70.0-130			2.51	25
Ethylbenzene	3.75	4.24	4.20	113	112	70.0-130			0.870	25
m&p-Xylene	7.50	8.60	8.42	115	112	70.0-130			2.10	25
o-Xylene	3.75	4.26	4.19	114	112	70.0-130			1.70	25
TPH (GC/MS) Low Fraction	150	160	159	107	106	70.0-130			1.14	25
(S) 1,4-Bromofluorobenzene				*103*	*104*	*60.0-140*				

Method Blank (MB)

(MB) R3136133-3 05/12/16 00:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPH (GC/FID) Low Fraction	U		31.4	100
(S) a,a,a-Trifluorotoluene(FID)	*99.9*			*62.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3136133-1 05/11/16 23:41 • (LCSD) R3136133-2 05/12/16 00:16

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	6260	6060	114	110	67.0-132			3.29	20
(S) a,a,a-Trifluorotoluene(FID)				*102*	*101*	*62.0-128*				

L833919-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L833919-11 05/12/16 02:26 • (MS) R3136133-4 05/12/16 01:22 • (MSD) R3136133-5 05/12/16 01:43

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	ND	6110	6110	111	111	1	50.0-143			0.0800	20
(S) a,a,a-Trifluorotoluene(FID)					*101*	*101*		*62.0-128*				

Method Blank (MB)

(MB) R3137422-3 05/14/16 02:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Ethanol	U		42.0	100
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.780	5.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*97.0*			*90.0-115*
(S) Dibromofluoromethane	*94.1*			*79.0-121*
(S) 4-Bromofluorobenzene	*89.1*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3137422-1 05/14/16 00:29 • (LCSD) R3137422-2 05/14/16 00:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	22.3	23.6	89.3	94.3	73.0-122			5.52	20
Ethylbenzene	25.0	25.0	26.7	100	107	80.9-121			6.42	20
Methyl tert-butyl ether	25.0	20.2	22.1	80.7	88.5	70.1-125			9.22	20
Naphthalene	25.0	20.4	21.9	81.7	87.7	69.7-134			7.00	20
Toluene	25.0	23.2	24.9	92.8	99.7	77.9-116			7.12	20
Xylenes, Total	75.0	73.8	78.2	98.4	104	79.2-122			5.86	20
(S) Toluene-d8				*97.3*	*97.6*	*90.0-115*				
(S) Dibromofluoromethane				*92.8*	*94.7*	*79.0-121*				
(S) 4-Bromofluorobenzene				*86.5*	*88.1*	*80.1-120*				

L834602-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L834602-01 05/14/16 04:27 • (MS) R3137422-4 05/14/16 03:04 • (MSD) R3137422-5 05/14/16 03:25

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	U	22.2	21.2	88.6	84.9	1	58.6-133			4.26	20
Ethylbenzene	25.0	U	25.2	23.5	101	93.8	1	62.7-136			7.31	20
Methyl tert-butyl ether	25.0	U	20.2	21.4	80.7	85.7	1	61.4-136			6.01	20
Naphthalene	25.0	U	20.6	22.4	82.3	89.8	1	61.8-143			8.73	20

L834602-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L834602-01 05/14/16 04:27 • (MS) R3137422-4 05/14/16 03:04 • (MSD) R3137422-5 05/14/16 03:25

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Toluene	25.0	U	23.5	22.0	93.9	88.2	1	67.8-124			6.33	20
Xylenes, Total	75.0	U	75.0	69.7	100	92.9	1	65.6-133			7.38	20
(S) Toluene-d8					*97.6*	*96.1*		*90.0-115*				
(S) Dibromofluoromethane					*93.3*	*95.8*		*79.0-121*				
(S) 4-Bromofluorobenzene					*87.1*	*84.5*		*80.1-120*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

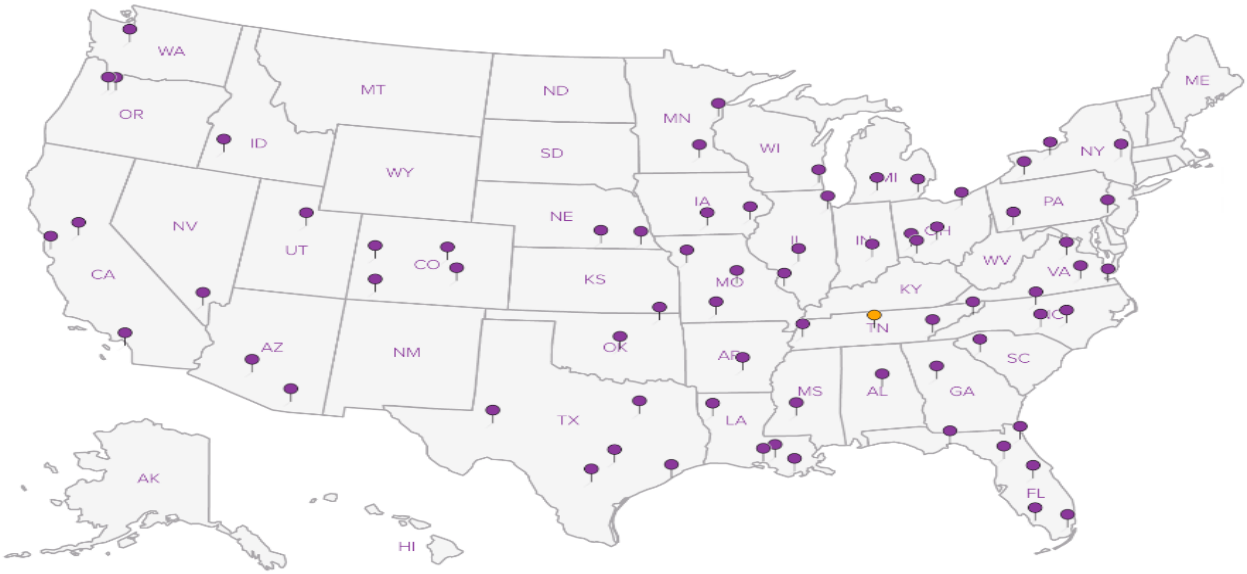
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1.] Drinking Water [2.] Underground Storage Tanks [3.] Aquatic Toxicity [4.] Chemical/Microbiological [5.] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project #: FMMD1008

Lab Project #

Collected by (print): AF

Site/Facility ID #

P.O. #: GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L834537
I121

Acctnum:
Template:
Prelogin:
TSR:
PB:

Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, MTBE via Method 18	TVPH via Method 18	BTEX, MTBE, Ethanol via V8260	TPH-GRO via 8015	pH						Rem./Contaminant	Sample # (lab only)
RCP09	Grab	Air		05/10/16	1610	1	X	X										-01
INF08	Grab	GW		05/10/16	1620	6			X	X								02
MID02	Grab	GW		05/10/16	1625	6			X	X								03
EFF08	Grab	GW		05/10/16	1630	7			X	X	X							04

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____

Flow _____ Other _____

6615 0393 3511

Remarks:

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Chris Hunter	5/10/16	1400	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Ile Jones

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 2.1°C °C Bottles Received: 20

Date: 5/11/16 Time: 0900

Condition: (lab use only) Toll

COC Seal Intact: ___ Y ___ N ___ NA

pH Checked:

NCF:

ANALYTICAL REPORT

June 23, 2016

Greene Env. Services, LLC

Sample Delivery Group:	L841406
Samples Received:	06/15/2016
Project Number:	FMMD1008
Description:	Meadows of Dan Food Market
Report To:	Mr.Trev Greene 129 Bunny Ridge Lane Rocky Mount, VA 24151

Entire Report Reviewed By:

Terrie Fudge
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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RCP11 L841406-01 Air

Collected by: KS | Collected date/time: 06/13/16 09:00 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method M18-Mod	WG880878	80	06/16/16 17:41	06/16/16 17:41	MBF
Volatile Organic Compounds (MS) by Method M18-Mod	WG881181	2000	06/17/16 11:34	06/17/16 11:34	MBF

INF09 L841406-02 GW

Collected by: KS | Collected date/time: 06/13/16 09:10 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880716	10	06/16/16 06:15	06/16/16 06:15	LM
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880510	10	06/15/16 19:36	06/15/16 19:36	JAH

MID03 L841406-03 GW

Collected by: KS | Collected date/time: 06/13/16 09:15 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880716	1	06/16/16 06:44	06/16/16 06:44	LM
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880510	1	06/15/16 20:00	06/15/16 20:00	JAH

EFF09 L841406-04 GW

Collected by: KS | Collected date/time: 06/13/16 09:20 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880716	1	06/16/16 07:13	06/16/16 07:13	LM
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880917	1	06/17/16 01:33	06/17/16 01:33	LM
Wet Chemistry by Method 9040C	WG880222	1	06/15/16 16:49	06/15/16 16:49	KK

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Terrie Fudge

Terrie Fudge
Technical Service Representative

Sample Handling and Receiving

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Sample ID	Project Sample ID	Method
L841406-04	EFF09	9040C

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	400	1280	5240	16700		2000	WG881181
Toluene	108-88-3	92.10	400	1510	69700	263000		2000	WG881181
Ethylbenzene	100-41-4	106	400	1730	13300	57800		2000	WG881181
m&p-Xylene	1330-20-7	106	800	3470	41300	179000		2000	WG881181
o-Xylene	95-47-6	106	400	1730	14800	64100		2000	WG881181
Methyl tert-butyl ether	1634-04-4	88.10	16.0	57.7	1290	4640		80	WG880878
TPH (GC/MS) Low Fraction	8006-61-9	101	100000	413000	892000	3680000		2000	WG881181
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.7*				WG881181
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*104*				WG880878

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	10500		314	1000	10	06/16/2016 06:15	WG880716
(S) a,a,a-Trifluorotoluene(FID)	*102*			*62.0-128*		*06/16/2016 06:15*	WG880716

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	52.4		3.31	10.0	10	06/15/2016 19:36	WG880510
Ethylbenzene	250		3.84	10.0	10	06/15/2016 19:36	WG880510
Naphthalene	237		10.0	50.0	10	06/15/2016 19:36	WG880510
Toluene	1050		7.80	50.0	10	06/15/2016 19:36	WG880510
Xylenes, Total	1770		10.6	30.0	10	06/15/2016 19:36	WG880510
Ethanol	U		420	1000	10	06/15/2016 19:36	WG880510
Methyl tert-butyl ether	158		3.67	10.0	10	06/15/2016 19:36	WG880510
(S) Toluene-d8	*107*			*90.0-115*		*06/15/2016 19:36*	WG880510
(S) Dibromofluoromethane	*92.8*			*79.0-121*		*06/15/2016 19:36*	WG880510
(S) 4-Bromofluorobenzene	*97.3*			*80.1-120*		*06/15/2016 19:36*	WG880510

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1260		31.4	100	1	06/16/2016 06:44	WG880716
(S) a,a,a-Trifluorotoluene(FID)	*102*			*62.0-128*		*06/16/2016 06:44*	WG880716

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	4.03		0.331	1.00	1	06/15/2016 20:00	WG880510
Ethylbenzene	17.6		0.384	1.00	1	06/15/2016 20:00	WG880510
Naphthalene	117	V	1.00	5.00	1	06/15/2016 20:00	WG880510
Toluene	79.5	J6	0.780	5.00	1	06/15/2016 20:00	WG880510
Xylenes, Total	150	J6	1.06	3.00	1	06/15/2016 20:00	WG880510
Ethanol	520		42.0	100	1	06/15/2016 20:00	WG880510
Methyl tert-butyl ether	55.9	J6	0.367	1.00	1	06/15/2016 20:00	WG880510
(S) Toluene-d8	*106*			*90.0-115*		*06/15/2016 20:00*	WG880510
(S) Dibromofluoromethane	*93.1*			*79.0-121*		*06/15/2016 20:00*	WG880510
(S) 4-Bromofluorobenzene	*96.8*			*80.1-120*		*06/15/2016 20:00*	WG880510

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.17		1	06/15/2016 16:49	WG880222

Sample Narrative:

9040C L841406-04 WG880222: 6.17 at 19.7c

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	272		31.4	100	1	06/16/2016 07:13	WG880716
(S) α,α,α-Trifluorotoluene(FID)	*104*			*62.0-128*		*06/16/2016 07:13*	WG880716

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	06/17/2016 01:33	WG880917
Ethylbenzene	U		0.384	1.00	1	06/17/2016 01:33	WG880917
Naphthalene	U		1.00	5.00	1	06/17/2016 01:33	WG880917
Toluene	2.50	J	0.780	5.00	1	06/17/2016 01:33	WG880917
Xylenes, Total	2.06	J	1.06	3.00	1	06/17/2016 01:33	WG880917
Ethanol	U		42.0	100	1	06/17/2016 01:33	WG880917
Methyl tert-butyl ether	83.6		0.367	1.00	1	06/17/2016 01:33	WG880917
(S) Toluene-d8	*108*			*90.0-115*		*06/17/2016 01:33*	WG880917
(S) Dibromofluoromethane	*98.3*			*79.0-121*		*06/17/2016 01:33*	WG880917
(S) 4-Bromofluorobenzene	*96.7*			*80.1-120*		*06/17/2016 01:33*	WG880917

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

L841123-06 Original Sample (OS) • Duplicate (DUP)

(OS) L841123-06 06/15/16 16:49 • (DUP) WG880222-3 06/15/16 16:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.78	6.76	1	0.295		1

L841467-02 Original Sample (OS) • Duplicate (DUP)

(OS) L841467-02 06/15/16 17:29 • (DUP) WG880222-4 06/15/16 17:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.11	7.09	1	0.282		1

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG880222-1 06/15/16 16:49 • (LCSD) WG880222-2 06/15/16 16:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	6.12	6.03	6.03	98.5	98.5	98.4-102			0.000	1

Method Blank (MB)

(MB) R3144117-3 06/16/16 08:30

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
MTBE	U		0.0505	0.200
(S) 1,4-Bromofluorobenzene	*95.5*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3144117-1 06/16/16 07:09 • (LCSD) R3144117-2 06/16/16 07:48

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
MTBE	3.75	4.05	4.07	108	108	70.0-130			0.370	25
(S) 1,4-Bromofluorobenzene				*102*	*102*	*60.0-140*				

Method Blank (MB)

(MB) R3144257-3 06/17/16 08:48

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0460	0.200
Ethylbenzene	U		0.0506	0.200
Toluene	U		0.0499	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
TPH (GC/MS) Low Fraction	U		6.91	50.0
(S) 1,4-Bromofluorobenzene	*97.4*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3144257-1 06/17/16 07:20 • (LCSD) R3144257-2 06/17/16 08:03

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	3.75	3.69	3.72	98.4	99.2	70.0-130			0.850	25
Toluene	3.75	3.81	3.85	102	103	70.0-130			1.05	25
Ethylbenzene	3.75	3.81	3.83	101	102	70.0-130			0.550	25
m&p-Xylene	7.50	7.43	7.53	99.1	100	70.0-130			1.32	25
o-Xylene	3.75	3.75	3.80	100	101	70.0-130			1.09	25
TPH (GC/MS) Low Fraction	150	151	152	101	102	70.0-130			0.850	25
(S) 1,4-Bromofluorobenzene				*98.6*	*97.7*	*60.0-140*				

Method Blank (MB)

(MB) R3143917-1 06/15/16 15:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPH (GC/FID) Low Fraction	U		31.4	100
(S) a,a,a-Trifluorotoluene(FID)	*102*			*62.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3143917-2 06/15/16 17:26 • (LCSD) R3143917-3 06/15/16 17:55

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	4220	4980	76.8	90.6	67.0-132			16.5	20
(S) a,a,a-Trifluorotoluene(FID)				*101*	*101*	*62.0-128*				

L841123-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841123-06 06/15/16 20:36 • (MS) R3143917-4 06/15/16 19:10 • (MSD) R3143917-5 06/15/16 19:39

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	U	6410	6850	117	125	1	50.0-143			6.62	20
(S) a,a,a-Trifluorotoluene(FID)					*101*	*101*		*62.0-128*				

Method Blank (MB)

(MB) R3143865-3 06/15/16 11:46

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Ethanol	U		42.0	100
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.780	5.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*106*			*90.0-115*
(S) Dibromofluoromethane	*94.5*			*79.0-121*
(S) 4-Bromofluorobenzene	*98.0*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3143865-1 06/15/16 09:45 • (LCSD) R3143865-2 06/15/16 10:09

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	23.7	24.1	94.8	96.3	73.0-122			1.57	20
Ethylbenzene	25.0	22.9	23.3	91.6	93.3	80.9-121			1.82	20
Methyl tert-butyl ether	25.0	26.5	25.9	106	103	70.1-125			2.30	20
Naphthalene	25.0	24.5	24.1	97.8	96.4	69.7-134			1.52	20
Toluene	25.0	23.7	23.8	94.8	95.2	77.9-116			0.470	20
Xylenes, Total	75.0	70.6	71.5	94.1	95.3	79.2-122			1.30	20
(S) Toluene-d8				*107*	*106*	*90.0-115*				
(S) Dibromofluoromethane				*94.9*	*96.1*	*79.0-121*				
(S) 4-Bromofluorobenzene				*96.8*	*95.9*	*80.1-120*				

L841406-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841406-03 06/15/16 20:00 • (MS) R3143865-4 06/15/16 20:25 • (MSD) R3143865-5 06/15/16 20:49

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	4.03	21.2	20.7	68.9	66.5	1	58.6-133			2.81	20
Ethylbenzene	25.0	17.6	34.4	33.6	67.1	63.9	1	62.7-136			2.37	20
Methyl tert-butyl ether	25.0	55.9	72.0	69.7	64.4	55.3	1	61.4-136		J6	3.22	20
Naphthalene	25.0	117	131	126	54.6	35.6	1	61.8-143	V	V	3.70	20
Toluene	25.0	79.5	85.2	81.0	22.6	5.81	1	67.8-124	J6	J6	5.05	20
Xylenes, Total	75.0	150	185	181	47.0	42.1	1	65.6-133	J6	J6	2.00	20
(S) Toluene-d8					*106*	*106*		*90.0-115*				
(S) Dibromofluoromethane					*94.7*	*93.6*		*79.0-121*				

L841406-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841406-03 06/15/16 20:00 • (MS) R3143865-4 06/15/16 20:25 • (MSD) R3143865-5 06/15/16 20:49

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 4-Bromofluorobenzene					*99.8*	*100*		*80.1-120*				

Method Blank (MB)

(MB) R3144162-3 06/16/16 18:40

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Ethanol	U		42.0	100
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.780	5.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*107*			*90.0-115*
(S) Dibromofluoromethane	*94.8*			*79.0-121*
(S) 4-Bromofluorobenzene	*98.4*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3144162-1 06/16/16 16:38 • (LCSD) R3144162-2 06/16/16 17:02

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	23.9	23.6	95.7	94.2	73.0-122			1.54	20
Ethylbenzene	25.0	22.6	22.7	90.3	90.7	80.9-121			0.460	20
Methyl tert-butyl ether	25.0	27.0	26.6	108	106	70.1-125			1.66	20
Naphthalene	25.0	25.1	24.8	100	99.1	69.7-134			1.29	20
Toluene	25.0	23.5	23.4	94.0	93.7	77.9-116			0.300	20
Xylenes, Total	75.0	69.4	69.1	92.5	92.1	79.2-122			0.420	20
(S) Toluene-d8				*107*	*106*	*90.0-115*				
(S) Dibromofluoromethane				*95.5*	*96.2*	*79.0-121*				
(S) 4-Bromofluorobenzene				*97.1*	*98.8*	*80.1-120*				

L841663-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841663-04 06/16/16 20:42 • (MS) R3144162-4 06/16/16 19:05 • (MSD) R3144162-5 06/16/16 19:29

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	ND	24.0	22.3	96.0	89.1	1	58.6-133			7.37	20
Ethylbenzene	25.0	ND	23.2	21.8	92.9	87.2	1	62.7-136			6.38	20
Methyl tert-butyl ether	25.0	ND	28.0	25.8	108	99.3	1	61.4-136			8.33	20
Naphthalene	25.0	ND	25.5	23.4	102	93.5	1	61.8-143			8.88	20
Toluene	25.0	ND	23.9	22.3	95.8	89.3	1	67.8-124			7.02	20
Xylenes, Total	75.0	ND	71.2	66.9	94.9	89.2	1	65.6-133			6.19	20
(S) Toluene-d8					*106*	*107*		*90.0-115*				
(S) Dibromofluoromethane					*95.7*	*96.2*		*79.0-121*				

L841663-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841663-04 06/16/16 20:42 • (MS) R3144162-4 06/16/16 19:05 • (MSD) R3144162-5 06/16/16 19:29

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 4-Bromofluorobenzene					*97.7*	*96.5*		*80.1-120*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

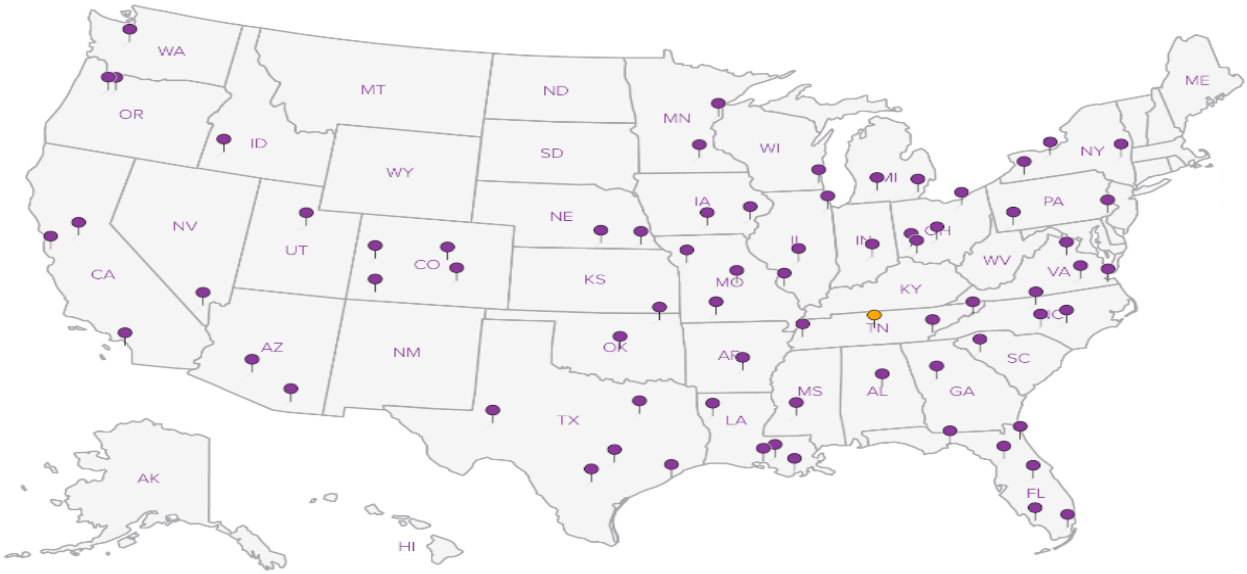
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project # FMMD1008

Lab Project #

Collected by (print): KS

Site/Facility ID #

P.O. # GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 841806

H112

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, MTBE via Method 18	TVPH via Method 18	BTEX, MTBE, Ethanol via V8260	TPH-GRO via 8015	pH						Rem./Contaminant	Sample # (lab only)
RCP11	Grab	Air		06/13/16	0900	1	X	X										01
INF09	Grab	GW		06/1316	0910	6			X	X								02
MID03	Grab	GW		06/13/16	0915	6			X	X								03
EFF09	Grab	GW		06/13/16	0920	7			X	X	X							04

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
[signature]	6-14-16	0930	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			[signature]

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 3.1 °C Bottles Received: 20

Date: 6/15/16 Time: 0900

Hold #

Condition: (lab use only) a JWT

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

ANALYTICAL REPORT

June 23, 2016

Greene Env. Services, LLC

Sample Delivery Group:	L841606
Samples Received:	06/15/2016
Project Number:	FMMD1008
Description:	Meadows of Dan Food Market
Report To:	Mr. Trev Greene 129 Bunny Ridge Lane Rocky Mount, VA 24151

Entire Report Reviewed By:

Terrie Fudge
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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MW01A L841606-01 GW

Collected by: KS | Collected date/time: 06/13/16 11:35 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880763	20	06/16/16 20:03	06/16/16 20:03	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	100	06/19/16 19:09	06/19/16 19:09	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG881787	1000	06/20/16 17:13	06/20/16 17:13	BMB

MW02 L841606-02 GW

Collected by: KS | Collected date/time: 06/13/16 13:31 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880763	10	06/16/16 20:32	06/16/16 20:32	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	10	06/19/16 19:31	06/19/16 19:31	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG881787	200	06/20/16 17:31	06/20/16 17:31	BMB

MW03 L841606-03 GW

Collected by: KS | Collected date/time: 06/13/16 11:55 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880763	10	06/16/16 21:01	06/16/16 21:01	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	20	06/19/16 19:54	06/19/16 19:54	ACG

MW04 L841606-04 GW

Collected by: KS | Collected date/time: 06/13/16 13:50 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880716	1	06/16/16 09:09	06/16/16 09:09	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/19/16 20:16	06/19/16 20:16	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG881787	10	06/20/16 17:49	06/20/16 17:49	BMB

MW05 L841606-05 GW

Collected by: KS | Collected date/time: 06/13/16 14:05 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880716	1	06/16/16 09:38	06/16/16 09:38	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/19/16 20:39	06/19/16 20:39	ACG

MW06 L841606-06 GW

Collected by: KS | Collected date/time: 06/13/16 13:32 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	1	06/16/16 04:58	06/16/16 04:58	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/19/16 21:01	06/19/16 21:01	ACG

MW07 L841606-07 GW

Collected by: KS | Collected date/time: 06/13/16 11:12 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG881091	10	06/16/16 22:08	06/16/16 22:08	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	25	06/19/16 21:24	06/19/16 21:24	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG881787	250	06/20/16 18:07	06/20/16 18:07	BMB

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

MW08 L841606-08 GW

Collected by: KS | Collected date/time: 06/13/16 11:45 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	1	06/16/16 05:41	06/16/16 05:41	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/19/16 21:47	06/19/16 21:47	ACG

MW09 L841606-09 GW

Collected by: KS | Collected date/time: 06/13/16 12:05 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	1	06/16/16 06:03	06/16/16 06:03	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/19/16 22:09	06/19/16 22:09	ACG

MW10 L841606-10 GW

Collected by: KS | Collected date/time: 06/13/16 12:22 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	1	06/16/16 06:25	06/16/16 06:25	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/19/16 22:32	06/19/16 22:32	ACG

MW11 L841606-11 GW

Collected by: KS | Collected date/time: 06/13/16 12:40 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	1	06/16/16 06:46	06/16/16 06:46	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/19/16 22:54	06/19/16 22:54	ACG

MW12 L841606-12 GW

Collected by: KS | Collected date/time: 06/13/16 10:50 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	1	06/16/16 07:08	06/16/16 07:08	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	5	06/19/16 23:17	06/19/16 23:17	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG881787	50	06/20/16 18:26	06/20/16 18:26	BMB

MW13 L841606-13 GW

Collected by: KS | Collected date/time: 06/13/16 14:35 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	1	06/16/16 07:30	06/16/16 07:30	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/19/16 23:40	06/19/16 23:40	ACG

MW14 L841606-14 GW

Collected by: KS | Collected date/time: 06/13/16 13:21 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	10	06/16/16 07:51	06/16/16 07:51	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG881787	50	06/20/16 18:44	06/20/16 18:44	BMB

MW15 L841606-15 GW

Collected by: KS | Collected date/time: 06/13/16 12:05 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	50	06/16/16 08:13	06/16/16 08:13	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	100	06/20/16 00:25	06/20/16 00:25	ACG

MW16 L841606-16 GW

Collected by: KS | Collected date/time: 06/13/16 11:28 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	1	06/16/16 08:35	06/16/16 08:35	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/20/16 00:47	06/20/16 00:47	ACG

MW17 L841606-17 GW

Collected by: KS | Collected date/time: 06/13/16 11:10 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	1	06/16/16 08:57	06/16/16 08:57	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/20/16 01:10	06/20/16 01:10	ACG

MW18 L841606-18 GW

Collected by: KS | Collected date/time: 06/13/16 13:15 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	1	06/16/16 09:19	06/16/16 09:19	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/20/16 01:33	06/20/16 01:33	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG881787	25	06/20/16 19:02	06/20/16 19:02	BMB

MW19 L841606-19 GW

Collected by: KS | Collected date/time: 06/13/16 12:25 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG881091	5	06/16/16 22:30	06/16/16 22:30	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG881787	25	06/20/16 19:21	06/20/16 19:21	BMB

MW20 L841606-20 GW

Collected by: KS | Collected date/time: 06/13/16 12:58 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG881091	1	06/16/16 21:45	06/16/16 21:45	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880794	1	06/19/16 18:46	06/19/16 18:46	ACG

MW21 L841606-21 GW

Collected by: KS | Collected date/time: 06/13/16 12:15 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG881091	5	06/16/16 22:52	06/16/16 22:52	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880788	50	06/19/16 04:27	06/19/16 04:27	DWR

MW22 L841606-22 GW

Collected by: KS | Collected date/time: 06/13/16 13:00 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880764	1	06/16/16 10:46	06/16/16 10:46	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880788	5	06/19/16 04:46	06/19/16 04:46	DWR

MW23 L841606-23 GW

Collected by: KS | Collected date/time: 06/13/16 11:00 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG881091	5	06/16/16 23:14	06/16/16 23:14	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880788	10	06/19/16 05:06	06/19/16 05:06	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG882250	100	06/22/16 01:28	06/22/16 01:28	ACG

MW24 L841606-24 GW

Collected by: KS | Collected date/time: 06/13/16 11:20 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG881091	10	06/16/16 23:37	06/16/16 23:37	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880788	250	06/19/16 05:25	06/19/16 05:25	DWR

MW25 L841606-25 GW

Collected by: KS | Collected date/time: 06/13/16 13:12 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880763	5	06/16/16 21:30	06/16/16 21:30	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880788	5	06/19/16 05:45	06/19/16 05:45	DWR

MW26 L841606-26 GW

Collected by: KS | Collected date/time: 06/13/16 11:45 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880763	10	06/16/16 21:59	06/16/16 21:59	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880788	50	06/19/16 06:05	06/19/16 06:05	DWR

MW27 L841606-27 GW

Collected by: KS | Collected date/time: 06/13/16 10:40 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880763	1	06/16/16 18:05	06/16/16 18:05	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880788	1	06/19/16 06:25	06/19/16 06:25	DWR

MW28 L841606-28 GW

Collected by: KS | Collected date/time: 06/13/16 12:45 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG880763	10	06/16/16 22:28	06/16/16 22:28	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG880788	10	06/19/16 06:44	06/19/16 06:44	DWR

DW01 L841606-29 GW

Collected by: KS | Collected date/time: 06/13/16 14:55 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG882234	1	06/21/16 23:26	06/21/16 23:26	LRL

DW07 L841606-30 GW

Collected by: KS | Collected date/time: 06/13/16 15:20 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG882234	1	06/21/16 23:48	06/21/16 23:48	LRL

DW13 L841606-31 GW

Collected by: KS | Collected date/time: 06/13/16 15:30 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG882234	1	06/22/16 00:08	06/22/16 00:08	LRL

DW14 L841606-32 GW

Collected by: KS | Collected date/time: 06/13/16 15:25 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG882234	1	06/22/16 00:29	06/22/16 00:29	LRL

DW17 L841606-33 GW

Collected by: KS | Collected date/time: 06/13/16 15:15 | Received date/time: 06/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG881672	1	06/22/16 16:03	06/22/16 16:03	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG882243	1	06/22/16 06:27	06/22/16 06:27	JAH

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Terrie Fudge

Terrie Fudge
Technical Service Representative

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	187000		628	2000	20	06/16/2016 20:03	WG880763
(S) α,α,α-Trifluorotoluene(FID)	*97.8*			*62.0-128*		*06/16/2016 20:03*	WG880763

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	3520		33.1	100	100	06/19/2016 19:09	WG880794
Toluene	26200		780	5000	1000	06/20/2016 17:13	WG881787
Ethylbenzene	3660		38.4	100	100	06/19/2016 19:09	WG880794
Total Xylenes	21400		106	300	100	06/19/2016 19:09	WG880794
Methyl tert-butyl ether	5440		36.7	100	100	06/19/2016 19:09	WG880794
Naphthalene	398	J	100	500	100	06/19/2016 19:09	WG880794
(S) Toluene-d8	*101*			*90.0-115*		*06/19/2016 19:09*	WG880794
(S) Toluene-d8	*100*			*90.0-115*		*06/20/2016 17:13*	WG881787
(S) Dibromofluoromethane	*96.4*			*79.0-121*		*06/20/2016 17:13*	WG881787
(S) Dibromofluoromethane	*97.1*			*79.0-121*		*06/19/2016 19:09*	WG880794
(S) α,α,α-Trifluorotoluene	*108*			*90.4-116*		*06/19/2016 19:09*	WG880794
(S) α,α,α-Trifluorotoluene	*96.7*			*90.4-116*		*06/20/2016 17:13*	WG881787
(S) 4-Bromofluorobenzene	*98.3*			*80.1-120*		*06/20/2016 17:13*	WG881787
(S) 4-Bromofluorobenzene	*100*			*80.1-120*		*06/19/2016 19:09*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	53500		314	1000	10	06/16/2016 20:32	WG880763
(S) α,α,α-Trifluorotoluene(FID)	*99.5*			*62.0-128*		*06/16/2016 20:32*	WG880763

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	901		3.31	10.0	10	06/19/2016 19:31	WG880794
Toluene	2570		156	1000	200	06/20/2016 17:31	WG881787
Ethylbenzene	1840		3.84	10.0	10	06/19/2016 19:31	WG880794
Total Xylenes	3730		212	600	200	06/20/2016 17:31	WG881787
Methyl tert-butyl ether	879		3.67	10.0	10	06/19/2016 19:31	WG880794
Naphthalene	224		10.0	50.0	10	06/19/2016 19:31	WG880794
(S) Toluene-d8	*101*			*90.0-115*		*06/19/2016 19:31*	WG880794
(S) Toluene-d8	*101*			*90.0-115*		*06/20/2016 17:31*	WG881787
(S) Dibromofluoromethane	*98.0*			*79.0-121*		*06/20/2016 17:31*	WG881787
(S) Dibromofluoromethane	*98.9*			*79.0-121*		*06/19/2016 19:31*	WG880794
(S) α,α,α-Trifluorotoluene	*105*			*90.4-116*		*06/19/2016 19:31*	WG880794
(S) α,α,α-Trifluorotoluene	*96.7*			*90.4-116*		*06/20/2016 17:31*	WG881787
(S) 4-Bromofluorobenzene	*99.8*			*80.1-120*		*06/20/2016 17:31*	WG881787
(S) 4-Bromofluorobenzene	*102*			*80.1-120*		*06/19/2016 19:31*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	99400		314	1000	10	06/16/2016 21:01	WG880763
(S) a,a,a-Trifluorotoluene(FID)	*97.6*			*62.0-128*		*06/16/2016 21:01*	WG880763

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	732		6.62	20.0	20	06/19/2016 19:54	WG880794
Toluene	2830		15.6	100	20	06/19/2016 19:54	WG880794
Ethylbenzene	836		7.68	20.0	20	06/19/2016 19:54	WG880794
Total Xylenes	4780		21.2	60.0	20	06/19/2016 19:54	WG880794
Methyl tert-butyl ether	664		7.34	20.0	20	06/19/2016 19:54	WG880794
Naphthalene	162		20.0	100	20	06/19/2016 19:54	WG880794
(S) Toluene-d8	*100*			*90.0-115*		*06/19/2016 19:54*	WG880794
(S) Dibromofluoromethane	*97.0*			*79.0-121*		*06/19/2016 19:54*	WG880794
(S) a,a,a-Trifluorotoluene	*107*			*90.4-116*		*06/19/2016 19:54*	WG880794
(S) 4-Bromofluorobenzene	*100*			*80.1-120*		*06/19/2016 19:54*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	621		31.4	100	1	06/16/2016 09:09	WG880716
(S) α,α,α-Trifluorotoluene(FID)	*99.7*			*62.0-128*		*06/16/2016 09:09*	WG880716

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	20.9		0.331	1.00	1	06/19/2016 20:16	WG880794
Toluene	U		0.780	5.00	1	06/19/2016 20:16	WG880794
Ethylbenzene	2.52		0.384	1.00	1	06/19/2016 20:16	WG880794
Total Xylenes	26.5		1.06	3.00	1	06/19/2016 20:16	WG880794
Methyl tert-butyl ether	318		3.67	10.0	10	06/20/2016 17:49	WG881787
Naphthalene	U		1.00	5.00	1	06/19/2016 20:16	WG880794
(S) Toluene-d8	*101*			*90.0-115*		*06/19/2016 20:16*	WG880794
(S) Toluene-d8	*101*			*90.0-115*		*06/20/2016 17:49*	WG881787
(S) Dibromofluoromethane	*101*			*79.0-121*		*06/20/2016 17:49*	WG881787
(S) Dibromofluoromethane	*95.6*			*79.0-121*		*06/19/2016 20:16*	WG880794
(S) α,α,α-Trifluorotoluene	*110*			*90.4-116*		*06/19/2016 20:16*	WG880794
(S) α,α,α-Trifluorotoluene	*99.0*			*90.4-116*		*06/20/2016 17:49*	WG881787
(S) 4-Bromofluorobenzene	*96.6*			*80.1-120*		*06/20/2016 17:49*	WG881787
(S) 4-Bromofluorobenzene	*99.4*			*80.1-120*		*06/19/2016 20:16*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	472		31.4	100	1	06/16/2016 09:38	WG880716
(S) α,α,α-Trifluorotoluene(FID)	*101*			*62.0-128*		*06/16/2016 09:38*	WG880716

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	17.3		0.331	1.00	1	06/19/2016 20:39	WG880794
Toluene	U		0.780	5.00	1	06/19/2016 20:39	WG880794
Ethylbenzene	2.17		0.384	1.00	1	06/19/2016 20:39	WG880794
Total Xylenes	54.8		1.06	3.00	1	06/19/2016 20:39	WG880794
Methyl tert-butyl ether	158		0.367	1.00	1	06/19/2016 20:39	WG880794
Naphthalene	1.27	J	1.00	5.00	1	06/19/2016 20:39	WG880794
(S) Toluene-d8	*101*			*90.0-115*		*06/19/2016 20:39*	WG880794
(S) Dibromofluoromethane	*95.4*			*79.0-121*		*06/19/2016 20:39*	WG880794
(S) α,α,α-Trifluorotoluene	*109*			*90.4-116*		*06/19/2016 20:39*	WG880794
(S) 4-Bromofluorobenzene	*101*			*80.1-120*		*06/19/2016 20:39*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		31.4	100	1	06/16/2016 04:58	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*99.8*			*62.0-128*		*06/16/2016 04:58*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	06/19/2016 21:01	WG880794
Toluene	U		0.780	5.00	1	06/19/2016 21:01	WG880794
Ethylbenzene	U		0.384	1.00	1	06/19/2016 21:01	WG880794
Total Xylenes	U		1.06	3.00	1	06/19/2016 21:01	WG880794
Methyl tert-butyl ether	U		0.367	1.00	1	06/19/2016 21:01	WG880794
Naphthalene	U		1.00	5.00	1	06/19/2016 21:01	WG880794
(S) Toluene-d8	*101*			*90.0-115*		*06/19/2016 21:01*	WG880794
(S) Dibromofluoromethane	*96.1*			*79.0-121*		*06/19/2016 21:01*	WG880794
(S) α,α,α-Trifluorotoluene	*109*			*90.4-116*		*06/19/2016 21:01*	WG880794
(S) 4-Bromofluorobenzene	*99.4*			*80.1-120*		*06/19/2016 21:01*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	61800		314	1000	10	06/16/2016 22:08	WG881091
(S) α,α,α-Trifluorotoluene(FID)	*91.7*			*62.0-128*		*06/16/2016 22:08*	WG881091

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	2030		8.28	25.0	25	06/19/2016 21:24	WG880794
Toluene	17200		195	1250	250	06/20/2016 18:07	WG881787
Ethylbenzene	1650		9.60	25.0	25	06/19/2016 21:24	WG880794
Total Xylenes	8360		26.5	75.0	25	06/19/2016 21:24	WG880794
Methyl tert-butyl ether	3160		9.18	25.0	25	06/19/2016 21:24	WG880794
Naphthalene	135		25.0	125	25	06/19/2016 21:24	WG880794
(S) Toluene-d8	*102*			*90.0-115*		*06/19/2016 21:24*	WG880794
(S) Toluene-d8	*100*			*90.0-115*		*06/20/2016 18:07*	WG881787
(S) Dibromofluoromethane	*97.5*			*79.0-121*		*06/20/2016 18:07*	WG881787
(S) Dibromofluoromethane	*98.5*			*79.0-121*		*06/19/2016 21:24*	WG880794
(S) α,α,α-Trifluorotoluene	*108*			*90.4-116*		*06/19/2016 21:24*	WG880794
(S) α,α,α-Trifluorotoluene	*97.2*			*90.4-116*		*06/20/2016 18:07*	WG881787
(S) 4-Bromofluorobenzene	*93.8*			*80.1-120*		*06/20/2016 18:07*	WG881787
(S) 4-Bromofluorobenzene	*101*			*80.1-120*		*06/19/2016 21:24*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		31.4	100	1	06/16/2016 05:41	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*99.7*			*62.0-128*		*06/16/2016 05:41*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	06/19/2016 21:47	WG880794
Toluene	U		0.780	5.00	1	06/19/2016 21:47	WG880794
Ethylbenzene	U		0.384	1.00	1	06/19/2016 21:47	WG880794
Total Xylenes	U		1.06	3.00	1	06/19/2016 21:47	WG880794
Methyl tert-butyl ether	U		0.367	1.00	1	06/19/2016 21:47	WG880794
Naphthalene	U		1.00	5.00	1	06/19/2016 21:47	WG880794
(S) Toluene-d8	*101*			*90.0-115*		*06/19/2016 21:47*	WG880794
(S) Dibromofluoromethane	*94.7*			*79.0-121*		*06/19/2016 21:47*	WG880794
(S) α,α,α-Trifluorotoluene	*107*			*90.4-116*		*06/19/2016 21:47*	WG880794
(S) 4-Bromofluorobenzene	*100*			*80.1-120*		*06/19/2016 21:47*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		31.4	100	1	06/16/2016 06:03	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*99.7*			*62.0-128*		*06/16/2016 06:03*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	06/19/2016 22:09	WG880794
Toluene	U		0.780	5.00	1	06/19/2016 22:09	WG880794
Ethylbenzene	U		0.384	1.00	1	06/19/2016 22:09	WG880794
Total Xylenes	U		1.06	3.00	1	06/19/2016 22:09	WG880794
Methyl tert-butyl ether	1.97		0.367	1.00	1	06/19/2016 22:09	WG880794
Naphthalene	U		1.00	5.00	1	06/19/2016 22:09	WG880794
(S) Toluene-d8	*98.6*			*90.0-115*		*06/19/2016 22:09*	WG880794
(S) Dibromofluoromethane	*95.1*			*79.0-121*		*06/19/2016 22:09*	WG880794
(S) α,α,α-Trifluorotoluene	*108*			*90.4-116*		*06/19/2016 22:09*	WG880794
(S) 4-Bromofluorobenzene	*102*			*80.1-120*		*06/19/2016 22:09*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		31.4	100	1	06/16/2016 06:25	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*99.9*			*62.0-128*		*06/16/2016 06:25*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	06/19/2016 22:32	WG880794
Toluene	U		0.780	5.00	1	06/19/2016 22:32	WG880794
Ethylbenzene	U		0.384	1.00	1	06/19/2016 22:32	WG880794
Total Xylenes	U		1.06	3.00	1	06/19/2016 22:32	WG880794
Methyl tert-butyl ether	50.7		0.367	1.00	1	06/19/2016 22:32	WG880794
Naphthalene	U		1.00	5.00	1	06/19/2016 22:32	WG880794
(S) Toluene-d8	*100*			*90.0-115*		*06/19/2016 22:32*	WG880794
(S) Dibromofluoromethane	*95.2*			*79.0-121*		*06/19/2016 22:32*	WG880794
(S) α,α,α-Trifluorotoluene	*108*			*90.4-116*		*06/19/2016 22:32*	WG880794
(S) 4-Bromofluorobenzene	*101*			*80.1-120*		*06/19/2016 22:32*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1320		31.4	100	1	06/16/2016 06:46	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*99.4*			*62.0-128*		*06/16/2016 06:46*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	43.3		0.331	1.00	1	06/19/2016 22:54	WG880794
Toluene	29.3		0.780	5.00	1	06/19/2016 22:54	WG880794
Ethylbenzene	25.7		0.384	1.00	1	06/19/2016 22:54	WG880794
Total Xylenes	319		1.06	3.00	1	06/19/2016 22:54	WG880794
Methyl tert-butyl ether	17.0		0.367	1.00	1	06/19/2016 22:54	WG880794
Naphthalene	2.26	J	1.00	5.00	1	06/19/2016 22:54	WG880794
(S) Toluene-d8	*102*			*90.0-115*		*06/19/2016 22:54*	WG880794
(S) Dibromofluoromethane	*96.4*			*79.0-121*		*06/19/2016 22:54*	WG880794
(S) α,α,α-Trifluorotoluene	*109*			*90.4-116*		*06/19/2016 22:54*	WG880794
(S) 4-Bromofluorobenzene	*98.5*			*80.1-120*		*06/19/2016 22:54*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1090		31.4	100	1	06/16/2016 07:08	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*99.8*			*62.0-128*		*06/16/2016 07:08*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	221		1.66	5.00	5	06/19/2016 23:17	WG880794
Toluene	1270		39.0	250	50	06/20/2016 18:26	WG881787
Ethylbenzene	509		1.92	5.00	5	06/19/2016 23:17	WG880794
Total Xylenes	2590		5.30	15.0	5	06/19/2016 23:17	WG880794
Methyl tert-butyl ether	21.6		1.84	5.00	5	06/19/2016 23:17	WG880794
Naphthalene	48.3		5.00	25.0	5	06/19/2016 23:17	WG880794
(S) Toluene-d8	*101*			*90.0-115*		*06/19/2016 23:17*	WG880794
(S) Toluene-d8	*106*			*90.0-115*		*06/20/2016 18:26*	WG881787
(S) Dibromofluoromethane	*96.8*			*79.0-121*		*06/20/2016 18:26*	WG881787
(S) Dibromofluoromethane	*96.5*			*79.0-121*		*06/19/2016 23:17*	WG880794
(S) α,α,α-Trifluorotoluene	*109*			*90.4-116*		*06/19/2016 23:17*	WG880794
(S) α,α,α-Trifluorotoluene	*101*			*90.4-116*		*06/20/2016 18:26*	WG881787
(S) 4-Bromofluorobenzene	*95.9*			*80.1-120*		*06/20/2016 18:26*	WG881787
(S) 4-Bromofluorobenzene	*100*			*80.1-120*		*06/19/2016 23:17*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		31.4	100	1	06/16/2016 07:30	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*98.9*			*62.0-128*		*06/16/2016 07:30*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	06/19/2016 23:40	WG880794
Toluene	U		0.780	5.00	1	06/19/2016 23:40	WG880794
Ethylbenzene	U		0.384	1.00	1	06/19/2016 23:40	WG880794
Total Xylenes	1.18	J	1.06	3.00	1	06/19/2016 23:40	WG880794
Methyl tert-butyl ether	2.03		0.367	1.00	1	06/19/2016 23:40	WG880794
Naphthalene	U		1.00	5.00	1	06/19/2016 23:40	WG880794
(S) Toluene-d8	*99.5*			*90.0-115*		*06/19/2016 23:40*	WG880794
(S) Dibromofluoromethane	*95.1*			*79.0-121*		*06/19/2016 23:40*	WG880794
(S) α,α,α-Trifluorotoluene	*108*			*90.4-116*		*06/19/2016 23:40*	WG880794
(S) 4-Bromofluorobenzene	*102*			*80.1-120*		*06/19/2016 23:40*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	57000		314	1000	10	06/16/2016 07:51	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*96.2*			*62.0-128*		*06/16/2016 07:51*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	1030		16.6	50.0	50	06/20/2016 18:44	WG881787
Toluene	3070		39.0	250	50	06/20/2016 18:44	WG881787
Ethylbenzene	630		19.2	50.0	50	06/20/2016 18:44	WG881787
Total Xylenes	4210		53.0	150	50	06/20/2016 18:44	WG881787
Methyl tert-butyl ether	680		18.4	50.0	50	06/20/2016 18:44	WG881787
Naphthalene	123	J	50.0	250	50	06/20/2016 18:44	WG881787
(S) Toluene-d8	*97.1*			*90.0-115*		*06/20/2016 18:44*	WG881787
(S) Dibromofluoromethane	*98.1*			*79.0-121*		*06/20/2016 18:44*	WG881787
(S) α,α,α-Trifluorotoluene	*94.6*			*90.4-116*		*06/20/2016 18:44*	WG881787
(S) 4-Bromofluorobenzene	*98.5*			*80.1-120*		*06/20/2016 18:44*	WG881787

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	138000		1570	5000	50	06/16/2016 08:13	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*98.8*			*62.0-128*		*06/16/2016 08:13*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	1160		33.1	100	100	06/20/2016 00:25	WG880794
Toluene	8790		78.0	500	100	06/20/2016 00:25	WG880794
Ethylbenzene	2610		38.4	100	100	06/20/2016 00:25	WG880794
Total Xylenes	16400		106	300	100	06/20/2016 00:25	WG880794
Methyl tert-butyl ether	657		36.7	100	100	06/20/2016 00:25	WG880794
Naphthalene	803		100	500	100	06/20/2016 00:25	WG880794
(S) Toluene-d8	*100*			*90.0-115*		*06/20/2016 00:25*	WG880794
(S) Dibromofluoromethane	*93.4*			*79.0-121*		*06/20/2016 00:25*	WG880794
(S) α,α,α-Trifluorotoluene	*108*			*90.4-116*		*06/20/2016 00:25*	WG880794
(S) 4-Bromofluorobenzene	*99.2*			*80.1-120*		*06/20/2016 00:25*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		31.4	100	1	06/16/2016 08:35	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*99.8*			*62.0-128*		*06/16/2016 08:35*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	06/20/2016 00:47	WG880794
Toluene	U		0.780	5.00	1	06/20/2016 00:47	WG880794
Ethylbenzene	U		0.384	1.00	1	06/20/2016 00:47	WG880794
Total Xylenes	2.12	J	1.06	3.00	1	06/20/2016 00:47	WG880794
Methyl tert-butyl ether	2.91		0.367	1.00	1	06/20/2016 00:47	WG880794
Naphthalene	U		1.00	5.00	1	06/20/2016 00:47	WG880794
(S) Toluene-d8	*98.9*			*90.0-115*		*06/20/2016 00:47*	WG880794
(S) Dibromofluoromethane	*93.2*			*79.0-121*		*06/20/2016 00:47*	WG880794
(S) α,α,α-Trifluorotoluene	*109*			*90.4-116*		*06/20/2016 00:47*	WG880794
(S) 4-Bromofluorobenzene	*103*			*80.1-120*		*06/20/2016 00:47*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		31.4	100	1	06/16/2016 08:57	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*99.6*			*62.0-128*		*06/16/2016 08:57*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	06/20/2016 01:10	WG880794
Toluene	U		0.780	5.00	1	06/20/2016 01:10	WG880794
Ethylbenzene	U		0.384	1.00	1	06/20/2016 01:10	WG880794
Total Xylenes	U		1.06	3.00	1	06/20/2016 01:10	WG880794
Methyl tert-butyl ether	U		0.367	1.00	1	06/20/2016 01:10	WG880794
Naphthalene	U		1.00	5.00	1	06/20/2016 01:10	WG880794
(S) Toluene-d8	*99.1*			*90.0-115*		*06/20/2016 01:10*	WG880794
(S) Dibromofluoromethane	*94.2*			*79.0-121*		*06/20/2016 01:10*	WG880794
(S) α,α,α-Trifluorotoluene	*108*			*90.4-116*		*06/20/2016 01:10*	WG880794
(S) 4-Bromofluorobenzene	*102*			*80.1-120*		*06/20/2016 01:10*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	2650		31.4	100	1	06/16/2016 09:19	WG880764
(S) α,α,α-Trifluorotoluene(FID)	*91.0*			*62.0-128*		*06/16/2016 09:19*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	781		8.28	25.0	25	06/20/2016 19:02	WG881787
Toluene	7.94		0.780	5.00	1	06/20/2016 01:33	WG880794
Ethylbenzene	51.2		0.384	1.00	1	06/20/2016 01:33	WG880794
Total Xylenes	260		1.06	3.00	1	06/20/2016 01:33	WG880794
Methyl tert-butyl ether	U		0.367	1.00	1	06/20/2016 01:33	WG880794
Naphthalene	29.3		1.00	5.00	1	06/20/2016 01:33	WG880794
(S) Toluene-d8	*104*			*90.0-115*		*06/20/2016 01:33*	WG880794
(S) Toluene-d8	*97.3*			*90.0-115*		*06/20/2016 19:02*	WG881787
(S) Dibromofluoromethane	*96.4*			*79.0-121*		*06/20/2016 19:02*	WG881787
(S) Dibromofluoromethane	*98.1*			*79.0-121*		*06/20/2016 01:33*	WG880794
(S) α,α,α-Trifluorotoluene	*112*			*90.4-116*		*06/20/2016 01:33*	WG880794
(S) α,α,α-Trifluorotoluene	*96.9*			*90.4-116*		*06/20/2016 19:02*	WG881787
(S) 4-Bromofluorobenzene	*100*			*80.1-120*		*06/20/2016 19:02*	WG881787
(S) 4-Bromofluorobenzene	*98.9*			*80.1-120*		*06/20/2016 01:33*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	22200		157	500	5	06/16/2016 22:30	WG881091
(S) α,α,α-Trifluorotoluene(FID)	*93.7*			*62.0-128*		*06/16/2016 22:30*	WG881091

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	320		8.28	25.0	25	06/20/2016 19:21	WG881787
Toluene	2850		19.5	125	25	06/20/2016 19:21	WG881787
Ethylbenzene	458		9.60	25.0	25	06/20/2016 19:21	WG881787
Total Xylenes	3100		26.5	75.0	25	06/20/2016 19:21	WG881787
Methyl tert-butyl ether	12.4	J	9.18	25.0	25	06/20/2016 19:21	WG881787
Naphthalene	57.9	J	25.0	125	25	06/20/2016 19:21	WG881787
(S) Toluene-d8	*108*			*90.0-115*		*06/20/2016 19:21*	WG881787
(S) Dibromofluoromethane	*97.4*			*79.0-121*		*06/20/2016 19:21*	WG881787
(S) α,α,α-Trifluorotoluene	*94.8*			*90.4-116*		*06/20/2016 19:21*	WG881787
(S) 4-Bromofluorobenzene	*90.6*			*80.1-120*		*06/20/2016 19:21*	WG881787

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	386		31.4	100	1	06/16/2016 21:45	WG881091
(S) a,a,a-Trifluorotoluene(FID)	*93.0*			*62.0-128*		*06/16/2016 21:45*	WG881091

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	23.7		0.331	1.00	1	06/19/2016 18:46	WG880794
Toluene	3.92	J	0.780	5.00	1	06/19/2016 18:46	WG880794
Ethylbenzene	6.23		0.384	1.00	1	06/19/2016 18:46	WG880794
Total Xylenes	39.6		1.06	3.00	1	06/19/2016 18:46	WG880794
Methyl tert-butyl ether	1.87		0.367	1.00	1	06/19/2016 18:46	WG880794
Naphthalene	1.44	J	1.00	5.00	1	06/19/2016 18:46	WG880794
(S) Toluene-d8	*101*			*90.0-115*		*06/19/2016 18:46*	WG880794
(S) Dibromofluoromethane	*96.1*			*79.0-121*		*06/19/2016 18:46*	WG880794
(S) a,a,a-Trifluorotoluene	*110*			*90.4-116*		*06/19/2016 18:46*	WG880794
(S) 4-Bromofluorobenzene	*98.3*			*80.1-120*		*06/19/2016 18:46*	WG880794

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	27000		157	500	5	06/16/2016 22:52	WG881091
(S) a,a,a-Trifluorotoluene(FID)	*92.1*			*62.0-128*		*06/16/2016 22:52*	WG881091

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	1180		16.6	50.0	50	06/19/2016 04:27	WG880788
Toluene	3710		39.0	250	50	06/19/2016 04:27	WG880788
Ethylbenzene	685		19.2	50.0	50	06/19/2016 04:27	WG880788
Total Xylenes	4920		53.0	150	50	06/19/2016 04:27	WG880788
Methyl tert-butyl ether	134		18.4	50.0	50	06/19/2016 04:27	WG880788
Naphthalene	102	J	50.0	250	50	06/19/2016 04:27	WG880788
(S) Toluene-d8	*105*			*90.0-115*		*06/19/2016 04:27*	WG880788
(S) Dibromofluoromethane	*107*			*79.0-121*		*06/19/2016 04:27*	WG880788
(S) a,a,a-Trifluorotoluene	*97.7*			*90.4-116*		*06/19/2016 04:27*	WG880788
(S) 4-Bromofluorobenzene	*97.7*			*80.1-120*		*06/19/2016 04:27*	WG880788

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	3190		31.4	100	1	06/16/2016 10:46	WG880764
(S) a,a,a-Trifluorotoluene(FID)	*99.2*			*62.0-128*		*06/16/2016 10:46*	WG880764

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	21.1		1.66	5.00	5	06/19/2016 04:46	WG880788
Toluene	126		3.90	25.0	5	06/19/2016 04:46	WG880788
Ethylbenzene	21.0		1.92	5.00	5	06/19/2016 04:46	WG880788
Total Xylenes	418		5.30	15.0	5	06/19/2016 04:46	WG880788
Methyl tert-butyl ether	67.5		1.84	5.00	5	06/19/2016 04:46	WG880788
Naphthalene	80.8		5.00	25.0	5	06/19/2016 04:46	WG880788
(S) Toluene-d8	*103*			*90.0-115*		*06/19/2016 04:46*	WG880788
(S) Dibromofluoromethane	*107*			*79.0-121*		*06/19/2016 04:46*	WG880788
(S) a,a,a-Trifluorotoluene	*97.1*			*90.4-116*		*06/19/2016 04:46*	WG880788
(S) 4-Bromofluorobenzene	*95.4*			*80.1-120*		*06/19/2016 04:46*	WG880788

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	40400		157	500	5	06/16/2016 23:14	WG881091
(S) a,a,a-Trifluorotoluene(FID)	*91.3*			*62.0-128*		*06/16/2016 23:14*	WG881091

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	317		3.31	10.0	10	06/19/2016 05:06	WG880788
Toluene	5660		78.0	500	100	06/22/2016 01:28	WG882250
Ethylbenzene	624		3.84	10.0	10	06/19/2016 05:06	WG880788
Total Xylenes	3990		10.6	30.0	10	06/19/2016 05:06	WG880788
Methyl tert-butyl ether	299		3.67	10.0	10	06/19/2016 05:06	WG880788
Naphthalene	76.9		10.0	50.0	10	06/19/2016 05:06	WG880788
(S) Toluene-d8	*103*			*90.0-115*		*06/19/2016 05:06*	WG880788
(S) Toluene-d8	*102*			*90.0-115*		*06/22/2016 01:28*	WG882250
(S) Dibromofluoromethane	*89.7*			*79.0-121*		*06/22/2016 01:28*	WG882250
(S) Dibromofluoromethane	*106*			*79.0-121*		*06/19/2016 05:06*	WG880788
(S) a,a,a-Trifluorotoluene	*95.3*			*90.4-116*		*06/19/2016 05:06*	WG880788
(S) a,a,a-Trifluorotoluene	*101*			*90.4-116*		*06/22/2016 01:28*	WG882250
(S) 4-Bromofluorobenzene	*103*			*80.1-120*		*06/22/2016 01:28*	WG882250
(S) 4-Bromofluorobenzene	*96.5*			*80.1-120*		*06/19/2016 05:06*	WG880788

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	59700		314	1000	10	06/16/2016 23:37	WG881091
(S) α,α,α-Trifluorotoluene(FID)	*92.4*			*62.0-128*		*06/16/2016 23:37*	WG881091

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	1180		82.8	250	250	06/19/2016 05:25	WG880788
Toluene	7810		195	1250	250	06/19/2016 05:25	WG880788
Ethylbenzene	1480		96.0	250	250	06/19/2016 05:25	WG880788
Total Xylenes	9700		265	750	250	06/19/2016 05:25	WG880788
Methyl tert-butyl ether	1340		91.8	250	250	06/19/2016 05:25	WG880788
Naphthalene	280	J	250	1250	250	06/19/2016 05:25	WG880788
(S) Toluene-d8	*104*			*90.0-115*		*06/19/2016 05:25*	WG880788
(S) Dibromofluoromethane	*107*			*79.0-121*		*06/19/2016 05:25*	WG880788
(S) α,α,α-Trifluorotoluene	*96.1*			*90.4-116*		*06/19/2016 05:25*	WG880788
(S) 4-Bromofluorobenzene	*93.7*			*80.1-120*		*06/19/2016 05:25*	WG880788

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	4210		157	500	5	06/16/2016 21:30	WG880763
(S) a,a,a-Trifluorotoluene(FID)	*102*			*62.0-128*		*06/16/2016 21:30*	WG880763

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	78.6		1.66	5.00	5	06/19/2016 05:45	WG880788
Toluene	364		3.90	25.0	5	06/19/2016 05:45	WG880788
Ethylbenzene	43.9		1.92	5.00	5	06/19/2016 05:45	WG880788
Total Xylenes	287		5.30	15.0	5	06/19/2016 05:45	WG880788
Methyl tert-butyl ether	340		1.84	5.00	5	06/19/2016 05:45	WG880788
Naphthalene	7.05	J	5.00	25.0	5	06/19/2016 05:45	WG880788
(S) Toluene-d8	*103*			*90.0-115*		*06/19/2016 05:45*	WG880788
(S) Dibromofluoromethane	*106*			*79.0-121*		*06/19/2016 05:45*	WG880788
(S) a,a,a-Trifluorotoluene	*94.5*			*90.4-116*		*06/19/2016 05:45*	WG880788
(S) 4-Bromofluorobenzene	*95.7*			*80.1-120*		*06/19/2016 05:45*	WG880788

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	58200		314	1000	10	06/16/2016 21:59	WG880763
(S) a,a,a-Trifluorotoluene(FID)	*97.8*			*62.0-128*		*06/16/2016 21:59*	WG880763

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	2430		16.6	50.0	50	06/19/2016 06:05	WG880788
Toluene	8570		39.0	250	50	06/19/2016 06:05	WG880788
Ethylbenzene	1650		19.2	50.0	50	06/19/2016 06:05	WG880788
Total Xylenes	8830		53.0	150	50	06/19/2016 06:05	WG880788
Methyl tert-butyl ether	3570		18.4	50.0	50	06/19/2016 06:05	WG880788
Naphthalene	149	J	50.0	250	50	06/19/2016 06:05	WG880788
(S) Toluene-d8	*105*			*90.0-115*		*06/19/2016 06:05*	WG880788
(S) Dibromofluoromethane	*107*			*79.0-121*		*06/19/2016 06:05*	WG880788
(S) a,a,a-Trifluorotoluene	*96.6*			*90.4-116*		*06/19/2016 06:05*	WG880788
(S) 4-Bromofluorobenzene	*94.4*			*80.1-120*		*06/19/2016 06:05*	WG880788

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	385		31.4	100	1	06/16/2016 18:05	WG880763
(S) α,α,α-Trifluorotoluene(FID)	*103*			*62.0-128*		*06/16/2016 18:05*	WG880763

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	06/19/2016 06:25	WG880788
Toluene	14.4		0.780	5.00	1	06/19/2016 06:25	WG880788
Ethylbenzene	9.04		0.384	1.00	1	06/19/2016 06:25	WG880788
Total Xylenes	89.3		1.06	3.00	1	06/19/2016 06:25	WG880788
Methyl tert-butyl ether	3.55		0.367	1.00	1	06/19/2016 06:25	WG880788
Naphthalene	U		1.00	5.00	1	06/19/2016 06:25	WG880788
(S) Toluene-d8	*105*			*90.0-115*		*06/19/2016 06:25*	WG880788
(S) Dibromofluoromethane	*104*			*79.0-121*		*06/19/2016 06:25*	WG880788
(S) α,α,α-Trifluorotoluene	*98.2*			*90.4-116*		*06/19/2016 06:25*	WG880788
(S) 4-Bromofluorobenzene	*94.3*			*80.1-120*		*06/19/2016 06:25*	WG880788

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	9350		314	1000	10	06/16/2016 22:28	WG880763
(S) α,α,α-Trifluorotoluene(FID)	*103*			*62.0-128*		*06/16/2016 22:28*	WG880763

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	38.9		3.31	10.0	10	06/19/2016 06:44	WG880788
Toluene	315		7.80	50.0	10	06/19/2016 06:44	WG880788
Ethylbenzene	55.3		3.84	10.0	10	06/19/2016 06:44	WG880788
Total Xylenes	901		10.6	30.0	10	06/19/2016 06:44	WG880788
Methyl tert-butyl ether	7.72	J	3.67	10.0	10	06/19/2016 06:44	WG880788
Naphthalene	109		10.0	50.0	10	06/19/2016 06:44	WG880788
(S) Toluene-d8	*105*			*90.0-115*		*06/19/2016 06:44*	WG880788
(S) Dibromofluoromethane	*106*			*79.0-121*		*06/19/2016 06:44*	WG880788
(S) α,α,α-Trifluorotoluene	*98.5*			*90.4-116*		*06/19/2016 06:44*	WG880788
(S) 4-Bromofluorobenzene	*94.1*			*80.1-120*		*06/19/2016 06:44*	WG880788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	06/21/2016 23:26	WG882234
Acrolein	U		8.87	50.0	1	06/21/2016 23:26	WG882234
Acrylonitrile	U		1.87	10.0	1	06/21/2016 23:26	WG882234
Benzene	U		0.331	1.00	1	06/21/2016 23:26	WG882234
Bromobenzene	U		0.352	1.00	1	06/21/2016 23:26	WG882234
Bromodichloromethane	U		0.380	1.00	1	06/21/2016 23:26	WG882234
Bromoform	U		0.469	1.00	1	06/21/2016 23:26	WG882234
Bromomethane	U		0.866	5.00	1	06/21/2016 23:26	WG882234
n-Butylbenzene	U		0.361	1.00	1	06/21/2016 23:26	WG882234
sec-Butylbenzene	U		0.365	1.00	1	06/21/2016 23:26	WG882234
tert-Butylbenzene	U		0.399	1.00	1	06/21/2016 23:26	WG882234
Carbon tetrachloride	U		0.379	1.00	1	06/21/2016 23:26	WG882234
Chlorobenzene	U		0.348	1.00	1	06/21/2016 23:26	WG882234
Chlorodibromomethane	U		0.327	1.00	1	06/21/2016 23:26	WG882234
Chloroethane	U		0.453	5.00	1	06/21/2016 23:26	WG882234
2-Chloroethyl vinyl ether	U		3.01	50.0	1	06/21/2016 23:26	WG882234
Chloroform	U		0.324	5.00	1	06/21/2016 23:26	WG882234
Chloromethane	U		0.276	2.50	1	06/21/2016 23:26	WG882234
2-Chlorotoluene	U		0.375	1.00	1	06/21/2016 23:26	WG882234
4-Chlorotoluene	U		0.351	1.00	1	06/21/2016 23:26	WG882234
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	06/21/2016 23:26	WG882234
1,2-Dibromoethane	U		0.381	1.00	1	06/21/2016 23:26	WG882234
Dibromomethane	U		0.346	1.00	1	06/21/2016 23:26	WG882234
1,2-Dichlorobenzene	U	J4	0.349	1.00	1	06/21/2016 23:26	WG882234
1,3-Dichlorobenzene	U		0.220	1.00	1	06/21/2016 23:26	WG882234
1,4-Dichlorobenzene	U		0.274	1.00	1	06/21/2016 23:26	WG882234
Dichlorodifluoromethane	U		0.551	5.00	1	06/21/2016 23:26	WG882234
1,1-Dichloroethane	U		0.259	1.00	1	06/21/2016 23:26	WG882234
1,2-Dichloroethane	U		0.361	1.00	1	06/21/2016 23:26	WG882234
1,1-Dichloroethene	U		0.398	1.00	1	06/21/2016 23:26	WG882234
cis-1,2-Dichloroethene	U		0.260	1.00	1	06/21/2016 23:26	WG882234
trans-1,2-Dichloroethene	U		0.396	1.00	1	06/21/2016 23:26	WG882234
1,2-Dichloropropane	U		0.306	1.00	1	06/21/2016 23:26	WG882234
1,1-Dichloropropene	U		0.352	1.00	1	06/21/2016 23:26	WG882234
1,3-Dichloropropane	U		0.366	1.00	1	06/21/2016 23:26	WG882234
cis-1,3-Dichloropropene	U		0.418	1.00	1	06/21/2016 23:26	WG882234
trans-1,3-Dichloropropene	U		0.419	1.00	1	06/21/2016 23:26	WG882234
2,2-Dichloropropane	U		0.321	1.00	1	06/21/2016 23:26	WG882234
Di-isopropyl ether	U	J3	0.320	1.00	1	06/21/2016 23:26	WG882234
Ethylbenzene	U		0.384	1.00	1	06/21/2016 23:26	WG882234
Hexachloro-1,3-butadiene	U		0.256	1.00	1	06/21/2016 23:26	WG882234
Isopropylbenzene	U		0.326	1.00	1	06/21/2016 23:26	WG882234
p-Isopropyltoluene	U		0.350	1.00	1	06/21/2016 23:26	WG882234
2-Butanone (MEK)	U		3.93	10.0	1	06/21/2016 23:26	WG882234
Methylene Chloride	U		1.00	5.00	1	06/21/2016 23:26	WG882234
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	06/21/2016 23:26	WG882234
Methyl tert-butyl ether	U		0.367	1.00	1	06/21/2016 23:26	WG882234
Naphthalene	U		1.00	5.00	1	06/21/2016 23:26	WG882234
n-Propylbenzene	U		0.349	1.00	1	06/21/2016 23:26	WG882234
Styrene	U		0.307	1.00	1	06/21/2016 23:26	WG882234
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	06/21/2016 23:26	WG882234
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	06/21/2016 23:26	WG882234
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	06/21/2016 23:26	WG882234
Tetrachloroethene	U		0.372	1.00	1	06/21/2016 23:26	WG882234
Toluene	U		0.780	5.00	1	06/21/2016 23:26	WG882234
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/21/2016 23:26	WG882234

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.355	1.00	1	06/21/2016 23:26	WG882234
1,1,1-Trichloroethane	U		0.319	1.00	1	06/21/2016 23:26	WG882234
1,1,2-Trichloroethane	U		0.383	1.00	1	06/21/2016 23:26	WG882234
Trichloroethene	U		0.398	1.00	1	06/21/2016 23:26	WG882234
Trichlorofluoromethane	U		1.20	5.00	1	06/21/2016 23:26	WG882234
1,2,3-Trichloropropane	U		0.807	2.50	1	06/21/2016 23:26	WG882234
1,2,4-Trimethylbenzene	U		0.373	1.00	1	06/21/2016 23:26	WG882234
1,2,3-Trimethylbenzene	U		0.321	1.00	1	06/21/2016 23:26	WG882234
1,3,5-Trimethylbenzene	U		0.387	1.00	1	06/21/2016 23:26	WG882234
Vinyl chloride	U		0.259	1.00	1	06/21/2016 23:26	WG882234
Xylenes, Total	U		1.06	3.00	1	06/21/2016 23:26	WG882234
(S) Toluene-d8	*105*			*90.0-115*		*06/21/2016 23:26*	WG882234
(S) Dibromofluoromethane	*106*			*79.0-121*		*06/21/2016 23:26*	WG882234
(S) 4-Bromofluorobenzene	*101*			*80.1-120*		*06/21/2016 23:26*	WG882234

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	06/21/2016 23:48	WG882234
Acrolein	U		8.87	50.0	1	06/21/2016 23:48	WG882234
Acrylonitrile	U		1.87	10.0	1	06/21/2016 23:48	WG882234
Benzene	U		0.331	1.00	1	06/21/2016 23:48	WG882234
Bromobenzene	U		0.352	1.00	1	06/21/2016 23:48	WG882234
Bromodichloromethane	U		0.380	1.00	1	06/21/2016 23:48	WG882234
Bromoform	U		0.469	1.00	1	06/21/2016 23:48	WG882234
Bromomethane	U		0.866	5.00	1	06/21/2016 23:48	WG882234
n-Butylbenzene	U		0.361	1.00	1	06/21/2016 23:48	WG882234
sec-Butylbenzene	U		0.365	1.00	1	06/21/2016 23:48	WG882234
tert-Butylbenzene	U		0.399	1.00	1	06/21/2016 23:48	WG882234
Carbon tetrachloride	U		0.379	1.00	1	06/21/2016 23:48	WG882234
Chlorobenzene	U		0.348	1.00	1	06/21/2016 23:48	WG882234
Chlorodibromomethane	U		0.327	1.00	1	06/21/2016 23:48	WG882234
Chloroethane	U		0.453	5.00	1	06/21/2016 23:48	WG882234
2-Chloroethyl vinyl ether	U		3.01	50.0	1	06/21/2016 23:48	WG882234
Chloroform	U		0.324	5.00	1	06/21/2016 23:48	WG882234
Chloromethane	U		0.276	2.50	1	06/21/2016 23:48	WG882234
2-Chlorotoluene	U		0.375	1.00	1	06/21/2016 23:48	WG882234
4-Chlorotoluene	U		0.351	1.00	1	06/21/2016 23:48	WG882234
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	06/21/2016 23:48	WG882234
1,2-Dibromoethane	U		0.381	1.00	1	06/21/2016 23:48	WG882234
Dibromomethane	U		0.346	1.00	1	06/21/2016 23:48	WG882234
1,2-Dichlorobenzene	U	J4	0.349	1.00	1	06/21/2016 23:48	WG882234
1,3-Dichlorobenzene	U		0.220	1.00	1	06/21/2016 23:48	WG882234
1,4-Dichlorobenzene	U		0.274	1.00	1	06/21/2016 23:48	WG882234
Dichlorodifluoromethane	U		0.551	5.00	1	06/21/2016 23:48	WG882234
1,1-Dichloroethane	U		0.259	1.00	1	06/21/2016 23:48	WG882234
1,2-Dichloroethane	U		0.361	1.00	1	06/21/2016 23:48	WG882234
1,1-Dichloroethene	U		0.398	1.00	1	06/21/2016 23:48	WG882234
cis-1,2-Dichloroethene	U		0.260	1.00	1	06/21/2016 23:48	WG882234
trans-1,2-Dichloroethene	U		0.396	1.00	1	06/21/2016 23:48	WG882234
1,2-Dichloropropane	U		0.306	1.00	1	06/21/2016 23:48	WG882234
1,1-Dichloropropene	U		0.352	1.00	1	06/21/2016 23:48	WG882234
1,3-Dichloropropane	U		0.366	1.00	1	06/21/2016 23:48	WG882234
cis-1,3-Dichloropropene	U		0.418	1.00	1	06/21/2016 23:48	WG882234
trans-1,3-Dichloropropene	U		0.419	1.00	1	06/21/2016 23:48	WG882234
2,2-Dichloropropane	U		0.321	1.00	1	06/21/2016 23:48	WG882234
Di-isopropyl ether	U	J3	0.320	1.00	1	06/21/2016 23:48	WG882234
Ethylbenzene	U		0.384	1.00	1	06/21/2016 23:48	WG882234
Hexachloro-1,3-butadiene	U		0.256	1.00	1	06/21/2016 23:48	WG882234
Isopropylbenzene	U		0.326	1.00	1	06/21/2016 23:48	WG882234
p-Isopropyltoluene	U		0.350	1.00	1	06/21/2016 23:48	WG882234
2-Butanone (MEK)	U		3.93	10.0	1	06/21/2016 23:48	WG882234
Methylene Chloride	U		1.00	5.00	1	06/21/2016 23:48	WG882234
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	06/21/2016 23:48	WG882234
Methyl tert-butyl ether	U		0.367	1.00	1	06/21/2016 23:48	WG882234
Naphthalene	U		1.00	5.00	1	06/21/2016 23:48	WG882234
n-Propylbenzene	U		0.349	1.00	1	06/21/2016 23:48	WG882234
Styrene	U		0.307	1.00	1	06/21/2016 23:48	WG882234
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	06/21/2016 23:48	WG882234
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	06/21/2016 23:48	WG882234
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	06/21/2016 23:48	WG882234
Tetrachloroethene	U		0.372	1.00	1	06/21/2016 23:48	WG882234
Toluene	U		0.780	5.00	1	06/21/2016 23:48	WG882234
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/21/2016 23:48	WG882234

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.355	1.00	1	06/21/2016 23:48	WG882234
1,1,1-Trichloroethane	U		0.319	1.00	1	06/21/2016 23:48	WG882234
1,1,2-Trichloroethane	U		0.383	1.00	1	06/21/2016 23:48	WG882234
Trichloroethene	U		0.398	1.00	1	06/21/2016 23:48	WG882234
Trichlorofluoromethane	U		1.20	5.00	1	06/21/2016 23:48	WG882234
1,2,3-Trichloropropane	U		0.807	2.50	1	06/21/2016 23:48	WG882234
1,2,4-Trimethylbenzene	U		0.373	1.00	1	06/21/2016 23:48	WG882234
1,2,3-Trimethylbenzene	U		0.321	1.00	1	06/21/2016 23:48	WG882234
1,3,5-Trimethylbenzene	U		0.387	1.00	1	06/21/2016 23:48	WG882234
Vinyl chloride	U		0.259	1.00	1	06/21/2016 23:48	WG882234
Xylenes, Total	U		1.06	3.00	1	06/21/2016 23:48	WG882234
(S) Toluene-d8	*106*			*90.0-115*		*06/21/2016 23:48*	WG882234
(S) Dibromofluoromethane	*107*			*79.0-121*		*06/21/2016 23:48*	WG882234
(S) 4-Bromofluorobenzene	*102*			*80.1-120*		*06/21/2016 23:48*	WG882234

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	06/22/2016 00:08	WG882234
Acrolein	U		8.87	50.0	1	06/22/2016 00:08	WG882234
Acrylonitrile	U		1.87	10.0	1	06/22/2016 00:08	WG882234
Benzene	U		0.331	1.00	1	06/22/2016 00:08	WG882234
Bromobenzene	U		0.352	1.00	1	06/22/2016 00:08	WG882234
Bromodichloromethane	U		0.380	1.00	1	06/22/2016 00:08	WG882234
Bromoform	U		0.469	1.00	1	06/22/2016 00:08	WG882234
Bromomethane	U		0.866	5.00	1	06/22/2016 00:08	WG882234
n-Butylbenzene	U		0.361	1.00	1	06/22/2016 00:08	WG882234
sec-Butylbenzene	U		0.365	1.00	1	06/22/2016 00:08	WG882234
tert-Butylbenzene	U		0.399	1.00	1	06/22/2016 00:08	WG882234
Carbon tetrachloride	U		0.379	1.00	1	06/22/2016 00:08	WG882234
Chlorobenzene	U		0.348	1.00	1	06/22/2016 00:08	WG882234
Chlorodibromomethane	U		0.327	1.00	1	06/22/2016 00:08	WG882234
Chloroethane	U		0.453	5.00	1	06/22/2016 00:08	WG882234
2-Chloroethyl vinyl ether	U		3.01	50.0	1	06/22/2016 00:08	WG882234
Chloroform	U		0.324	5.00	1	06/22/2016 00:08	WG882234
Chloromethane	U		0.276	2.50	1	06/22/2016 00:08	WG882234
2-Chlorotoluene	U		0.375	1.00	1	06/22/2016 00:08	WG882234
4-Chlorotoluene	U		0.351	1.00	1	06/22/2016 00:08	WG882234
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	06/22/2016 00:08	WG882234
1,2-Dibromoethane	U		0.381	1.00	1	06/22/2016 00:08	WG882234
Dibromomethane	U		0.346	1.00	1	06/22/2016 00:08	WG882234
1,2-Dichlorobenzene	U	J4	0.349	1.00	1	06/22/2016 00:08	WG882234
1,3-Dichlorobenzene	U		0.220	1.00	1	06/22/2016 00:08	WG882234
1,4-Dichlorobenzene	U		0.274	1.00	1	06/22/2016 00:08	WG882234
Dichlorodifluoromethane	U		0.551	5.00	1	06/22/2016 00:08	WG882234
1,1-Dichloroethane	U		0.259	1.00	1	06/22/2016 00:08	WG882234
1,2-Dichloroethane	U		0.361	1.00	1	06/22/2016 00:08	WG882234
1,1-Dichloroethene	U		0.398	1.00	1	06/22/2016 00:08	WG882234
cis-1,2-Dichloroethene	U		0.260	1.00	1	06/22/2016 00:08	WG882234
trans-1,2-Dichloroethene	U		0.396	1.00	1	06/22/2016 00:08	WG882234
1,2-Dichloropropane	U		0.306	1.00	1	06/22/2016 00:08	WG882234
1,1-Dichloropropene	U		0.352	1.00	1	06/22/2016 00:08	WG882234
1,3-Dichloropropane	U		0.366	1.00	1	06/22/2016 00:08	WG882234
cis-1,3-Dichloropropene	U		0.418	1.00	1	06/22/2016 00:08	WG882234
trans-1,3-Dichloropropene	U		0.419	1.00	1	06/22/2016 00:08	WG882234
2,2-Dichloropropane	U		0.321	1.00	1	06/22/2016 00:08	WG882234
Di-isopropyl ether	U	J3	0.320	1.00	1	06/22/2016 00:08	WG882234
Ethylbenzene	U		0.384	1.00	1	06/22/2016 00:08	WG882234
Hexachloro-1,3-butadiene	U		0.256	1.00	1	06/22/2016 00:08	WG882234
Isopropylbenzene	U		0.326	1.00	1	06/22/2016 00:08	WG882234
p-Isopropyltoluene	U		0.350	1.00	1	06/22/2016 00:08	WG882234
2-Butanone (MEK)	U		3.93	10.0	1	06/22/2016 00:08	WG882234
Methylene Chloride	U		1.00	5.00	1	06/22/2016 00:08	WG882234
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	06/22/2016 00:08	WG882234
Methyl tert-butyl ether	U		0.367	1.00	1	06/22/2016 00:08	WG882234
Naphthalene	U		1.00	5.00	1	06/22/2016 00:08	WG882234
n-Propylbenzene	U		0.349	1.00	1	06/22/2016 00:08	WG882234
Styrene	U		0.307	1.00	1	06/22/2016 00:08	WG882234
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	06/22/2016 00:08	WG882234
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	06/22/2016 00:08	WG882234
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	06/22/2016 00:08	WG882234
Tetrachloroethene	U		0.372	1.00	1	06/22/2016 00:08	WG882234
Toluene	U		0.780	5.00	1	06/22/2016 00:08	WG882234
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/22/2016 00:08	WG882234

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.355	1.00	1	06/22/2016 00:08	WG882234
1,1,1-Trichloroethane	U		0.319	1.00	1	06/22/2016 00:08	WG882234
1,1,2-Trichloroethane	U		0.383	1.00	1	06/22/2016 00:08	WG882234
Trichloroethene	U		0.398	1.00	1	06/22/2016 00:08	WG882234
Trichlorofluoromethane	U		1.20	5.00	1	06/22/2016 00:08	WG882234
1,2,3-Trichloropropane	U		0.807	2.50	1	06/22/2016 00:08	WG882234
1,2,4-Trimethylbenzene	U		0.373	1.00	1	06/22/2016 00:08	WG882234
1,2,3-Trimethylbenzene	U		0.321	1.00	1	06/22/2016 00:08	WG882234
1,3,5-Trimethylbenzene	U		0.387	1.00	1	06/22/2016 00:08	WG882234
Vinyl chloride	U		0.259	1.00	1	06/22/2016 00:08	WG882234
Xylenes, Total	U		1.06	3.00	1	06/22/2016 00:08	WG882234
(S) Toluene-d8	*110*			*90.0-115*		*06/22/2016 00:08*	WG882234
(S) Dibromofluoromethane	*121*			*79.0-121*		*06/22/2016 00:08*	WG882234
(S) 4-Bromofluorobenzene	*105*			*80.1-120*		*06/22/2016 00:08*	WG882234

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	06/22/2016 00:29	WG882234
Acrolein	U		8.87	50.0	1	06/22/2016 00:29	WG882234
Acrylonitrile	U		1.87	10.0	1	06/22/2016 00:29	WG882234
Benzene	U		0.331	1.00	1	06/22/2016 00:29	WG882234
Bromobenzene	U		0.352	1.00	1	06/22/2016 00:29	WG882234
Bromodichloromethane	U		0.380	1.00	1	06/22/2016 00:29	WG882234
Bromoform	U		0.469	1.00	1	06/22/2016 00:29	WG882234
Bromomethane	U		0.866	5.00	1	06/22/2016 00:29	WG882234
n-Butylbenzene	U		0.361	1.00	1	06/22/2016 00:29	WG882234
sec-Butylbenzene	U		0.365	1.00	1	06/22/2016 00:29	WG882234
tert-Butylbenzene	U		0.399	1.00	1	06/22/2016 00:29	WG882234
Carbon tetrachloride	U		0.379	1.00	1	06/22/2016 00:29	WG882234
Chlorobenzene	U		0.348	1.00	1	06/22/2016 00:29	WG882234
Chlorodibromomethane	U		0.327	1.00	1	06/22/2016 00:29	WG882234
Chloroethane	U		0.453	5.00	1	06/22/2016 00:29	WG882234
2-Chloroethyl vinyl ether	U		3.01	50.0	1	06/22/2016 00:29	WG882234
Chloroform	U		0.324	5.00	1	06/22/2016 00:29	WG882234
Chloromethane	U		0.276	2.50	1	06/22/2016 00:29	WG882234
2-Chlorotoluene	U		0.375	1.00	1	06/22/2016 00:29	WG882234
4-Chlorotoluene	U		0.351	1.00	1	06/22/2016 00:29	WG882234
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	06/22/2016 00:29	WG882234
1,2-Dibromoethane	U		0.381	1.00	1	06/22/2016 00:29	WG882234
Dibromomethane	U		0.346	1.00	1	06/22/2016 00:29	WG882234
1,2-Dichlorobenzene	U	J4	0.349	1.00	1	06/22/2016 00:29	WG882234
1,3-Dichlorobenzene	U		0.220	1.00	1	06/22/2016 00:29	WG882234
1,4-Dichlorobenzene	U		0.274	1.00	1	06/22/2016 00:29	WG882234
Dichlorodifluoromethane	U		0.551	5.00	1	06/22/2016 00:29	WG882234
1,1-Dichloroethane	U		0.259	1.00	1	06/22/2016 00:29	WG882234
1,2-Dichloroethane	U		0.361	1.00	1	06/22/2016 00:29	WG882234
1,1-Dichloroethene	U		0.398	1.00	1	06/22/2016 00:29	WG882234
cis-1,2-Dichloroethene	U		0.260	1.00	1	06/22/2016 00:29	WG882234
trans-1,2-Dichloroethene	U		0.396	1.00	1	06/22/2016 00:29	WG882234
1,2-Dichloropropane	U		0.306	1.00	1	06/22/2016 00:29	WG882234
1,1-Dichloropropene	U		0.352	1.00	1	06/22/2016 00:29	WG882234
1,3-Dichloropropane	U		0.366	1.00	1	06/22/2016 00:29	WG882234
cis-1,3-Dichloropropene	U		0.418	1.00	1	06/22/2016 00:29	WG882234
trans-1,3-Dichloropropene	U		0.419	1.00	1	06/22/2016 00:29	WG882234
2,2-Dichloropropane	U		0.321	1.00	1	06/22/2016 00:29	WG882234
Di-isopropyl ether	U	J3	0.320	1.00	1	06/22/2016 00:29	WG882234
Ethylbenzene	U		0.384	1.00	1	06/22/2016 00:29	WG882234
Hexachloro-1,3-butadiene	U		0.256	1.00	1	06/22/2016 00:29	WG882234
Isopropylbenzene	U		0.326	1.00	1	06/22/2016 00:29	WG882234
p-Isopropyltoluene	U		0.350	1.00	1	06/22/2016 00:29	WG882234
2-Butanone (MEK)	U		3.93	10.0	1	06/22/2016 00:29	WG882234
Methylene Chloride	U		1.00	5.00	1	06/22/2016 00:29	WG882234
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	06/22/2016 00:29	WG882234
Methyl tert-butyl ether	U		0.367	1.00	1	06/22/2016 00:29	WG882234
Naphthalene	U		1.00	5.00	1	06/22/2016 00:29	WG882234
n-Propylbenzene	U		0.349	1.00	1	06/22/2016 00:29	WG882234
Styrene	U		0.307	1.00	1	06/22/2016 00:29	WG882234
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	06/22/2016 00:29	WG882234
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	06/22/2016 00:29	WG882234
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	06/22/2016 00:29	WG882234
Tetrachloroethene	U		0.372	1.00	1	06/22/2016 00:29	WG882234
Toluene	U		0.780	5.00	1	06/22/2016 00:29	WG882234
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/22/2016 00:29	WG882234

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.355	1.00	1	06/22/2016 00:29	WG882234
1,1,1-Trichloroethane	U		0.319	1.00	1	06/22/2016 00:29	WG882234
1,1,2-Trichloroethane	U		0.383	1.00	1	06/22/2016 00:29	WG882234
Trichloroethene	U		0.398	1.00	1	06/22/2016 00:29	WG882234
Trichlorofluoromethane	U		1.20	5.00	1	06/22/2016 00:29	WG882234
1,2,3-Trichloropropane	U		0.807	2.50	1	06/22/2016 00:29	WG882234
1,2,4-Trimethylbenzene	U		0.373	1.00	1	06/22/2016 00:29	WG882234
1,2,3-Trimethylbenzene	U		0.321	1.00	1	06/22/2016 00:29	WG882234
1,3,5-Trimethylbenzene	U		0.387	1.00	1	06/22/2016 00:29	WG882234
Vinyl chloride	U		0.259	1.00	1	06/22/2016 00:29	WG882234
Xylenes, Total	U		1.06	3.00	1	06/22/2016 00:29	WG882234
(S) Toluene-d8	*106*			*90.0-115*		*06/22/2016 00:29*	WG882234
(S) Dibromofluoromethane	*109*			*79.0-121*		*06/22/2016 00:29*	WG882234
(S) 4-Bromofluorobenzene	*106*			*80.1-120*		*06/22/2016 00:29*	WG882234

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	06/22/2016 06:27	WG882243
Acrolein	U		8.87	50.0	1	06/22/2016 06:27	WG882243
Acrylonitrile	U		1.87	10.0	1	06/22/2016 06:27	WG882243
Benzene	U		0.331	1.00	1	06/22/2016 06:27	WG882243
Bromobenzene	U		0.352	1.00	1	06/22/2016 06:27	WG882243
Bromodichloromethane	U		0.380	1.00	1	06/22/2016 06:27	WG882243
Bromoform	U		0.469	1.00	1	06/22/2016 06:27	WG882243
Bromomethane	U		0.866	5.00	1	06/22/2016 06:27	WG882243
n-Butylbenzene	U		0.361	1.00	1	06/22/2016 06:27	WG882243
sec-Butylbenzene	U		0.365	1.00	1	06/22/2016 06:27	WG882243
tert-Butylbenzene	U		0.399	1.00	1	06/22/2016 06:27	WG882243
Carbon tetrachloride	U		0.379	1.00	1	06/22/2016 06:27	WG882243
Chlorobenzene	U		0.348	1.00	1	06/22/2016 06:27	WG882243
Chlorodibromomethane	U		0.327	1.00	1	06/22/2016 06:27	WG882243
Chloroethane	U		0.453	5.00	1	06/22/2016 06:27	WG882243
2-Chloroethyl vinyl ether	U		3.01	50.0	1	06/22/2016 06:27	WG882243
Chloroform	U		0.324	5.00	1	06/22/2016 06:27	WG882243
Chloromethane	U		0.276	2.50	1	06/22/2016 06:27	WG882243
2-Chlorotoluene	U		0.375	1.00	1	06/22/2016 06:27	WG882243
4-Chlorotoluene	U		0.351	1.00	1	06/22/2016 06:27	WG882243
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	06/22/2016 06:27	WG882243
1,2-Dibromoethane	U		0.381	1.00	1	06/22/2016 06:27	WG882243
Dibromomethane	U		0.346	1.00	1	06/22/2016 06:27	WG882243
1,2-Dichlorobenzene	U		0.349	1.00	1	06/22/2016 06:27	WG882243
1,3-Dichlorobenzene	U		0.220	1.00	1	06/22/2016 06:27	WG882243
1,4-Dichlorobenzene	U		0.274	1.00	1	06/22/2016 06:27	WG882243
Dichlorodifluoromethane	U		0.551	5.00	1	06/22/2016 06:27	WG882243
1,1-Dichloroethane	U		0.259	1.00	1	06/22/2016 06:27	WG882243
1,2-Dichloroethane	U		0.361	1.00	1	06/22/2016 06:27	WG882243
1,1-Dichloroethene	U		0.398	1.00	1	06/22/2016 06:27	WG882243
cis-1,2-Dichloroethene	U		0.260	1.00	1	06/22/2016 06:27	WG882243
trans-1,2-Dichloroethene	U		0.396	1.00	1	06/22/2016 06:27	WG882243
1,2-Dichloropropane	U		0.306	1.00	1	06/22/2016 06:27	WG882243
1,1-Dichloropropene	U		0.352	1.00	1	06/22/2016 06:27	WG882243
1,3-Dichloropropane	U		0.366	1.00	1	06/22/2016 06:27	WG882243
cis-1,3-Dichloropropene	U		0.418	1.00	1	06/22/2016 06:27	WG882243
trans-1,3-Dichloropropene	U		0.419	1.00	1	06/22/2016 06:27	WG882243
2,2-Dichloropropane	U		0.321	1.00	1	06/22/2016 06:27	WG882243
Di-isopropyl ether	U		0.320	1.00	1	06/22/2016 06:27	WG882243
Ethylbenzene	U		0.384	1.00	1	06/22/2016 06:27	WG882243
Hexachloro-1,3-butadiene	U		0.256	1.00	1	06/22/2016 06:27	WG882243
Isopropylbenzene	U		0.326	1.00	1	06/22/2016 06:27	WG882243
p-Isopropyltoluene	U		0.350	1.00	1	06/22/2016 06:27	WG882243
2-Butanone (MEK)	U		3.93	10.0	1	06/22/2016 06:27	WG882243
Methylene Chloride	U		1.00	5.00	1	06/22/2016 06:27	WG882243
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	06/22/2016 06:27	WG882243
Methyl tert-butyl ether	U		0.367	1.00	1	06/22/2016 06:27	WG882243
Naphthalene	U		1.00	5.00	1	06/22/2016 06:27	WG882243
n-Propylbenzene	U		0.349	1.00	1	06/22/2016 06:27	WG882243
Styrene	U		0.307	1.00	1	06/22/2016 16:03	WG881672
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	06/22/2016 06:27	WG882243
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	06/22/2016 06:27	WG882243
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	06/22/2016 06:27	WG882243
Tetrachloroethene	U		0.372	1.00	1	06/22/2016 06:27	WG882243
Toluene	U		0.780	5.00	1	06/22/2016 06:27	WG882243
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/22/2016 06:27	WG882243

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.355	1.00	1	06/22/2016 06:27	WG882243
1,1,1-Trichloroethane	U		0.319	1.00	1	06/22/2016 06:27	WG882243
1,1,2-Trichloroethane	U		0.383	1.00	1	06/22/2016 06:27	WG882243
Trichloroethene	U		0.398	1.00	1	06/22/2016 06:27	WG882243
Trichlorofluoromethane	U		1.20	5.00	1	06/22/2016 06:27	WG882243
1,2,3-Trichloropropane	U		0.807	2.50	1	06/22/2016 06:27	WG882243
1,2,4-Trimethylbenzene	U		0.373	1.00	1	06/22/2016 06:27	WG882243
1,2,3-Trimethylbenzene	U		0.321	1.00	1	06/22/2016 06:27	WG882243
1,3,5-Trimethylbenzene	U		0.387	1.00	1	06/22/2016 06:27	WG882243
Vinyl chloride	U		0.259	1.00	1	06/22/2016 06:27	WG882243
Xylenes, Total	U		1.06	3.00	1	06/22/2016 06:27	WG882243
(S) Toluene-d8	*99.5*			*90.0-115*		*06/22/2016 06:27*	WG882243
(S) Toluene-d8	*103*			*90.0-115*		*06/22/2016 16:03*	WG881672
(S) Dibromofluoromethane	*101*			*79.0-121*		*06/22/2016 16:03*	WG881672
(S) Dibromofluoromethane	*97.7*			*79.0-121*		*06/22/2016 06:27*	WG882243
(S) 4-Bromofluorobenzene	*92.5*			*80.1-120*		*06/22/2016 06:27*	WG882243
(S) 4-Bromofluorobenzene	*100*			*80.1-120*		*06/22/2016 16:03*	WG881672

Method Blank (MB)

(MB) R3143917-1 06/15/16 15:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPH (GC/FID) Low Fraction	U		31.4	100
(S) a,a,a-Trifluorotoluene(FID)	*102*			*62.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3143917-2 06/15/16 17:26 • (LCSD) R3143917-3 06/15/16 17:55

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	4220	4980	76.8	90.6	67.0-132			16.5	20
(S) a,a,a-Trifluorotoluene(FID)				*101*	*101*	*62.0-128*				

L841123-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841123-06 06/15/16 20:36 • (MS) R3143917-4 06/15/16 19:10 • (MSD) R3143917-5 06/15/16 19:39

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	U	6410	6850	117	125	1	50.0-143			6.62	20
(S) a,a,a-Trifluorotoluene(FID)					*101*	*101*		*62.0-128*				

Method Blank (MB)

(MB) R3144142-3 06/16/16 13:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPH (GC/FID) Low Fraction	U		31.4	100
(S) a,a,a-Trifluorotoluene(FID)	*103*			*62.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3144142-1 06/16/16 12:17 • (LCSD) R3144142-2 06/16/16 12:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	4950	4780	89.9	87.0	67.0-132			3.33	20
(S) a,a,a-Trifluorotoluene(FID)				*101*	*101*	*62.0-128*				

L841606-27 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841606-27 06/16/16 18:05 • (MS) R3144142-4 06/16/16 15:08 • (MSD) R3144142-5 06/16/16 15:38

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	385	7380	7250	127	125	1	50.0-143			1.82	20
(S) a,a,a-Trifluorotoluene(FID)					*98.8*	*101*		*62.0-128*				

Method Blank (MB)

(MB) R3143979-3 06/16/16 01:39

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPH (GC/FID) Low Fraction	U		31.4	100
(S) a,a,a-Trifluorotoluene(FID)	*99.7*			*62.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3143979-1 06/15/16 23:54 • (LCSD) R3143979-2 06/16/16 00:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	6620	6440	120	117	67.0-132			2.67	20
(S) a,a,a-Trifluorotoluene(FID)				*102*	*102*	*62.0-128*				

L840989-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L840989-04 06/16/16 04:37 • (MS) R3143979-4 06/16/16 02:00 • (MSD) R3143979-5 06/16/16 02:22

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	882	7270	7360	116	118	1	50.0-143			1.23	20
(S) a,a,a-Trifluorotoluene(FID)					*102*	*103*		*62.0-128*				

Method Blank (MB)

(MB) R3144227-3 06/16/16 20:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPH (GC/FID) Low Fraction	U		31.4	100
(S) a,a,a-Trifluorotoluene(FID)	*94.3*			*62.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3144227-1 06/16/16 19:10 • (LCSD) R3144227-2 06/16/16 19:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	5820	5910	106	107	67.0-132			1.57	20
(S) a,a,a-Trifluorotoluene(FID)				*106*	*105*	*62.0-128*				

L841606-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841606-20 06/16/16 21:45 • (MS) R3144227-4 06/16/16 20:39 • (MSD) R3144227-5 06/16/16 21:01

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5500	386	4180	4180	69.1	68.9	1	50.0-143			0.160	20
(S) a,a,a-Trifluorotoluene(FID)					*101*	*101*		*62.0-128*				

Method Blank (MB)

(MB) R3144773-3 06/18/16 17:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.780	5.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*103*			*90.0-115*
(S) Dibromofluoromethane	*107*			*79.0-121*
(S) α,α,α-Trifluorotoluene	*95.8*			*90.4-116*
(S) 4-Bromofluorobenzene	*93.2*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3144773-1 06/18/16 16:37 • (LCSD) R3144773-2 06/18/16 16:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	26.6	27.2	106	109	73.0-122			2.21	20
Ethylbenzene	25.0	22.5	23.1	90.2	92.2	80.9-121			2.27	20
Methyl tert-butyl ether	25.0	26.4	26.0	105	104	70.1-125			1.36	20
Naphthalene	25.0	24.4	23.9	97.5	95.5	69.7-134			2.05	20
Toluene	25.0	24.4	24.5	97.6	97.9	77.9-116			0.380	20
Xylenes, Total	75.0	66.5	68.2	88.6	90.9	79.2-122			2.60	20
(S) Toluene-d8				*102*	*103*	*90.0-115*				
(S) Dibromofluoromethane				*107*	*109*	*79.0-121*				
(S) α,α,α-Trifluorotoluene				*94.4*	*94.3*	*90.4-116*				
(S) 4-Bromofluorobenzene				*92.3*	*91.9*	*80.1-120*				

L841508-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841508-09 06/19/16 00:30 • (MS) R3144773-4 06/18/16 21:15 • (MSD) R3144773-5 06/18/16 21:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	ND	25.9	25.5	104	102	1	58.6-133			1.67	20
Ethylbenzene	25.0	ND	22.0	21.5	88.0	85.9	1	62.7-136			2.34	20
Methyl tert-butyl ether	25.0	ND	27.4	25.7	110	103	1	61.4-136			6.63	20
Naphthalene	25.0	ND	26.3	24.4	105	97.5	1	61.8-143			7.68	20
Toluene	25.0	ND	23.9	23.1	95.4	92.3	1	67.8-124			3.28	20
Xylenes, Total	75.0	ND	66.0	63.3	87.9	84.4	1	65.6-133			4.06	20
(S) Toluene-d8					*105*	*105*		*90.0-115*				

L841508-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841508-09 06/19/16 00:30 • (MS) R3144773-4 06/18/16 21:15 • (MSD) R3144773-5 06/18/16 21:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) Dibromofluoromethane					*113*	*112*		*79.0-121*				
(S) α,α,α-Trifluorotoluene					*95.0*	*96.5*		*90.4-116*				
(S) 4-Bromofluorobenzene					*92.9*	*92.3*		*80.1-120*				

Method Blank (MB)

(MB) R3144549-3 06/19/16 17:15

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.780	5.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*100*			*90.0-115*
(S) Dibromofluoromethane	*95.5*			*79.0-121*
(S) α,α,α-Trifluorotoluene	*108*			*90.4-116*
(S) 4-Bromofluorobenzene	*98.0*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3144549-1 06/19/16 15:23 • (LCSD) R3144549-2 06/19/16 15:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	22.8	22.9	91.1	91.6	73.0-122			0.540	20
Ethylbenzene	25.0	25.3	25.4	101	101	80.9-121			0.160	20
Methyl tert-butyl ether	25.0	18.6	18.7	74.5	74.8	70.1-125			0.400	20
Naphthalene	25.0	24.1	24.4	96.5	97.6	69.7-134			1.13	20
Toluene	25.0	22.4	22.8	89.6	91.2	77.9-116			1.81	20
Xylenes, Total	75.0	75.7	74.9	101	99.8	79.2-122			1.07	20
(S) Toluene-d8				*102*	*104*	*90.0-115*				
(S) Dibromofluoromethane				*95.9*	*94.8*	*79.0-121*				
(S) α,α,α-Trifluorotoluene				*110*	*111*	*90.4-116*				
(S) 4-Bromofluorobenzene				*102*	*102*	*80.1-120*				

L841606-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841606-20 06/19/16 18:46 • (MS) R3144549-4 06/19/16 17:38 • (MSD) R3144549-5 06/19/16 18:01

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	23.7	48.3	45.4	98.5	86.8	1	58.6-133			6.26	20
Ethylbenzene	25.0	6.23	33.2	31.5	108	101	1	62.7-136			5.30	20
Methyl tert-butyl ether	25.0	1.87	22.6	21.5	82.8	78.6	1	61.4-136			4.80	20
Naphthalene	25.0	1.44	28.8	27.5	109	104	1	61.8-143			4.35	20
Toluene	25.0	3.92	27.5	26.2	94.1	89.3	1	67.8-124			4.54	20
Xylenes, Total	75.0	39.6	119	112	106	96.9	1	65.6-133			5.88	20
(S) Toluene-d8					*104*	*104*		*90.0-115*				

L841606-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841606-20 06/19/16 18:46 • (MS) R3144549-4 06/19/16 17:38 • (MSD) R3144549-5 06/19/16 18:01

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) Dibromofluoromethane					*97.2*	*97.3*		*79.0-121*				
(S) α,α,α-Trifluorotoluene					*110*	*110*		*90.4-116*				
(S) 4-Bromofluorobenzene					*102*	*102*		*80.1-120*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3145197-1 06/22/16 08:13 • (LCSD) R3145197-2 06/22/16 08:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Styrene	25.0	27.7	26.1	111	104	79.9-124			5.75	20
(S) Toluene-d8				*103*	*103*	*90.0-115*				
(S) Dibromofluoromethane				*101*	*101*	*79.0-121*				
(S) 4-Bromofluorobenzene				*99.1*	*99.0*	*80.1-120*				

L842336-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L842336-01 06/22/16 12:29 • (MS) R3145197-4 06/22/16 12:49 • (MSD) R3145197-5 06/22/16 13:09

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Styrene	25.0	ND	22.8	24.6	91.2	98.6	1	68.2-133			7.74	20
(S) Toluene-d8					*103*	*101*		*90.0-115*				
(S) Dibromofluoromethane					*101*	*101*		*79.0-121*				
(S) 4-Bromofluorobenzene					*98.8*	*100*		*80.1-120*				

Method Blank (MB)

(MB) R3144612-3 06/20/16 11:27

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.780	5.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*100*			*90.0-115*
(S) Dibromofluoromethane	*101*			*79.0-121*
(S) α,α,α-Trifluorotoluene	*92.1*			*90.4-116*
(S) 4-Bromofluorobenzene	*94.1*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3144612-1 06/20/16 09:55 • (LCSD) R3144612-2 06/20/16 10:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	22.9	23.2	91.8	92.9	73.0-122			1.17	20
Ethylbenzene	25.0	23.0	22.5	92.1	89.8	80.9-121			2.50	20
Methyl tert-butyl ether	25.0	21.9	20.7	87.5	83.0	70.1-125			5.32	20
Naphthalene	25.0	22.1	22.3	88.3	89.3	69.7-134			1.19	20
Toluene	25.0	23.6	23.9	94.6	95.6	77.9-116			1.02	20
Xylenes, Total	75.0	66.3	65.2	88.3	86.9	79.2-122			1.65	20
(S) Toluene-d8				*104*	*104*	*90.0-115*				
(S) Dibromofluoromethane				*99.7*	*97.7*	*79.0-121*				
(S) α,α,α-Trifluorotoluene				*96.8*	*102*	*90.4-116*				
(S) 4-Bromofluorobenzene				*97.4*	*91.3*	*80.1-120*				

L842159-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L842159-02 06/20/16 16:18 • (MS) R3144612-4 06/20/16 14:46 • (MSD) R3144612-5 06/20/16 15:04

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	ND	23.2	23.1	90.9	90.3	1	58.6-133			0.600	20
Ethylbenzene	25.0	ND	24.1	21.4	96.3	85.8	1	62.7-136			11.6	20
Methyl tert-butyl ether	25.0	1.91	23.1	21.7	84.8	79.2	1	61.4-136			6.27	20
Naphthalene	25.0	ND	24.9	23.8	99.5	95.0	1	61.8-143			4.62	20
Toluene	25.0	ND	24.3	24.4	93.7	93.8	1	67.8-124			0.110	20
Xylenes, Total	75.0	ND	69.8	64.9	93.1	86.5	1	65.6-133			7.30	20
(S) Toluene-d8					*106*	*105*		*90.0-115*				

L842159-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L842159-02 06/20/16 16:18 • (MS) R3144612-4 06/20/16 14:46 • (MSD) R3144612-5 06/20/16 15:04

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) Dibromofluoromethane					*105*	*96.4*		*79.0-121*				
(S) α,α,α-Trifluorotoluene					*101*	*97.8*		*90.4-116*				
(S) 4-Bromofluorobenzene					*103*	*94.2*		*80.1-120*				

Method Blank (MB)

(MB) R3144914-3 06/21/16 20:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Acrolein	U		8.87	50.0
Acrylonitrile	U		1.87	10.0
Benzene	U		0.331	1.00
Bromobenzene	U		0.352	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
n-Butylbenzene	U		0.361	1.00
sec-Butylbenzene	U		0.365	1.00
tert-Butylbenzene	U		0.399	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
2-Chloroethyl vinyl ether	U		3.01	50.0
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
2-Chlorotoluene	U		0.375	1.00
4-Chlorotoluene	U		0.351	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
Dibromomethane	U		0.346	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
1,1-Dichloropropene	U		0.352	1.00
1,3-Dichloropropane	U		0.366	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
2,2-Dichloropropane	U		0.321	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00

Method Blank (MB)

(MB) R3144914-3 06/21/16 20:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U		0.256	1.00
Isopropylbenzene	U		0.326	1.00
p-Isopropyltoluene	U		0.350	1.00
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
n-Propylbenzene	U		0.349	1.00
Tetrachloroethene	U		0.372	1.00
Styrene	U		0.307	1.00
1,1,1,2-Tetrachloroethane	U		0.385	1.00
Toluene	U		0.780	5.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
Trichloroethene	U		0.398	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
Trichlorofluoromethane	U		1.20	5.00
1,2,3-Trichloropropane	U		0.807	2.50
1,2,3-Trimethylbenzene	U		0.321	1.00
1,2,4-Trimethylbenzene	U		0.373	1.00
1,3,5-Trimethylbenzene	U		0.387	1.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*104*			*90.0-115*
(S) Dibromofluoromethane	*107*			*79.0-121*
(S) 4-Bromofluorobenzene	*97.3*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3144914-1 06/21/16 18:42 • (LCSD) R3144914-2 06/21/16 19:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	175	171	140	137	28.7-175			1.90	20.9
Acrolein	125	133	124	106	99.2	40.4-172			7.05	20
Acrylonitrile	125	116	108	92.8	86.2	58.2-145			7.40	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3144914-1 06/21/16 18:42 • (LCSD) R3144914-2 06/21/16 19:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	21.1	21.0	84.5	84.1	73.0-122			0.420	20
Bromobenzene	25.0	23.0	22.5	91.9	90.0	81.5-115			2.16	20
Bromodichloromethane	25.0	22.7	22.9	90.6	91.5	75.5-121			0.980	20
Bromoform	25.0	26.7	25.4	107	102	71.5-131			5.00	20
Bromomethane	25.0	26.9	27.1	108	108	22.4-187			0.680	20
n-Butylbenzene	25.0	21.1	20.9	84.3	83.4	75.9-134			0.980	20
sec-Butylbenzene	25.0	22.7	22.1	90.7	88.2	80.6-126			2.78	20
tert-Butylbenzene	25.0	22.9	22.4	91.5	89.4	79.3-127			2.31	20
Carbon tetrachloride	25.0	22.8	21.6	91.4	86.5	70.9-129			5.43	20
Chlorobenzene	25.0	22.8	22.9	91.4	91.8	79.7-122			0.410	20
Chlorodibromomethane	25.0	25.4	25.3	102	101	78.2-124			0.520	20
Chloroethane	25.0	27.4	26.9	110	108	41.2-153			1.88	20
2-Chloroethyl vinyl ether	125	114	111	91.0	89.1	23.4-162			2.05	23.5
Chloroform	25.0	21.5	21.7	85.8	86.7	73.2-125			1.02	20
Chloromethane	25.0	22.5	22.1	89.9	88.4	55.8-134			1.67	20
2-Chlorotoluene	25.0	22.7	22.5	90.8	89.9	76.4-125			0.980	20
4-Chlorotoluene	25.0	23.1	23.0	92.5	92.0	81.5-121			0.560	20
1,2-Dibromo-3-Chloropropane	25.0	23.4	21.8	93.8	87.2	64.8-131			7.21	20
1,2-Dibromoethane	25.0	23.5	23.2	94.1	92.7	79.8-122			1.57	20
Dibromomethane	25.0	24.1	23.4	96.4	93.4	79.5-118			3.13	20
1,2-Dichlorobenzene	25.0	21.4	21.1	85.7	84.3	84.7-118		J4	1.62	20
1,3-Dichlorobenzene	25.0	21.9	21.4	87.6	85.7	77.6-127			2.26	20
1,4-Dichlorobenzene	25.0	20.9	20.6	83.8	82.6	82.2-114			1.42	20
Dichlorodifluoromethane	25.0	22.8	22.0	91.2	88.2	56.0-134			3.35	20
1,1-Dichloroethane	25.0	21.7	21.4	86.9	85.4	71.7-127			1.74	20
1,2-Dichloroethane	25.0	24.3	23.7	97.1	95.0	65.3-126			2.22	20
1,1-Dichloroethene	25.0	23.7	23.5	94.9	93.9	59.9-137			1.06	20
cis-1,2-Dichloroethene	25.0	21.8	21.8	87.4	87.0	77.3-122			0.390	20
trans-1,2-Dichloroethene	25.0	22.5	22.3	89.9	89.1	72.6-125			0.880	20
1,2-Dichloropropane	25.0	22.7	22.4	90.8	89.4	77.4-125			1.50	20
1,1-Dichloropropene	25.0	23.6	23.4	94.3	93.7	72.5-127			0.650	20
1,3-Dichloropropane	25.0	23.8	23.7	95.2	94.9	80.6-115			0.300	20
cis-1,3-Dichloropropene	25.0	24.8	24.9	99.1	99.7	77.7-124			0.590	20
trans-1,3-Dichloropropene	25.0	25.2	25.4	101	102	73.5-127			0.870	20
2,2-Dichloropropane	25.0	21.5	22.1	86.0	88.4	61.3-134			2.70	20
Di-isopropyl ether	25.0	22.8	28.8	91.2	115	65.1-135		J3	23.3	20
Ethylbenzene	25.0	22.5	22.3	89.9	89.1	80.9-121			0.940	20
Hexachloro-1,3-butadiene	25.0	21.1	21.1	84.5	84.5	73.7-133			0.0200	20
Isopropylbenzene	25.0	22.4	22.2	89.5	88.6	81.6-124			0.950	20
p-Isopropyltoluene	25.0	23.5	22.7	93.8	90.8	77.6-129			3.22	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3144914-1 06/21/16 18:42 • (LCSD) R3144914-2 06/21/16 19:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	125	143	136	114	109	46.4-155			4.78	20
Methylene Chloride	25.0	21.9	22.3	87.6	89.3	69.5-120			1.87	20
4-Methyl-2-pentanone (MIBK)	125	130	122	104	97.5	63.3-138			6.28	20
Methyl tert-butyl ether	25.0	24.4	25.1	97.6	100	70.1-125			2.66	20
Naphthalene	25.0	21.8	21.0	87.0	84.1	69.7-134			3.44	20
n-Propylbenzene	25.0	22.3	21.8	89.4	87.3	81.9-122			2.31	20
Styrene	25.0	23.9	23.8	95.4	95.1	79.9-124			0.360	20
1,1,1,2-Tetrachloroethane	25.0	24.3	23.9	97.2	95.6	78.5-125			1.66	20
1,1,2,2-Tetrachloroethane	25.0	21.7	20.2	86.9	80.9	79.3-123			7.14	20
Tetrachloroethene	25.0	23.5	22.8	93.9	91.3	73.5-130			2.80	20
Toluene	25.0	21.4	21.3	85.6	85.3	77.9-116			0.370	20
1,1,2-Trichlorotrifluoroethane	25.0	24.1	23.1	96.4	92.2	62.0-141			4.47	20
1,2,3-Trichlorobenzene	25.0	22.2	22.2	88.6	88.8	75.7-134			0.230	20
1,1,1-Trichloroethane	25.0	23.1	22.6	92.3	90.4	71.1-129			2.10	20
1,2,4-Trichlorobenzene	25.0	22.5	22.6	90.2	90.6	76.1-136			0.440	20
1,1,2-Trichloroethane	25.0	22.7	22.1	91.0	88.2	81.6-120			3.04	20
Trichloroethene	25.0	22.8	22.8	91.1	91.3	79.5-121			0.150	20
Trichlorofluoromethane	25.0	24.9	24.7	99.4	98.8	49.1-157			0.590	20
1,2,3-Trichloropropane	25.0	23.5	22.5	93.8	90.1	74.9-124			4.11	20
1,2,3-Trimethylbenzene	25.0	21.4	21.4	85.8	85.8	79.9-118			0.0200	20
1,2,4-Trimethylbenzene	25.0	23.7	23.4	95.0	93.5	79.0-122			1.54	20
1,3,5-Trimethylbenzene	25.0	22.9	22.5	91.7	89.9	81.0-123			2.00	20
Vinyl chloride	25.0	26.9	26.0	107	104	61.5-134			3.33	20
Xylenes, Total	75.0	68.4	67.0	91.2	89.4	79.2-122			2.05	20
(S) Toluene-d8				*104*	*104*	*90.0-115*				
(S) Dibromofluoromethane				*103*	*103*	*79.0-121*				
(S) 4-Bromofluorobenzene				*103*	*103*	*80.1-120*				

L841570-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841570-03 06/21/16 20:24 • (MS) R3144914-4 06/21/16 21:45 • (MSD) R3144914-5 06/21/16 22:05

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	125	U	144	137	115	110	1	25.0-156			4.60	21.5
Acrolein	125	U	115	120	92.1	95.8	1	34.0-194			3.99	21.5
Acrylonitrile	125	U	105	109	84.0	87.6	1	55.9-161			4.12	20
Benzene	25.0	U	19.0	19.2	75.8	76.7	1	58.6-133			1.12	20
Bromobenzene	25.0	U	20.9	20.7	83.8	82.9	1	70.6-125			1.08	20
Bromodichloromethane	25.0	U	21.4	21.7	85.6	86.7	1	69.2-127			1.23	20

L841570-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841570-03 06/21/16 20:24 • (MS) R3144914-4 06/21/16 21:45 • (MSD) R3144914-5 06/21/16 22:05

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	25.0	U	23.5	24.6	94.0	98.4	1	66.3-140			4.55	20
Bromomethane	25.0	U	20.9	19.4	83.6	77.5	1	16.6-183			7.66	20.5
n-Butylbenzene	25.0	U	19.0	19.2	76.2	76.8	1	64.8-145			0.810	20
sec-Butylbenzene	25.0	U	20.8	20.6	83.0	82.5	1	66.8-139			0.670	20
tert-Butylbenzene	25.0	U	20.8	20.9	83.3	83.6	1	67.1-138			0.250	20
Carbon tetrachloride	25.0	U	20.2	20.1	81.0	80.2	1	60.6-139			0.950	20
Chlorobenzene	25.0	U	20.9	21.0	83.5	84.1	1	70.1-130			0.780	20
Chlorodibromomethane	25.0	U	23.5	24.2	94.1	96.8	1	71.6-132			2.84	20
Chloroethane	25.0	U	22.1	21.9	88.4	87.7	1	33.3-155			0.880	20
2-Chloroethyl vinyl ether	125	U	95.3	103	76.2	82.0	1	5.00-149			7.33	40
Chloroform	25.0	U	20.5	20.5	81.9	82.2	1	66.1-133			0.280	20
Chloromethane	25.0	U	15.6	15.4	62.3	61.5	1	40.7-139			1.34	20
2-Chlorotoluene	25.0	U	20.9	20.7	83.4	82.8	1	66.9-134			0.800	20
4-Chlorotoluene	25.0	U	21.1	21.0	84.5	84.1	1	66.8-134			0.450	20
1,2-Dibromo-3-Chloropropane	25.0	U	21.0	21.8	83.8	87.3	1	63.9-142			4.05	20.2
1,2-Dibromoethane	25.0	U	21.4	21.6	85.5	86.4	1	73.8-131			1.00	20
Dibromomethane	25.0	U	21.7	22.0	86.9	88.1	1	72.8-127			1.35	20
1,2-Dichlorobenzene	25.0	U	19.7	20.2	78.8	80.7	1	77.4-127			2.45	20
1,3-Dichlorobenzene	25.0	U	19.8	20.0	79.3	79.9	1	67.9-136			0.650	20
1,4-Dichlorobenzene	25.0	U	19.0	19.2	76.0	76.9	1	74.4-123			1.22	20
Dichlorodifluoromethane	25.0	U	14.9	14.9	59.4	59.6	1	42.2-146			0.350	20
1,1-Dichloroethane	25.0	U	19.9	20.1	79.8	80.4	1	64.0-134			0.850	20
1,2-Dichloroethane	25.0	U	22.4	22.6	89.5	90.3	1	60.7-132			0.930	20
1,1-Dichloroethene	25.0	0.515	20.5	20.9	80.1	81.3	1	48.8-144			1.50	20
cis-1,2-Dichloroethene	25.0	U	20.0	19.9	80.1	79.5	1	60.6-136			0.750	20
trans-1,2-Dichloroethene	25.0	U	17.2	17.9	68.7	71.6	1	61.0-132			4.06	20
1,2-Dichloropropane	25.0	U	20.8	21.2	83.3	85.0	1	69.7-130			2.01	20
1,1-Dichloropropene	25.0	U	20.3	20.4	81.3	81.6	1	61.5-136			0.300	20
1,3-Dichloropropane	25.0	U	21.3	22.3	85.4	89.4	1	74.3-123			4.62	20
cis-1,3-Dichloropropene	25.0	U	22.8	23.3	91.1	93.1	1	71.1-129			2.13	20
trans-1,3-Dichloropropene	25.0	U	22.9	23.8	91.7	95.4	1	66.3-136			3.97	20
2,2-Dichloropropane	25.0	U	22.3	21.0	89.0	83.9	1	54.9-142			5.93	20
Di-isopropyl ether	25.0	U	20.6	21.3	82.6	85.2	1	59.9-140			3.14	20
Ethylbenzene	25.0	U	20.3	20.2	81.2	80.9	1	62.7-136			0.370	20
Hexachloro-1,3-butadiene	25.0	U	19.9	19.4	79.6	77.7	1	61.1-144			2.39	20.1
Isopropylbenzene	25.0	U	20.3	20.3	81.1	81.3	1	67.4-136			0.160	20
p-Isopropyltoluene	25.0	U	21.2	20.9	84.9	83.4	1	62.8-143			1.81	20
2-Butanone (MEK)	125	U	120	133	95.9	106	1	45.0-156			10.3	20.8
Methylene Chloride	25.0	U	19.8	18.3	79.3	73.3	1	61.5-125			7.85	20
4-Methyl-2-pentanone (MIBK)	125	U	113	122	90.6	97.4	1	60.7-150			7.22	20

L841570-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841570-03 06/21/16 20:24 • (MS) R3144914-4 06/21/16 21:45 • (MSD) R3144914-5 06/21/16 22:05

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methyl tert-butyl ether	25.0	U	20.6	21.3	82.4	85.2	1	61.4-136			3.31	20
Naphthalene	25.0	U	19.4	20.7	77.6	82.9	1	61.8-143			6.58	20
n-Propylbenzene	25.0	U	20.2	20.3	80.7	81.0	1	63.2-139			0.330	20
Styrene	25.0	U	21.5	21.9	86.1	87.4	1	68.2-133			1.54	20
1,1,1,2-Tetrachloroethane	25.0	U	23.0	23.1	91.9	92.2	1	70.5-132			0.390	20
1,1,2,2-Tetrachloroethane	25.0	U	20.3	20.7	81.1	82.8	1	64.9-145			2.08	20
Tetrachloroethene	25.0	U	20.4	20.3	81.7	81.1	1	57.4-141			0.770	20
Toluene	25.0	U	19.2	19.3	76.8	77.4	1	67.8-124			0.670	20
1,1,2-Trichlorotrifluoroethane	25.0	U	21.3	21.2	85.3	84.8	1	53.7-150			0.570	20
1,2,3-Trichlorobenzene	25.0	U	20.8	21.6	83.2	86.6	1	65.7-143			4.02	20
1,1,1-Trichloroethane	25.0	U	21.4	20.7	85.7	83.0	1	58.7-134			3.20	20
1,2,4-Trichlorobenzene	25.0	U	20.4	21.2	81.8	84.6	1	67.0-146			3.43	20
1,1,2-Trichloroethane	25.0	U	20.8	21.5	83.1	85.9	1	74.1-130			3.38	20
Trichloroethene	25.0	U	20.5	20.5	82.1	82.1	1	48.9-148			0.0700	20
Trichlorofluoromethane	25.0	U	21.4	20.5	85.7	81.9	1	39.9-165			4.52	20
1,2,3-Trichloropropane	25.0	U	22.0	22.7	88.0	90.9	1	71.5-134			3.22	20
1,2,3-Trimethylbenzene	25.0	U	19.6	19.7	78.3	78.8	1	62.7-133			0.540	20
1,2,4-Trimethylbenzene	25.0	U	21.7	21.5	86.8	86.1	1	60.5-137			0.840	20
1,3,5-Trimethylbenzene	25.0	U	20.8	20.5	83.1	81.9	1	67.9-134			1.52	20
Vinyl chloride	25.0	U	18.9	18.9	75.7	75.6	1	44.3-143			0.120	20
Xylenes, Total	75.0	U	61.3	61.2	81.8	81.6	1	65.6-133			0.140	20
(S) Toluene-d8					*105*	*105*		*90.0-115*				
(S) Dibromofluoromethane					*102*	*102*		*79.0-121*				
(S) 4-Bromofluorobenzene					*103*	*101*		*80.1-120*				

Method Blank (MB)

(MB) R3145093-1 06/21/16 22:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Acrolein	U		8.87	50.0
Acrylonitrile	U		1.87	10.0
Benzene	U		0.331	1.00
Bromobenzene	U		0.352	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
n-Butylbenzene	U		0.361	1.00
sec-Butylbenzene	0.536	J	0.365	1.00
tert-Butylbenzene	0.757	J	0.399	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
2-Chloroethyl vinyl ether	U		3.01	50.0
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
2-Chlorotoluene	U		0.375	1.00
4-Chlorotoluene	U		0.351	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
Dibromomethane	U		0.346	1.00
1,2-Dichlorobenzene	0.402	J	0.349	1.00
1,3-Dichlorobenzene	0.328	J	0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
1,1-Dichloropropene	U		0.352	1.00
1,3-Dichloropropane	U		0.366	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
2,2-Dichloropropane	U		0.321	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00

Method Blank (MB)

(MB) R3145093-1 06/21/16 22:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	1.12		0.256	1.00
Isopropylbenzene	U		0.326	1.00
p-Isopropyltoluene	0.377	J	0.350	1.00
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	0.614	J	0.367	1.00
Naphthalene	1.35	J	1.00	5.00
n-Propylbenzene	U		0.349	1.00
1,1,1,2-Tetrachloroethane	U		0.385	1.00
1,1,2,2-Tetrachloroethane	0.328	J	0.130	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.780	5.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	1.16		0.230	1.00
1,2,4-Trichlorobenzene	0.903	J	0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
1,2,3-Trichloropropane	U		0.807	2.50
1,2,3-Trimethylbenzene	0.429	J	0.321	1.00
1,2,4-Trimethylbenzene	U		0.373	1.00
1,3,5-Trimethylbenzene	U		0.387	1.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*98.0*			*90.0-115*
(S) Dibromofluoromethane	*95.1*			*79.0-121*
(S) 4-Bromofluorobenzene	*91.7*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3145093-4 06/22/16 11:51 • (LCSD) R3145093-5 06/22/16 12:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	94.5	78.8	75.6	63.0	28.7-175			18.2	20.9
Acrolein	125	82.2	75.5	65.8	60.4	40.4-172			8.50	20
Acrylonitrile	125	123	111	98.4	88.7	58.2-145			10.5	20
Benzene	25.0	23.7	23.9	94.7	95.8	73.0-122			1.11	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3145093-4 06/22/16 11:51 • (LCSD) R3145093-5 06/22/16 12:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromobenzene	25.0	22.5	22.7	90.1	90.6	81.5-115			0.610	20
Bromodichloromethane	25.0	22.7	22.7	90.6	90.9	75.5-121			0.330	20
Bromoform	25.0	26.6	26.7	106	107	71.5-131			0.390	20
Bromomethane	25.0	35.0	35.2	140	141	22.4-187			0.540	20
n-Butylbenzene	25.0	21.8	22.5	87.3	89.9	75.9-134			2.95	20
sec-Butylbenzene	25.0	23.7	23.1	94.7	92.5	80.6-126			2.35	20
tert-Butylbenzene	25.0	24.5	23.5	97.9	93.9	79.3-127			4.12	20
Carbon tetrachloride	25.0	20.8	20.6	83.1	82.5	70.9-129			0.810	20
Chlorobenzene	25.0	26.4	26.1	106	104	79.7-122			1.25	20
Chlorodibromomethane	25.0	26.2	25.5	105	102	78.2-124			2.59	20
Chloroethane	25.0	30.3	30.7	121	123	41.2-153			1.12	20
2-Chloroethyl vinyl ether	125	154	149	123	119	23.4-162			3.15	23.5
Chloroform	25.0	22.4	22.9	89.5	91.6	73.2-125			2.24	20
Chloromethane	25.0	24.6	25.1	98.5	101	55.8-134			2.04	20
2-Chlorotoluene	25.0	26.1	26.6	104	107	76.4-125			2.18	20
4-Chlorotoluene	25.0	23.2	23.3	92.7	93.4	81.5-121			0.740	20
1,2-Dibromo-3-Chloropropane	25.0	23.6	22.2	94.6	88.9	64.8-131			6.14	20
1,2-Dibromoethane	25.0	26.0	25.7	104	103	79.8-122			0.920	20
Dibromomethane	25.0	25.2	24.2	101	96.6	79.5-118			4.13	20
1,2-Dichlorobenzene	25.0	23.1	23.3	92.5	93.1	84.7-118			0.670	20
1,3-Dichlorobenzene	25.0	24.7	24.7	98.9	98.8	77.6-127			0.0300	20
1,4-Dichlorobenzene	25.0	23.7	23.8	94.9	95.2	82.2-114			0.290	20
Dichlorodifluoromethane	25.0	28.9	29.1	116	117	56.0-134			0.680	20
1,1-Dichloroethane	25.0	22.9	23.6	91.6	94.3	71.7-127			2.95	20
1,2-Dichloroethane	25.0	21.2	21.2	84.8	84.8	65.3-126			0.0100	20
1,1-Dichloroethene	25.0	24.4	25.1	97.5	100	59.9-137			2.80	20
cis-1,2-Dichloroethene	25.0	24.7	25.0	98.8	100	77.3-122			1.38	20
trans-1,2-Dichloroethene	25.0	24.6	25.1	98.3	100	72.6-125			1.99	20
1,2-Dichloropropane	25.0	24.4	24.3	97.6	97.0	77.4-125			0.520	20
1,1-Dichloropropene	25.0	24.4	24.8	97.4	99.3	72.5-127			1.92	20
1,3-Dichloropropane	25.0	25.9	25.2	103	101	80.6-115			2.61	20
cis-1,3-Dichloropropene	25.0	25.6	24.8	102	99.1	77.7-124			3.20	20
trans-1,3-Dichloropropene	25.0	25.4	24.7	101	98.9	73.5-127			2.58	20
2,2-Dichloropropane	25.0	23.3	21.8	93.2	87.1	61.3-134			6.69	20
Di-isopropyl ether	25.0	21.0	20.7	84.0	82.8	65.1-135			1.50	20
Ethylbenzene	25.0	25.6	25.8	102	103	80.9-121			0.790	20
Hexachloro-1,3-butadiene	25.0	22.4	22.1	89.4	88.6	73.7-133			1.00	20
Isopropylbenzene	25.0	24.2	24.0	96.7	95.9	81.6-124			0.790	20
p-Isopropyltoluene	25.0	24.8	24.9	99.2	99.8	77.6-129			0.550	20
2-Butanone (MEK)	125	118	105	94.6	84.3	46.4-155			11.5	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3145093-4 06/22/16 11:51 • (LCSD) R3145093-5 06/22/16 12:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methylene Chloride	25.0	23.0	23.2	92.0	92.8	69.5-120			0.860	20
4-Methyl-2-pentanone (MIBK)	125	125	118	99.8	94.4	63.3-138			5.53	20
Methyl tert-butyl ether	25.0	22.9	20.9	91.5	83.7	70.1-125			8.82	20
Naphthalene	25.0	20.0	19.8	80.0	79.2	69.7-134			0.910	20
n-Propylbenzene	25.0	24.2	24.6	96.9	98.4	81.9-122			1.58	20
1,1,1,2-Tetrachloroethane	25.0	25.7	25.2	103	101	78.5-125			2.21	20
1,1,2,2-Tetrachloroethane	25.0	24.4	23.4	97.7	93.8	79.3-123			4.10	20
Tetrachloroethene	25.0	26.4	26.5	106	106	73.5-130			0.390	20
Toluene	25.0	24.0	24.0	96.1	95.9	77.9-116			0.200	20
1,1,2-Trichlorotrifluoroethane	25.0	24.3	23.8	97.1	95.2	62.0-141			1.96	20
1,2,3-Trichlorobenzene	25.0	20.3	20.8	81.1	83.3	75.7-134			2.58	20
1,2,4-Trichlorobenzene	25.0	22.0	22.3	87.8	89.3	76.1-136			1.70	20
1,1,1-Trichloroethane	25.0	21.2	20.5	84.7	82.0	71.1-129			3.23	20
1,1,2-Trichloroethane	25.0	24.9	24.3	99.4	97.4	81.6-120			2.08	20
Trichloroethene	25.0	25.6	25.6	102	102	79.5-121			0.0100	20
Trichlorofluoromethane	25.0	26.6	27.3	106	109	49.1-157			2.63	20
1,2,3-Trichloropropane	25.0	24.8	24.1	99.2	96.5	74.9-124			2.77	20
1,2,3-Trimethylbenzene	25.0	21.9	21.8	87.6	87.2	79.9-118			0.520	20
1,2,4-Trimethylbenzene	25.0	23.4	23.6	93.7	94.2	79.0-122			0.560	20
1,3,5-Trimethylbenzene	25.0	23.5	22.9	93.9	91.8	81.0-123			2.28	20
Vinyl chloride	25.0	26.6	27.6	106	110	61.5-134			3.49	20
Xylenes, Total	75.0	75.2	75.6	100	101	79.2-122			0.440	20
(S) Toluene-d8				*99.1*	*97.7*	*90.0-115*				
(S) Dibromofluoromethane				*97.7*	*98.4*	*79.0-121*				
(S) 4-Bromofluorobenzene				*90.7*	*91.9*	*80.1-120*				

L841435-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841435-07 06/22/16 02:42 • (MS) R3145093-2 06/22/16 08:30 • (MSD) R3145093-3 06/22/16 08:50

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	125	ND	42.5	40.0	34.0	32.0	1	25.0-156			6.01	21.5
Acrolein	125	ND	85.0	82.5	68.0	66.0	1	34.0-194			3.01	21.5
Acrylonitrile	125	ND	112	120	89.3	96.2	1	55.9-161			7.43	20
Benzene	25.0	ND	21.0	21.2	83.9	84.6	1	58.6-133			0.860	20
Bromobenzene	25.0	ND	19.5	20.5	78.0	81.8	1	70.6-125			4.74	20
Bromodichloromethane	25.0	ND	20.7	20.8	83.0	83.3	1	69.2-127			0.420	20
Bromoform	25.0	ND	24.0	26.3	95.9	105	1	66.3-140			9.35	20
Bromomethane	25.0	ND	25.2	25.5	101	102	1	16.6-183			1.18	20.5

L841435-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841435-07 06/22/16 02:42 • (MS) R3145093-2 06/22/16 08:30 • (MSD) R3145093-3 06/22/16 08:50

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
n-Butylbenzene	25.0	ND	18.6	19.2	74.6	76.8	1	64.8-145			2.97	20
sec-Butylbenzene	25.0	ND	20.1	21.8	80.2	87.2	1	66.8-139			8.31	20
tert-Butylbenzene	25.0	ND	20.5	22.8	81.9	91.2	1	67.1-138			10.7	20
Carbon tetrachloride	25.0	ND	18.4	19.3	73.5	77.2	1	60.6-139			4.93	20
Chlorobenzene	25.0	ND	22.8	24.0	91.2	95.9	1	70.1-130			5.00	20
Chlorodibromomethane	25.0	ND	23.2	24.2	92.9	96.9	1	71.6-132			4.29	20
Chloroethane	25.0	ND	24.3	23.7	97.2	95.0	1	33.3-155			2.31	20
2-Chloroethyl vinyl ether	125	ND	ND	ND	0.000	0.000	1	5.00-149	J6	J6	0.000	40
Chloroform	25.0	ND	20.9	20.8	83.4	83.2	1	66.1-133			0.310	20
Chloromethane	25.0	ND	16.4	16.5	65.6	66.0	1	40.7-139			0.600	20
2-Chlorotoluene	25.0	ND	22.5	23.7	90.1	94.9	1	66.9-134			5.16	20
4-Chlorotoluene	25.0	ND	19.9	20.8	79.4	83.3	1	66.8-134			4.71	20
1,2-Dibromo-3-Chloropropane	25.0	ND	21.3	22.6	85.3	90.6	1	63.9-142			6.03	20.2
1,2-Dibromoethane	25.0	ND	22.8	24.2	91.2	96.9	1	73.8-131			6.11	20
Dibromomethane	25.0	ND	21.5	22.2	85.8	88.7	1	72.8-127			3.26	20
1,2-Dichlorobenzene	25.0	ND	20.6	21.0	82.3	84.1	1	77.4-127			2.09	20
1,3-Dichlorobenzene	25.0	ND	21.1	22.3	84.3	89.2	1	67.9-136			5.70	20
1,4-Dichlorobenzene	25.0	ND	20.7	21.1	82.9	84.5	1	74.4-123			1.90	20
Dichlorodifluoromethane	25.0	ND	17.8	18.1	71.1	72.2	1	42.2-146			1.63	20
1,1-Dichloroethane	25.0	ND	20.9	21.1	83.5	84.4	1	64.0-134			1.14	20
1,2-Dichloroethane	25.0	ND	19.5	19.7	77.9	78.7	1	60.7-132			1.04	20
1,1-Dichloroethene	25.0	ND	20.3	20.7	81.0	82.6	1	48.8-144			1.94	20
cis-1,2-Dichloroethene	25.0	21.1	43.2	44.3	88.5	92.8	1	60.6-136			2.46	20
trans-1,2-Dichloroethene	25.0	ND	20.9	21.0	83.7	84.0	1	61.0-132			0.300	20
1,2-Dichloropropane	25.0	1.07	21.4	22.1	81.4	83.9	1	69.7-130			2.92	20
1,1-Dichloropropene	25.0	ND	20.5	20.8	82.1	83.3	1	61.5-136			1.49	20
1,3-Dichloropropane	25.0	ND	22.9	23.7	91.5	94.9	1	74.3-123			3.73	20
cis-1,3-Dichloropropene	25.0	ND	21.3	21.5	85.1	86.0	1	71.1-129			0.990	20
trans-1,3-Dichloropropene	25.0	ND	21.2	21.8	82.5	84.8	1	66.3-136			2.60	20
2,2-Dichloropropane	25.0	ND	21.1	21.4	84.4	85.4	1	54.9-142			1.19	20
Di-isopropyl ether	25.0	ND	18.8	19.4	75.1	77.6	1	59.9-140			3.23	20
Ethylbenzene	25.0	ND	21.8	22.7	87.2	90.7	1	62.7-136			3.93	20
Hexachloro-1,3-butadiene	25.0	ND	18.1	19.5	72.2	77.9	1	61.1-144			7.53	20.1
Isopropylbenzene	25.0	ND	20.6	22.0	82.4	88.1	1	67.4-136			6.68	20
p-Isopropyltoluene	25.0	ND	20.8	22.6	83.2	90.4	1	62.8-143			8.27	20
2-Butanone (MEK)	125	ND	73.4	77.1	58.8	61.7	1	45.0-156			4.90	20.8
Methylene Chloride	25.0	ND	20.7	20.8	82.7	83.1	1	61.5-125			0.510	20
4-Methyl-2-pentanone (MIBK)	125	ND	108	115	86.7	91.9	1	60.7-150			5.79	20
Methyl tert-butyl ether	25.0	ND	20.0	22.1	76.8	85.4	1	61.4-136			10.2	20
Naphthalene	25.0	ND	16.7	18.7	67.0	74.8	1	61.8-143			11.1	20

L841435-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841435-07 06/22/16 02:42 • (MS) R3145093-2 06/22/16 08:30 • (MSD) R3145093-3 06/22/16 08:50

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
n-Propylbenzene	25.0	ND	20.9	22.0	83.6	88.1	1	63.2-139			5.17	20
1,1,1,2-Tetrachloroethane	25.0	ND	22.8	24.4	91.2	97.4	1	70.5-132			6.64	20
1,1,2,2-Tetrachloroethane	25.0	ND	22.2	24.3	88.7	97.0	1	64.9-145			8.96	20
Tetrachloroethene	25.0	ND	21.6	23.0	86.4	92.1	1	57.4-141			6.38	20
Toluene	25.0	ND	20.3	20.8	81.3	83.3	1	67.8-124			2.43	20
1,1,2-Trichlorotrifluoroethane	25.0	ND	21.9	22.6	87.8	90.4	1	53.7-150			2.91	20
1,2,3-Trichlorobenzene	25.0	ND	16.2	18.0	65.0	72.1	1	65.7-143	J6		10.4	20
1,2,4-Trichlorobenzene	25.0	ND	17.3	18.5	69.2	74.0	1	67.0-146			6.67	20
1,1,1-Trichloroethane	25.0	ND	19.1	19.6	76.5	78.5	1	58.7-134			2.56	20
1,1,2-Trichloroethane	25.0	ND	22.3	23.5	89.1	94.0	1	74.1-130			5.28	20
Trichloroethene	25.0	91.5	102	108	43.0	66.3	1	48.9-148	J6		5.54	20
Trichlorofluoromethane	25.0	ND	22.2	22.5	88.8	89.8	1	39.9-165			1.08	20
1,2,3-Trichloropropane	25.0	ND	21.9	23.9	87.5	95.4	1	71.5-134			8.64	20
1,2,3-Trimethylbenzene	25.0	ND	19.2	19.6	76.9	78.5	1	62.7-133			2.06	20
1,2,4-Trimethylbenzene	25.0	ND	19.8	20.9	79.4	83.6	1	60.5-137			5.18	20
1,3,5-Trimethylbenzene	25.0	ND	19.6	20.9	78.4	83.4	1	67.9-134			6.20	20
Vinyl chloride	25.0	ND	19.5	19.5	76.6	76.5	1	44.3-143			0.0600	20
Xylenes, Total	75.0	ND	64.3	67.7	85.8	90.3	1	65.6-133			5.16	20
(S) Toluene-d8					*96.4*	*95.2*		*90.0-115*				
(S) Dibromofluoromethane					*98.4*	*98.0*		*79.0-121*				
(S) 4-Bromofluorobenzene					*88.5*	*93.3*		*80.1-120*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3145059-1 06/21/16 18:32

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.780	5.00
(S) Toluene-d8	*103*			*90.0-115*
(S) Dibromofluoromethane	*90.9*			*79.0-121*
(S) 4-Bromofluorobenzene	*105*			*80.1-120*
(S) α,α,α-Trifluorotoluene	*103*			*90.4-116*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3145059-4 06/22/16 11:10 • (LCSD) R3145059-5 06/22/16 11:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Toluene	25.0	22.4	26.4	89.7	105	77.9-116			16.1	20
(S) Toluene-d8				*100*	*103*	*90.0-115*				
(S) Dibromofluoromethane				*87.3*	*88.3*	*79.0-121*				
(S) 4-Bromofluorobenzene				*103*	*105*	*80.1-120*				
(S) α,α,α-Trifluorotoluene				*102*	*103*	*90.4-116*				

L841531-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L841531-02 06/21/16 23:34 • (MS) R3145059-2 06/22/16 08:27 • (MSD) R3145059-3 06/22/16 08:50

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Toluene	25.0	ND	22.7	24.8	90.8	99.0	1	67.8-124			8.73	20
(S) Toluene-d8					*102*	*102*		*90.0-115*				
(S) Dibromofluoromethane					*87.8*	*88.1*		*79.0-121*				
(S) 4-Bromofluorobenzene					*105*	*103*		*80.1-120*				
(S) α,α,α-Trifluorotoluene					*103*	*103*		*90.4-116*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

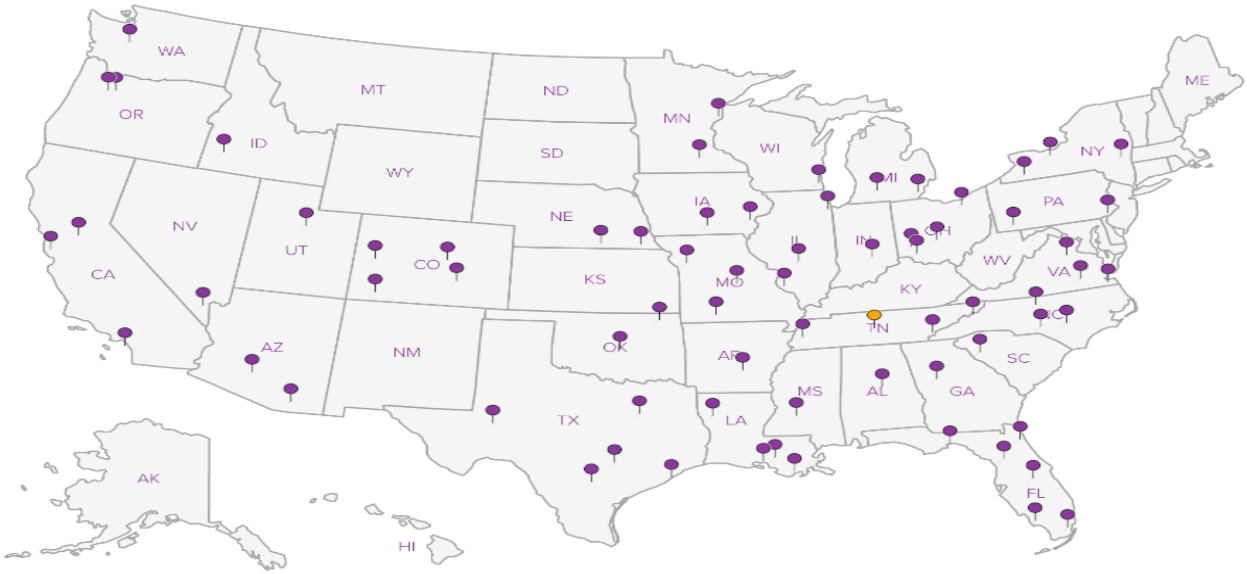
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project #: FMMD1008

Lab Project #

Collected by (print): KS

Site/Facility ID #

P.O. #: GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ✓ Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

ESC LABORATORIES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L841606

J010

Acctnum:
Template:
Prelogin:
TSR:
PB:

Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH-GRO via 8015	BTEX, MTBE, Naphthalene via 8021	VOCs via 8260	Rem./Contaminant	Sample # (lab only)
MW01A	Grab	GW		06/13/16	1135	4	X	X			-01
MW02	Grab	GW		06/1316	1331	4	X	X			-02
MW03	Grab	GW		06/13/16	1155	4	X	X			-03
MW04	Grab	GW		06/13/16	1350	4	X	X			-04
MW05	Grab	GW		06/13/16	1405	4	X	X			-05
MW06	Grab	GW		06/13/16	1332	4	X	X			-06
MW07	Grab	GW		06/13/16	1112	4	X	X			-07
MW08	Grab	GW		06/13/16	1145	4	X	X			-08
MW09	Grab	GW		06/13/16	1205	4	X	X			-09
MW10	Grab	GW		06/13/16	1222	4	X	X			-10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

6645 0393 3533

Remarks: PAGE 1 of 4

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
[signature]	6-14-16	0930	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)
			[signature]

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 1.4 °C Bottles Received: 132 = VP

Date: 6-15-16 Time: 0900

Hold #

Condition: DB9 (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project # FMMD1008

Lab Project #

L# L841606

Table #

Collected by (print): KS

Site/Facility ID #

P.O. # GREENENVA120914S

Acctnum:
Template:
Prelogin:
TSR:
PB:

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH-GRO via 8015	BTEX, MTBE, Naphthalene via 8021	VOCs via 8260								Rem./Contaminant	Sample # (lab only)
MW11	Grab	GW		06/13/16	1240	4	X	X										-11
MW12	Grab	GW		06/1316	1050	4	X	X										-12
MW13	Grab	GW		06/13/16	1435	4	X	X										-13
MW14	Grab	GW		06/13/16	1321	4	X	X										-14
MW15	Grab	GW		06/13/16	1205	4	X	X										-15
MW16	Grab	GW		06/13/16	1128	4	X	X										-16
MW17	Grab	GW		06/13/16	1110	4	X	X										-17
MW18	Grab	GW		06/13/16	1315	4	X	X										-18
MW19	Grab	GW		06/13/16	1225	4	X	X										-19
MW20	Grab	GW		06/13/16	1258	4	X	X										-20

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks: PAGE 2 of 4

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ ____	Condition: (lab use only)
	6-14-16	0930			OK
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.4 °C Bottles Received: 132VP	COC Seal Intact: ✓ Y ___N ___NA
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 6-15-16 Time: 0900	pH Checked: NCF:

Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

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Phone: 540-483-3311
Fax: 540-483-3381

Client Project #: FMMD1008

Lab Project #

Collected by (print): KS

Site/Facility ID #

P.O. #: GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABS SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L841606

Table #

Acctnum:
Template:
Prelogin:
TSR:
PB:

Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH-GRO via 8015	BTEX, MTBE, Naphthalene via 8021	VOCs via 8260								Rem./Contaminant	Sample # (lab only)
MW21	Grab	GW		06/13/16	1215	4	X	X										-21
MW22	Grab	GW		06/1316	1300	4	X	X										-22
MW23	Grab	GW		06/13/16	1100	4	X	X										-23
MW24	Grab	GW		06/13/16	1120	4	X	X										-24
MW25	Grab	GW		06/13/16	1312	4	X	X										-25
MW26	Grab	GW		06/13/16	1145	4	X	X										-26
MW27	Grab	GW		06/13/16	1040	4	X	X										-27
MW28	Grab	GW		06/13/16	1245	4	X	X										-28
DW01	Grab	GW		06/13/16	1455	4			X									-29
DW07	Grab	GW		06/13/16	1520	4			X									-30

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks: PAGE 3 of 4

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ ____	Condition: (lab use only)
[signature]	6-14-16	0930			DNG
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.4 °C Bottles Received: 1324P	OK
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 6-15-16 Time: 0900	pH Checked: NCF:

COC Seal Intact: ___Y ___N ___NA

Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project #: FMMD1008

Lab Project #

Collected by (print): KS

Site/Facility ID #

P.O. #: GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABS SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L841606

Table #

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH-GRO via 8015	BTEX, MTBE, Naphthalene via 8021	VOCs via 8260								Rem./Contaminant	Sample # (lab only)
DW13	Grab	GW		06/13/16	1530	4			X									-31
DW14	Grab	GW		06/1316	1525	4			X									-32
DW17	Grab	GW		06/13/16	1515	4			X									-33

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____

Remarks: PAGE 4 of 4

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ ____	Condition: (lab use only)
	6-14-16	0930			DB9
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.4 °C Bottles Received: 132	COC Seal Intact: ___Y ___N ___NA ok
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 6-15-16 Time: 0900	pH Checked: NCF:

APPENDIX D

Air Exhaust Stream Data

VA DEQ Stationary Source Permit to Construct and Operate
Monthly Air Emissions Calculations

COMMONWEALTH of VIRGINIA

David K. Paylor
Director

Molly Joseph Ward
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Blue Ridge Regional Office
www.deq.virginia.gov

Robert J. Weld
Regional Director

Lynchburg Office
7705 Timberlake Road
Lynchburg, Virginia 24502
(434) 582-5120
Fax (434) 582-5125

Roanoke Office
3019 Peters Creek Road
Roanoke, Virginia 24019
(540) 562-6700
Fax (540) 562-6725

October 20, 2015

Mr. Marshall Adam Flora
Project Manager
Greene Environmental Services, LLC
200 Buckwheat Lane
Rocky Mount, VA 24151

Location: Patrick County, VA
Registration No.: 21600

Dear Mr. Flora:

Attached is a permit to construct and operate a dual phase extraction system in accordance with the provisions of the Virginia Regulations for the Control and Abatement of Air Pollution.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on October 13, 2015.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and/or civil charges. Please read all permit conditions carefully.

This permit approval to construct and operate shall not relieve the Meadows of Dan Food Market of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-200 provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever

occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
P. O. Box 10009
Richmond, VA 23240-0009

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact Margaret O. Wagner at 540-562-6700.

Sincerely,

Robert J. Weld
Regional Director

Attachment: Permit

cc: Frank Adams, Air Compliance Manager

COMMONWEALTH of VIRGINIA

David K. Paylor
Director

Molly Joseph Ward
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Blue Ridge Regional Office
www.deq.virginia.gov

Robert J. Weld
Regional Director

Lynchburg Office
7705 Timberlake Road
Lynchburg, Virginia 24502
(434) 582-5120
Fax (434) 582-5125

Roanoke Office
3019 Peters Creek Road
Roanoke, Virginia 24019
(540) 562-6700
Fax (540) 562-6725

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

The Meadows of Dan Food Market
2609 Jeb Stuart Highway
Meadows of Dan, VA 24120
Registration No.: 21600

is authorized to construct and operate

a dual-phase extraction system

located at

the Meadows of Dan Food Market at 2609 Jeb Stuart Highway,
Meadows of Dan, VA

in accordance with the Conditions of this permit.

Approved on October 20, 2015

Robert J. Weld
Regional Director

Permit consists of 6 pages.
Permit Conditions 1 to 16.

INTRODUCTION

This permit approval is based on the permit application dated June 30, 2015 with supplemental information received on August 6, 2015, August 28, 2015 and October 13, 2015. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-20 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the Virginia Department of Environmental Quality (DEQ) or the State Air Pollution Control Board (Board) for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

Equipment List - Equipment at this facility consists of:

Equipment to be Constructed			
Reference No.	**Equipment Description**	**Rated Capacity**	**Federal Requirements**
DPE - 1	Dual Phase Extraction System equipped with a 3-Ohio Medical Corporation rotary claw vacuum pumps (operated in parallel)	765 ACFM at 15" Hg vacuum	N/A
2	4 tray-EZ Tray Steel Air Stripper	25 gpm 140 SCFM	

Specifications included in the above table are for informational purposes only and do not form enforceable terms or conditions of the permit.
(9 VAC 80-1180 D 3)

PROCESS REQUIREMENTS

1. **VOC Work Practice Standards** – At all times the disposal of volatile organic compounds shall be accomplished by taking measures, to the extent practicable, consistent with air pollution control practices for minimizing emissions. Volatile organic compounds shall not be intentionally spilled, discarded in sewers which are not connected to a treatment plant, or stored in open containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution practices for minimizing emissions.
(9 VAC 5-80-1180 and 9 VAC 5-50-20 F)

2. **Emissions Monitoring** – Sampling of the exhaust stream from the DPE shall be conducted and mass removal calculations shall be performed monthly to determine compliance with the emissions limit in Condition 4.
(9 VAC 5-80-1180 and 9 VAC 5-50-30 F)

3. **Emissions Testing** – The DPE shall be constructed to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the equipment such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. Sampling ports shall be provided when requested at the appropriate locations and safe sampling platforms and access shall be provided.
(9 VAC 5-80-1180 and 9 VAC 5-50-30 F)

EMISSION LIMITS

4. **Process Emission Limits** - Emissions from the operation of the DPE shall not exceed the limits specified below:

Volatile Organic Compounds	65 tons/yr

The annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months. Compliance with this emission limit may be determined as stated in Condition 6.
(9 VAC 5-80-1180)

5. **Visible Emission Limit** - Visible emissions from the DPE shall not exceed five percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed ten percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A. This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

RECORDS

6. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Blue Ridge Regional Office. These records shall include, but are not limited to:

   a. Monthly and annual VOC emissions from the DPE to verify compliance with the ton/yr emission limitation in Condition 4. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months. VOC emissions shall be calculated using methods approved in Attachment A to this permit.

   b. Notifications required in Condition 7.

   These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
   (9 VAC 5-80-1180 and 9 VAC 5-50-50)

NOTIFICATIONS

7. **Initial Notifications** - The permittee shall furnish written notification to the Blue Ridge Regional Office of:

   a. The actual date on which construction of the DPE commenced within 30 days after such date.

   b. The actual start-up date of the DPE within 15 days after such date.

   (9 VAC 5-80-1180 and 9 VAC 5-50-50)

GENERAL CONDITIONS

8. **Permit Invalidation** – This permit to construct the DPE shall become invalid, unless an extension is granted by the DEQ, if:

   a. A program of continuous construction is not commenced within 18 months from the date of this permit; or,

   b. A program of construction is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

   (9 VAC 5-80-1210)

9. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:

   a. Knowingly makes material misstatements in the permit application or any amendments to it;

   b. Fails to comply with the conditions of this permit;

   c. Fails to comply with any emission standards applicable to a permitted emissions unit;

   d. Causes emissions from the stationary source which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard; or

   e. Fails to operate in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time an application for this permit is submitted.

   (9 VAC 5-80-1210 F)

10. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

    a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

    b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

    c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

    d. To sample or test at reasonable times.

    For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
    (9 VAC 5-170-130 and 9 VAC 5-80-1180)

11. **Maintenance/Operating Procedures** – At all times, including periods of start-up, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.
    (9 VAC 5-50-20 E and 9 VAC 5-80-1180 D)

12. **Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.
(9 VAC 5-20-180 J and 9 VAC 5-80-1180 D)

13. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Blue Ridge Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Blue Ridge Regional Office.
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

14. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9 VAC 5-20-180 I and 9 VAC 5-80-1180)

15. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Regional Director, Blue Ridge Regional Office of the change of ownership within 30 days of the transfer.
(9 VAC 5-80-1240)

16. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
(9 VAC 5-80-1180)

CALCULATION SHEET
MONTHLY AIR EMISSIONS

PROBLEM:

Calculate the monthly air emissions as required by the VA DEQ Stationary Source Permit to Construct and Operate. As stated in the permit emissions from the operation of the DPE remediation system will not exceed 65 tons per year.

GIVEN:

Rotary Claw Pump Exhaust Average Air Sample Results

Air Stripper Exhaust Average Air Sample Results

Approximate RCP Exhaust Flow Rates

Approximate Air Stripper Flow Rates

Hours of operation

Conversion factor: $\frac{1mg}{M^3} = \frac{2.2046226218e{-6}\ \text{lbs}}{35.314\,666\,721\ \text{ft}^3}$

SOLUTION:

Using the site-specific information collected during operation of the DPE remediation system, monthly emissions have been calculated.

Table 1.

Monthly Emissions Calculations

Reporting Period	System Component	Calculated Monthly Emissions (tons)	Total Monthly Emissions (tons)	Total Emissions to Date (tons)	Predicted Total Annual Emissions (tons)	Annual Exemption Rate (tons/year)
02/22/16-02/29/16	RCP Exhaust	0.66	0.68	0.68	8.16	65
	Air Stripper Exhaust	0.015				
03/01/16-03/31/16	RCP Exhaust	4.42	4.46	5.14	30.84	65
	Air Stripper Exhaust	0.038				
04/01/16-04/30/16	RCP Exhaust	4.88	4.91	10.05	40.20	65
	Air Stripper Exhaust	0.025				

CALCULATION SHEET
MONTHLY AIR EMISSIONS

Table 1 (Cont'd).

Monthly Emissions Calculations

Reporting Period	System Component	Calculated Monthly Emissions (tons)	Total Monthly Emissions (tons)	Total Emissions to Date (tons)	Predicted Total Annual Emissions (tons)	Annual Exemption Rate (tons/year)
05/01/16-05/31/16	RCP Exhaust	2.54	2.55	12.60	37.80	65
	Air Stripper Exhaust	0.007				
06/01/16-06/30/16	RCP Exhaust	1.64	1.65	14.25	34.20	65
	Air Stripper Exhaust	0.006				

(Calculations performed in Excel Spreadsheet)

Note: These calculations should be considered estimates as they are an extrapolation of lab data representing a few seconds of exhaust flow over multiday exhaust discharges.

APPENDIX E

General VPDES Permit VAG83

VA DEQ Coverage Letter Dated June 2, 2015
CAP IMP SP3 Discharge Monitoring Reports

COMMONWEALTH of VIRGINIA

David K. Paylor
Director

Molly Joseph Ward
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Blue Ridge Regional Office
www.deq.virginia.gov

Robert J. Weld
Regional Director

Lynchburg Office
7705 Timberlake Road
Lynchburg, Virginia 24502
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Fax (434) 582-5125

Roanoke Office
3019 Peters Creek Road
Roanoke, Virginia 24019
(540) 562-6700
Fax (540) 562-6725

June 2, 2015

Mr. Marshall Adam Flora
Project Manager
Greene Environmental Services, LLC
129 Bunny Ridge Lane
Rocky Mount, VA 24151

RE: Coverage under the General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests, VAG830483, Meadows of Dan Food Market, 2609 Jeb Stuart Highway, Meadows of Dan, PC 2014-2256

Dear Mr. Flora;

We have reviewed your Registration Statement received on May 26, 2015, and determined that the discharge outlined on that statement is hereby covered under the referenced general VPDES permit. The effective date of your coverage under this general permit is the date of this letter. The enclosed copy of the general permit contains the applicable effluent limitations, monitoring requirements and other conditions of coverage.

The permit requires effluent sampling on a monthly basis and reporting on a monthly basis. Discharge Monitoring Reports (DMRs) that you may use to report sampling results are enclosed. You are responsible for making additional copies of the DMR as needed. Separate DMRs must be completed for each permitted outfall and DMRs must be submitted for each outfall regardless of whether a discharge from that outfall occurred during the previous month. If a discharge did not occur from a particular outfall during the previous month, please write "no discharge" on the DMR. You are required to submit completed DMRs by the 10th of each month to:

Cathy Kibler
VA DEQ
3019 Peters Creek Road
Roanoke, VA 24019

Information provided on the registration statement indicates that wastewater will be discharged through a treatment works. Within 30 days of the date of this letter, you are required to develop and maintain on site an Operation and Maintenance (O&M) Manual for this permitted treatment works (see Part I.B.3 of the Permit).

This general permit will expire on February 28, 2018. The conditions of the permit require that you submit a new registration statement no later than 30 days prior to the date of permit expiration if you wish to continue coverage under the permit.

If you wish to terminate permit coverage for inactive outfalls or the entire site, please fill out the enclosed Termination of Coverage Request form and send it to Lewis Pillis at the address for the Roanoke office listed above.

Please review the enclosed materials carefully. If you have any questions, please contact Lewis Pillis at lewis.pillis@deq.virginia.gov or at 540-562-6789.

Sincerely,

Kip D. Foster
Water Permit Manager

Enclosures:
Discharge Monitoring Report
VPDES Permit No. VAG830483
Termination of Coverage Request form

cc: Lewis Pillis, DEQ, BRRO-R (electronic)
Doug Carl, DEQ, BRRO-R (electronic)

06/01/2015

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

PETROLEUM DISCHARGE PERMIT

DISCHARGE MONITORING REPORT(DMR)

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Meadows Of Dan Food Mart

ADDRESS

FACILITY LOCATION 2609 JEB Stuart Hwy
Meadows Of Dan VA 24120

VAG830483	001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2016	04	01	TO	2016	04	30

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)

Blue Ridge Regional Office
3019 Peters Creek Road
Roanoke VA 24019

NOTE: **READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM**

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTED	*********	8,410	GPD	*********	*********	*********			1/M	EST
	REQUIREMENT	*********	NL	GPD	*********	*********	*********			1/M	EST
002 pH	REPORTED	*********	*********		6.15	*********	6.15	SU	0	1/M	GRAB
	REQUIREMENT	*********	*********		6.0	*********	9.0	SU		1/M	GRAB
146 ETHANOL	REPORTED	*********	*********		*********	*********	76.1	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	4100.0	UG/L		1/M	GRAB
172 ETHYLBENZENE	REPORTED	*********	*********		*********	*********	ND	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	4.3	UG/L		1/M	GRAB
216 BENZENE (AS C6H6)	REPORTED	*********	*********		*********	*********	ND	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	12.0	UG/L		1/M	GRAB
222 TOLUENE (AS C7H8)	REPORTED	*********	*********		*********	*********	ND	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	43.0	UG/L		1/M	GRAB
331 METHYL-TERT-BUTYL ETHER	REPORTED	*********	*********		*********	*********	281	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	440.0	UG/L		1/M	GRAB
745 TOTAL XYLENES	REPORTED	*********	*********		*********	*********	ND	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	33.0	UG/L		1/M	GRAB

Additional DMR Comments:

ND = Non Detected at laboratory reported detection limit.

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)	OPERATOR IN RESPONSIBLE CHARGE			DATE		
	NA	NA	NA	Marshall Adam Flora	Marshall A Flora	NA	2016	05	09
				TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
				PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
				Marshall Adam Flora	Marshall A Flora	(540) 483-3311	2016	05	09
				TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	495		31.4	100	1	04/14/2016 03:06	WG864513
(S) a,a,a-Trifluorotoluene(FID)	*99.0*			*62.0-128*		*04/14/2016 03:06*	WG864513

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	04/19/2016 08:59	WG864980
Ethylbenzene	U		7.68	20.0	20	04/20/2016 08:43	WG866044
Methyl tert-butyl ether	281		7.34	20.0	20	04/20/2016 08:43	WG866044
Naphthalene	U		20.0	100	20	04/20/2016 08:43	WG866044
Toluene	U		15.6	100	20	04/20/2016 08:43	WG866044
Xylenes, Total	U		21.2	60.0	20	04/20/2016 08:43	WG866044
Ethanol	76.1	J	42.0	500	1	04/19/2016 08:59	WG864980
(S) Toluene-d8	*102*			*90.0-115*		*04/19/2016 08:59*	WG864980
(S) Dibromofluoromethane	*98.4*			*79.0-121*		*04/19/2016 08:59*	WG864980
(S) a,a,a-Trifluorotoluene	*98.8*			*90.4-116*		*04/19/2016 08:59*	WG864980
(S) 4-Bromofluorobenzene	*99.5*			*80.1-120*		*04/19/2016 08:59*	WG864980

Sample Narrative:

8260B L829271-04 WG866044: Target compounds too high to run at a lower dilution.

Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project # FMMD1008

Lab Project #

Collected by (print): AF

Site/Facility ID #

P.O. # GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L829271
Table D188
Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, MTBE via Method 18	TVPH via Method 18	BTEX, MTBE, Naphthalene, Ethanol via V8260	TPH-GRO via 8015	Rem./Contaminant	Sample # (lab only)
RCP08	Grab	Air		04/11/16	1010	1	X	X				-01
INF07	Grab	GW		04/11/16	1020	6			X	X		-02
MID01	Grab	GW		04/11/16	1030	6			X	X		-03
EFF07	Grab	GW		04/11/16	1040	6			X	X		-04

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks: 6645-0393-3496

Hold #

Condition: (lab use only) JW 7 OK

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Carl Harris	4/12/16	0150a	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Jessica Rotie

Samples returned via: ☐ UPS ✓ FedEx ☐ Courier ☐ _____

Temp: 3.1 °C Bottles Received: 18+ Tedlar

Date: 4-13-16 Time: 9:00

COC Seal Intact: ✓ Y ___N ___NA

pH Checked: NCF:

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	su				
pH	6.15		1	04/28/2016 13:22	WG867940

Sample Narrative:

9040C L832036-02 WG867940: 6.15 at 20.2c

Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project # FMMD1008

Lab Project #

Collected by (print): AF

Site/Facility ID #

P.O. # GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L832036

G052

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, MTBE via Method 18	TVPH via Method 18	pH	VOCs via 8260	Rem./Contaminant	Sample # (lab only)
RCP09	Grab	Air		04/25/16	1050	1	X	X				-01
EFF07	Grab	GW		04/25/16	1045	1			X			-02
DW23	Grab	GW		04/25/16	1515	4				X		-03

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
[signature]	4-27-16	1000	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
			[signature]
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 3.1 °C Bottles Received: 6

Date: 4/28/16 Time: 900

Condition: (lab use only) OK JW7

COC Seal Intact: ____Y ____N ____NA

pH Checked: NCF:

06/01/2015

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

PETROLEUM DISCHARGE PERMIT

DISCHARGE MONITORING REPORT(DMR)

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Meadows Of Dan Food Mart

ADDRESS

FACILITY LOCATION 2609 JEB Stuart Hwy
Meadows Of Dan VA 24120

VAG830483	001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2016	05	01	TO	2016	05	31

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)

Blue Ridge Regional Office
3019 Peters Creek Road
Roanoke VA 24019

NOTE: **READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM**

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTED	*********	5,240	GPD	*********	*********	*********			1/M	EST
	REQUIREMENT	*********	NL	GPD	*********	*********	*********			1/M	EST
002 pH	REPORTED	*********	*********		6.14	*********	6.14	SU	0	1/M	GRAB
	REQUIREMENT	*********	*********		6.0	*********	9.0	SU		1/M	GRAB
146 ETHANOL	REPORTED	*********	*********		*********	*********	ND	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	4100.0	UG/L		1/M	GRAB
172 ETHYLBENZENE	REPORTED	*********	*********		*********	*********	ND	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	4.3	UG/L		1/M	GRAB
216 BENZENE (AS C6H6)	REPORTED	*********	*********		*********	*********	ND	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	12.0	UG/L		1/M	GRAB
222 TOLUENE (AS C7H8)	REPORTED	*********	*********		*********	*********	1.22	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	43.0	UG/L		1/M	GRAB
331 METHYL-TERT-BUTYL ETHER	REPORTED	*********	*********		*********	*********	121	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	440.0	UG/L		1/M	GRAB
745 TOTAL XYLENES	REPORTED	*********	*********		*********	*********	1.4	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	33.0	UG/L		1/M	GRAB

Additional DMR Comments:

ND = Non Detected at laboratory reported detection limit.

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)
	NA	NA	NA

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OPERATOR IN RESPONSIBLE CHARGE			DATE		
Marshall Adam Flora	Marshall A Flora	NA	2016	06	02
TYPED OR PRINTED NAME	**SIGNATURE**	**CERTIFICATE NO.**	**YEAR**	**MO.**	**DAY**
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		**TELEPHONE**			
Marshall Adam Flora	Marshall A Flora	(540) 483-3311	2016	06	02
TYPED OR PRINTED NAME	**SIGNATURE**		**YEAR**	**MO.**	**DAY**

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.14		1	05/12/2016 17:03	WG871701

Sample Narrative:

9040C L834537-04 WG871701: 6.14 at 15.0c

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	122		31.4	100	1	05/12/2016 13:52	WG871828
(S) α,α,α-Trifluorotoluene(FID)	*100*			*62.0-128*		*05/12/2016 13:52*	WG871828

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	05/14/2016 05:27	WG872092
Ethylbenzene	U		0.384	1.00	1	05/14/2016 05:27	WG872092
Naphthalene	U		1.00	5.00	1	05/14/2016 05:27	WG872092
Toluene	1.22	J	0.780	5.00	1	05/14/2016 05:27	WG872092
Xylenes, Total	1.40	J	1.06	3.00	1	05/14/2016 05:27	WG872092
Ethanol	U		42.0	100	1	05/14/2016 05:27	WG872092
Methyl tert-butyl ether	121		0.367	1.00	1	05/14/2016 05:27	WG872092
(S) Toluene-d8	*99.2*			*90.0-115*		*05/14/2016 05:27*	WG872092
(S) Dibromofluoromethane	*94.7*			*79.0-121*		*05/14/2016 05:27*	WG872092
(S) 4-Bromofluorobenzene	*89.8*			*80.1-120*		*05/14/2016 05:27*	WG872092

Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project #: FMMD1008

Lab Project #

Collected by (print): AF

Site/Facility ID #

P.O. #: GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L834537
I121

Acctnum:
Template:
Prelogin:
TSR:
PB:

Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, MTBE via Method 18	TVPH via Method 18	BTEX, MTBE, Ethanol via V8260	TPH-GRO via 8015	pH						Rem./Contaminant	Sample # (lab only)
RCP09	Grab	Air		05/10/16	1610	1	X	X										-01
INF08	Grab	GW		05/10/16	1620	6			X	X								02
MID02	Grab	GW		05/10/16	1625	6			X	X								03
EFF08	Grab	GW		05/10/16	1630	7			X	X	X							04

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____

Flow _____ Other _____

6615 0393 3511

Remarks:

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Chris Hunter	5/10/16	1400	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Ile Jones

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 2.1°C °C Bottles Received: 20

Date: 5/11/16 Time: 0900

Condition: (lab use only) Toll

COC Seal Intact: ___ Y ___ N ___ NA

pH Checked:

NCF:

06/01/2015

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

PETROLEUM DISCHARGE PERMIT

DISCHARGE MONITORING REPORT(DMR)

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Meadows Of Dan Food Mart

ADDRESS

FACILITY LOCATION 2609 JEB Stuart Hwy
Meadows Of Dan VA 24120

VAG830483	001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2016	06	01	TO	2016	06	30

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)

Blue Ridge Regional Office
3019 Peters Creek Road
Roanoke VA 24019

NOTE: **READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM**

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTED	*********	5,240	GPD	*********	*********	*********			1/M	EST
	REQUIREMENT	*********	NL	GPD	*********	*********	*********			1/M	EST
002 pH	REPORTED	*********	*********		6.17	*********	6.17	SU	0	1/M	GRAB
	REQUIREMENT	*********	*********		6.0	*********	9.0	SU		1/M	GRAB
146 ETHANOL	REPORTED	*********	*********		*********	*********	ND	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	4100.0	UG/L		1/M	GRAB
172 ETHYLBENZENE	REPORTED	*********	*********		*********	*********	ND	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	4.3	UG/L		1/M	GRAB
216 BENZENE (AS C6H6)	REPORTED	*********	*********		*********	*********	ND	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	12.0	UG/L		1/M	GRAB
222 TOLUENE (AS C7H8)	REPORTED	*********	*********		*********	*********	2.50	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	43.0	UG/L		1/M	GRAB
331 METHYL-TERT-BUTYL ETHER	REPORTED	*********	*********		*********	*********	83.6	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	440.0	UG/L		1/M	GRAB
745 TOTAL XYLENES	REPORTED	*********	*********		*********	*********	2.06	UG/L	0	1/M	GRAB
	REQUIREMENT	*********	*********		*********	*********	33.0	UG/L		1/M	GRAB

Additional DMR Comments:

ND = Non Detected at laboratory reported detection limit.

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)
	NA	NA	NA

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OPERATOR IN RESPONSIBLE CHARGE			DATE		
Marshall Adam Flora	Marshall A Flora	NA	2016	07	11
TYPED OR PRINTED NAME	**SIGNATURE**	**CERTIFICATE NO.**	**YEAR**	**MO.**	**DAY**
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		**TELEPHONE**			
Marshall Adam Flora	Marshall A Flora	(540) 483-3311	2016	07	11
TYPED OR PRINTED NAME	**SIGNATURE**		**YEAR**	**MO.**	**DAY**

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.17		1	06/15/2016 16:49	WG880222

Sample Narrative:

9040C L841406-04 WG880222: 6.17 at 19.7c

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	272		31.4	100	1	06/16/2016 07:13	WG880716
(S) α,α,α-Trifluorotoluene(FID)	*104*			*62.0-128*		*06/16/2016 07:13*	WG880716

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.331	1.00	1	06/17/2016 01:33	WG880917
Ethylbenzene	U		0.384	1.00	1	06/17/2016 01:33	WG880917
Naphthalene	U		1.00	5.00	1	06/17/2016 01:33	WG880917
Toluene	2.50	J	0.780	5.00	1	06/17/2016 01:33	WG880917
Xylenes, Total	2.06	J	1.06	3.00	1	06/17/2016 01:33	WG880917
Ethanol	U		42.0	100	1	06/17/2016 01:33	WG880917
Methyl tert-butyl ether	83.6		0.367	1.00	1	06/17/2016 01:33	WG880917
(S) Toluene-d8	*108*			*90.0-115*		*06/17/2016 01:33*	WG880917
(S) Dibromofluoromethane	*98.3*			*79.0-121*		*06/17/2016 01:33*	WG880917
(S) 4-Bromofluorobenzene	*96.7*			*80.1-120*		*06/17/2016 01:33*	WG880917

Company Name/Address:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151

Billing Information:
Greene Environmental
200 Buckwheat Lane
Rocky Mount, VA 24151
GREENENVA120914S

Report to: Trev Greene

Email To: tgreene@greene-environmental.com

Project Description: Meadows of Dan Food Market

City/State Collected: VA

Phone: 540-483-3311
Fax: 540-483-3381

Client Project # FMMD1008

Lab Project #

Collected by (print): KS

Site/Facility ID #

P.O. # GREENENVA120914S

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 841806

H112

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via: FEDEX

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, MTBE via Method 18	TVPH via Method 18	BTEX, MTBE, Ethanol via V8260	TPH-GRO via 8015	pH						Rem./Contaminant	Sample # (lab only)
RCP11	Grab	Air		06/13/16	0900	1	X	X										01
INF09	Grab	GW		06/1316	0910	6			X	X								02
MID03	Grab	GW		06/13/16	0915	6			X	X								03
EFF09	Grab	GW		06/13/16	0920	7			X	X	X							04

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
[signature]	6-14-16	0930	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			[signature]

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 3.1 °C Bottles Received: 20

Date: 6/15/16 Time: 0900

Hold #

Condition: (lab use only) a JWT

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

APPENDIX F

Mass Removal & Recovery Time Estimates

Dissolved Phase Petroleum Mass Removal Calculation Sheet
Vapor Phase Petroleum Mass Removal Calculation Sheet
Remediation System Treatment Efficiency Calculation Sheet
Mass Removal Recovery Rate Calculation Sheets
Remaining Petroleum Mass Graph

CALCULATION SHEET

DISSOLVED PHASE CONTAMINATION RECOVERY

PROBLEM:

Calculate a mass of dissolved phase constituent recovered through groundwater capture during Dual Phase Extraction Operation (CAP IMP SP3).

GIVEN:

Average Water Influent Sample Results

Gallons Discharged

Conversion factor: $\frac{1\mu g}{L} = \frac{2.2046226218e{-9}\ \text{lbs}}{0.26417205236\ \text{gallons}}$

SOLUTION:

Using the site-specific information collected during CAP IMP SP3, a calculation of the dissolved phase constituent recovery has been created.

Constituent	Average Concentration (µg/L)	Concentration (Converted to lbs/gal.)	Water Recovery (gallons)	Constituent Recovery (lbs)
Benzene	131.70	1.0990897663E-06	527,630	0.5799
Toluene	2,060.00	1.7191533171E-05		9.0708
Ethylbenzene	511.00	4.2645016749E-06		2.2501
Xylenes	3,310.00	2.7623288735E-05		14.5749
MTBE	366.00	3.0544180294E-06		1.6116
TPH-GRO	18,233.33	1.5216454117E-04		80.2866

(Calculations performed in Excel Spreadsheet)

Note: These calculations should be considered estimates as they are an extrapolation of lab data representing portions of isolated recovery batches over multiday discharge volumes.

CALCULATION SHEET
VAPOR PHASE CONTAMINATION RECOVERY

PROBLEM:

Calculate a mass of vapor phase constituent recovered through extraction of soil vapors during CAP IMP SP3.

GIVEN:

Rotary Claw Pump Exhaust Average Air Sample Results

Approximate RCP Exhaust Flow Rates

Hours of operation

Conversion factor: $\frac{1mg}{M^3} = \frac{2.2046226218e-6 \text{ lbs}}{35.314\,666\,721 \text{ ft}^3}$

SOLUTION:

Using the site-specific information collected during CAP IMP SP3, a calculation of the vapor phase constituent recovery has been created.

Constituent & Average Concentration (mg/M^3)		Concentration (Converted to lbs/ft^3)	Runtime Hours	Approximate Exhaust Flow Rate (SCFM)	Exhaust Volume (ft^3)	Recovery (lbs)
Benzene	40.77	2.54497986E-06	2,108.10	331.78	41,965,525	106.80
Toluene	576.00	3.59585053E-05				1,509.02
Ethylbenzene	124.93	7.79933321E-06				327.30
Xylenes	573.70	3.58149210E-05				1,502.99
MTBE	8.81	5.49782239E-07				23.07
TVPH	6,828.33	4.26278924E-04				17,889.02

(Calculations performed in Excel Spreadsheet)

Note: These calculations should be considered estimates as they are an extrapolation of lab data representing a few seconds of exhaust flow over multiday exhaust discharges.

GREENE ENVIRONMENTAL SERVICES LLC.

CALCULATION SHEET

AIR STRIPPER EFFICIENCY

PROBLEM:

Calculate efficiency of the system's air stripper at removing individual constituents from process water during CAP IMP SP3.

GIVEN:

Average Water Influent and Midpoint Sample Results

Gallons Discharged

Conversion factor: $\frac{1\mu g}{L} = \frac{2.2046226218e{-9}\ \text{lbs}}{0.26417205236\ \text{gallons}}$

SOLUTION:

Using the site-specific information collected during CAP IMP SP3, a calculation of the air stripper efficiency by constituent has been created.

Constituent	Corresponding Concentration (µg/L)		Converted Concentration (lbs/gal.)		Water Recovery (gallons)	Constituent Mass (pounds)		Air Stripper Efficiency
	Influent	Midpoint	Influent	Midpoint		Influent	Midpoint	
Benzene	131.70	4.23	1.0990897663E-06	3.5328878846E-08	527,630	0.5799	0.018641	96.79%
Toluene	2,060.00	93.30	1.7191533171E-05	7.7862623535E-07		9.0708	0.410827	95.47%
Ethylbenzene	511.00	21.70	4.2645016749E-06	1.8109527660E-07		2.2501	0.095551	95.75%
Xylenes	3,310.00	176.00	2.7623288735E-05	1.4687911835E-06		14.5749	0.774978	94.68%
MTBE	366.00	129.27	3.0544180294E-06	1.0787826155E-06		1.6116	0.569198	64.68%
TPH-GRO	18,233.33	1,553.33	1.5216454117E-04	1.2963194915E-05		80.2866	6.839771	91.48%

(Calculations performed in Excel Spreadsheet)

Note: These calculations should be considered estimates as they are an extrapolation of lab data representing portions of isolated recovery batches over multiday discharge volumes.

GREENE ENVIRONMENTAL SERVICES LLC.

CALCULATION SHEET

LGAC EFFICIENCY

PROBLEM:

Calculate efficiency of the system's LGAC vessels at removing individual constituents from process water during CAP IMP SP3.

GIVEN:

Average Water Midpoint and Effluent Sample Results

Gallons Discharged

Conversion factor: $\frac{1\mu g}{L} = \frac{2.2046226218e{-9}\ \text{lbs}}{0.26417205236\ \text{gallons}}$

SOLUTION:

Using the site-specific information collected during CAP IMP SP3, a calculation of the LGAC efficiency by constituent has been created.

Constituent	Corresponding Concentration (µg/L)		Converted Concentration (lbs/gal.)		Water Recovery (gallons)	Constituent Mass (pounds)		LGAC Efficiency
	Midpoint	Effluent	Midpoint	Effluent		Midpoint	Effluent	
Benzene	4.23	0.00	3.5328878846E-08	0.0000000000E+00	527,630	0.018641	0.000000	100.00%
Toluene	93.30	1.24	7.7862623535E-07	1.0348301520E-08		0.410827	0.005460	98.67%
Ethylbenzene	21.70	0.00	1.8109527660E-07	0.0000000000E+00		0.095551	0.000000	100.00%
Xylenes	176.00	1.15	1.4687911835E-06	9.6250331344E-09		0.774978	0.005078	99.34%
MTBE	129.27	161.87	1.0787826155E-06	1.3508428006E-06		0.569198	0.712745	-25.22%
TPH-GRO	1,553.33	296.33	1.2963194915E-05	2.4730215192E-06		6.839771	1.304840	80.92%

(Calculations performed in Excel Spreadsheet)

Note: These calculations should be considered estimates as they are an extrapolation of lab data representing portions of isolated recovery batches over multiday discharge volumes.

GREENE ENVIRONMENTAL SERVICES LLC.

CALCULATION SHEET

AIR STRIPPER & LGAC EFFICIENCY

PROBLEM:

Calculate efficiency of the system's air stripper and LGAC vessels at removing individual constituents from process water during CAP IMP SP3.

GIVEN:

Average Water Influent and Effluent Sample Results

Gallons Discharged

Conversion factor: $\frac{1\mu g}{L} = \frac{2.2046226218e{-9}\ \text{lbs}}{0.26417205236\ \text{gallons}}$

SOLUTION:

Using the site-specific information collected during CAP IMP SP3, a calculation of the air stripper and LGAC efficiency by constituent has been created.

Constituent	Corresponding Concentration (µg/L)		Converted Concentration (lbs/gal.)		Water Recovery (gallons)	Constituent Mass (pounds)		Air Stripper & LGAC Efficiency
	Influent	Effluent	Influent	Effluent		Influent	Effluent	
Benzene	131.70	0.00	1.0990897663E-06	0.0000000000E+00	527,630	0.5799	0.000000	100.00%
Toluene	2,060.00	1.24	1.7191533171E-05	1.0348301520E-08		9.0708	0.005460	99.94%
Ethylbenzene	511.00	0.00	4.2645016749E-06	0.0000000000E+00		2.2501	0.000000	100.00%
Xylenes	3,310.00	1.15	2.7623288735E-05	9.6250331344E-09		14.5749	0.005078	99.97%
MTBE	366.00	161.87	3.0544180294E-06	1.3508428006E-06		1.6116	0.712745	55.77%
TPH-GRO	18,233.33	296.33	1.5216454117E-04	2.4730215192E-06		80.2866	1.304840	98.37%

(Calculations performed in Excel Spreadsheet)

Note: These calculations should be considered estimates as they are an extrapolation of lab data representing portions of isolated recovery batches over multiday discharge volumes.

CALCULATION SHEET

DPE Recovery Rate and Period

PROBLEM:

Determine rate of petroleum recovery based on data collected through the end of the third subphase of long-term Dual Phase Extraction Implementation. Also, determine length of DPE application based on recovery rate.

GIVEN:

Petroleum Mass Prior to CAP IMP SP3 =	71,498
Petroleum Mass Estimate After CAP IMP SP3 =	53,529
Petroleum Mass Recovered During CAP IMP SP3 =	17,969
Days of Operation During CAP IMP SP3 =	87.84

SOLUTION:

Using the site-specific information collected during CAP IMP SP3 of long-term DPE Implementation, a daily recovery rate of total petroleum has been calculated. TVPH in vapor phase and TPH-GRO in dissolved phase are the basis for this estimate. It should be noted that the given information consists of estimates and approximations.

Determine Daily Recovery Mass:

Daily Recovery Mass = Pet. Mass Recovery During CAP IMP SP3 / Days of DPE Operation

= 17,969 lbs / 87.84 days

= 204.57 lbs/day

≈ 205 lbs/day

Convert Daily Recovery Mass to Daily Recovery Rate:

Daily Recovery Rate = Daily Recovery Mass / Pet. Mass Prior to CAP IMP SP3

= 205 lbs/day / 71,498 lbs

= 0.0029/day

= 0.29% /day

CALCULATION SHEET

DPE Recovery Rate and Period

Several factors affect the recovery potential and rate of DPE when applied to subsurface petroleum contaminants. However, recovery trends are expected to reduce the petroleum mass in such a way that the operation may be modeled as exponential decay.

Exponential decay is expressed as $Y = ne^{kt}$ or $k = \frac{\ln\left(\frac{y}{n}\right)}{t}$ or $t = \frac{\ln\left(\frac{y}{n}\right)}{k}$

Where: Y=Final Mass
n=Initial Mass
e =2.71828 (Euler's Number)
k =Decay Constant
t =Time Period

In order to determine the length of time needed to reduce the current petroleum mass to fractions of itself, one must first determine the Decay Constant, k. By applying the observed recovery during CAP IMP SP3, k can be calculated:

$$k = \frac{\ln\left(\frac{y}{n}\right)}{t} \quad \Bigg| \quad k = \frac{\ln\left(\frac{53{,}529}{71{,}498}\right)}{87.84} \quad \Bigg| \quad k = -0.0032951$$

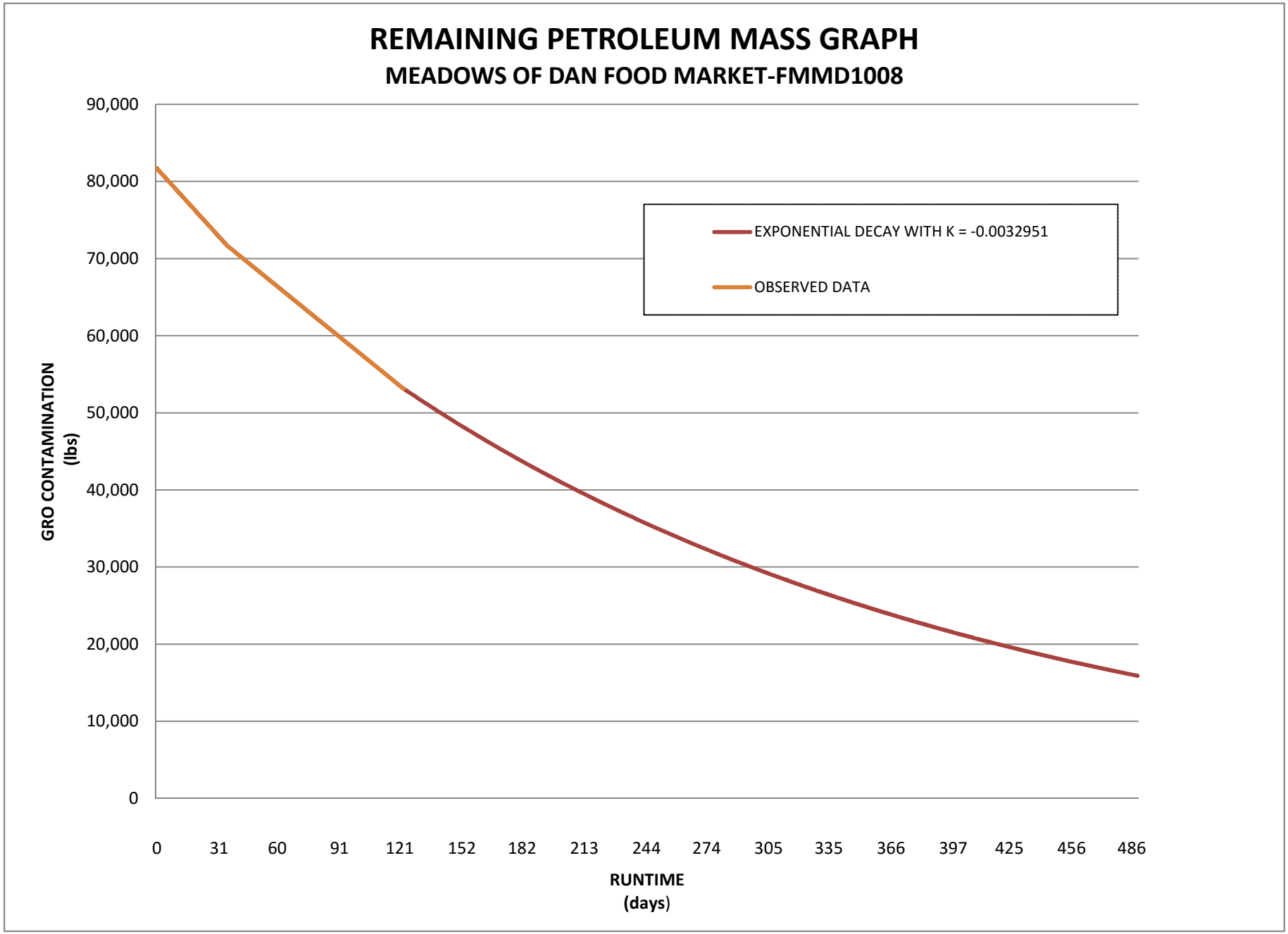
Now that k is known, we can solve for t, time period (in days) to reduce the remaining mass to ½ and ¼ of itself. This is an asymptotic recovery model so removing all of the initial mass is assumed to not be possible.

½ of initial mass:

$$t = \frac{\ln\left(\frac{y}{n}\right)}{k} \quad \Bigg| \quad t = \frac{\ln(26{,}765/53{,}529)}{-0.0032951} \quad \Bigg| \quad t \approx 210\ days$$

¼ of initial mass:

$$t = \frac{\ln\left(\frac{y}{n}\right)}{k} \quad \Bigg| \quad t = \frac{\ln(13{,}382/53{,}529)}{-0.0032951} \quad \Bigg| \quad t \approx 421\ days$$


REMAINING PETROLEUM MASS GRAPH
MEADOWS OF DAN FOOD MARKET-FMMD1008
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
GRO CONTAMINATION (lbs)
EXPONENTIAL DECAY WITH K = -0.0032951
OBSERVED DATA
0
31
60
91
121
152
182
213
244
274
305
335
366
397
425
456
486
RUNTIME (days)