TRADEMARK METALS RECYCLING, LLC

VALDOSTA, GEORGIA

VOLUNTARY REMEDIATION PROGRAM
PROGRESS REPORT NO. 6

2000 WEST SAVANNAH AVENUE

VALDOSTA, LOWNDES COUNTY, GEORGIA

VRP NO. 1348601340

HSI NO. 10923

GF PROJECT NO. 057524.029

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Prepared by:
GANNETT FLEMING, INC.
WestLake Corporate Center
9119 Corporate Lake Drive, Suite 150
Tampa, Florida 33634
Phone: (813) 882-4366 / Fax: (813) 884-4609

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QUALIFIED GROUNDWATER SCIENTIST CERTIFICATION

"I certify that I am a qualified groundwater scientist who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and have sufficient training and experience in groundwater hydrology and related fields as demonstrated by state registration and completion of accredited university courses that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by myself or by a subordinate working under my direction."

Aaron Getchell 12/16/16

Aaron Getchell, P.G.

P.G. Certification Number: PG002203

1.0 INTRODUCTION

1.1 Introduction

Gannett Fleming, Inc. (GF) was retained by the David J. Joseph Company/Trademark Metals Recycling, LLC (TMR) to perform a site investigation and prepare a Conceptual Site Model (CSM) pursuant to the Georgia Department of Natural Resources (GDNR), Environmental Protection Division (EPD) Voluntary Remediation Program (VRP) for the qualifying property (consistent with Code Section 12-8-105) listed in the Hazardous Site Inventory (HSI) and located at 2000 West Savannah Avenue, Valdosta, Lowndes County, Georgia (Figures 1 and 2). In March 2013, a Voluntary Investigation and Remediation Plan (VIRP) and VRP Application were submitted pursuant to the VRP Act (Code Section 12-8-100). The VIRP and VRP Application were approved by the EPD in a letter dated May 22, 2014.

An Interim Site Assessment Report/VRP Status Report (Progress Report No.1) was submitted to EPD in December 2014 and provided a summary of historical site assessment and remediation findings and results of the site assessment activities performed by GF in 2014. This report also included previous reports completed by Stillwater Technologies, Inc. (STI). VRP Progress Report No. 2 was submitted to the EPD on May 28, 2015. TMR and GF met with EPD representatives at the site on August 6, 2015, to conduct an inspection and discuss further assessment and remediation requirements. Additional soil and groundwater assessment activities were completed and summarized in VRP Progress Report No. 3 dated December 15, 2015. VRP Progress Report No. 4 was submitted on May 31, 2016, and summarized the results of the April 2016 semi-annual groundwater monitoring. VRP Progress Report No. 5 was submitted on September 15, 2016, and summarized the site investigation activities conducted in the vicinity of MW-8; and provided EPD with a technical justification for discontinuing groundwater sampling in certain areas of the site. This VRP Progress Report No. 6 has been prepared to summarize soil and groundwater remediation activities in the vicinity of MW-8; and summarize the results of the October 2016 groundwater monitoring.

Assessment and remediation activities were performed in accordance with standard field investigation methods and conducted in general accordance with the EPD requirements. Groundwater sampling was performed in accordance with United States Environmental Protection Agency (USEPA) Operating Procedure SESDPROC-301-R3 dated March 4, 2013.

The purpose of conducting assessment and remediation activities at this site is to pursue risk-based corrective action with EPD and ultimately delist the site in the HSI. With the history of industrial land use at the site; and the proposed future land use of the site for industrial purposes, risk-based corrective action planned for the site include institutional controls in accordance with Code Section 12-8-102(a)(9).

1.2 Site Description

The site (VRP No. VRP1348601340 and HSI No. 10923) consists of 27.57 acres with approximately 1,000 feet of frontage along West Savannah Avenue. As shown on Figure 2, the site (Lowndes County Parcel Number 0121A 026) is unpaved and primarily wooded in the eastern portion which is not being used to support business operations. A pond is located on the southeastern portion of the site. The surrounding parcels include a mix of residential, commercial, and industrial properties.

Structures and improvements to the site (shown on Figure 2) include: an office building that is approximately 1,630 square feet; a warehouse building that is approximately 20,000 square feet; a shear building that contains a metal shear for processing the scrap metal; and a metal shed which provides cover for a metal bailer and a truck scale. The site has access to a 1,000-foot rail spur that is inactive, and has one storage tank that is located within a concrete containment dike. The site is secured with a 6.0-foot chain link fence and a locking entrance gate located along West Savannah Avenue. As of November 2015, the site has been closed and recycling operations have ceased because of the decline in scrap metal market conditions.

1.3 Property Setting and Adjacent Properties

Elevation at the site is approximately 205 feet above mean sea level and the area topography is generally flat with a slight downward trend to the south. The site is located in a mixed use area that consist of residential, commercial, and industrial. The site is bordered to the north by West Savannah Avenue; to the east by vacant, undeveloped land and then residential properties; the south by vacant, undeveloped land; and the west by A-1 Towing.

1.4 Site History

The site was previously owned and operated by Rice Iron & Metals, Inc., as a scrap metal processing business reportedly beginning in the mid-1960s. TMR contracted with STI to perform a pre-purchase environmental site investigation in 2011. The site investigation revealed the presence of soil and groundwater impacts in several areas on the site including: 1) the outdoor metal bailing area; 2) the metal shearing machine area; 3) the torch cutting area; 4) the motor block storage area; and 5) the train car load-out area. The history of any previous chemical release(s) was unknown. Since assessment has been initiated, soil and groundwater assessment activities have been conducted in several areas of the site including the Northern Operations Area and the Southern Operations Area. Results of the site assessment revealed the presence of chlorinated solvents, petroleum hydrocarbons, and metals at concentrations above Maximum Contaminant Levels (MCLs).

A Soil Excavation and Groundwater Investigation Report was completed by STI in February 2012, and was included in GF's Progress Report No. 1. The investigation included the installation of 11 monitoring wells (MW-1 through MW-11) in five potential source areas and background areas across the site, and the completion of groundwater monitoring to assess the site. Source removal soil excavation was also conducted by STI in six areas of the site to remove impacted soil (Area #1, metal shear building, motor block storage, rail car loadout, oil water separator drainage swale, baler shed). Following the soil excavations, STI collected confirmation soil samples and the results indicated that no constituent of concern (COC) exceeded their respective cleanup criteria.

1.5 Project Health and Safety

During site assessment and remediation activities, GF has adhered to a site-specific Health and Safety Plan (HASP) that was prepared in accordance to USEPA Standard Operating Safety Guidelines and Occupational Safety and Health Administration (OSHA) Health and Safety Practices, 29 Code of Federal Regulations, Part 1910. GF personnel who participated in field activities at the subject site have completed Hazardous Waste Operations and Emergency Response (HAZWOPER) training courses that meet the criteria of OSHA regulations stipulated in 29 CFR 1910.120. Assessment work conducted by GF has been performed using Level D personal protective equipment.

2.0 APPLICATION/CHECKLIST

A Voluntary Investigation and Remediation Plan (VIRP) Application and Checklist was submitted to EPD on March 8, 2013. The VIRP Application was approved by EPD in a letter dated May 22, 2014, and indicated that the final Compliance Status Report (CSR) is due to EPD on or before April 18, 2019. Previous soil sampling data conducted by GF and submitted to EPD is summarized in tables included in Appendix A. These VRP milestones are listed in Table 1.

3.0 CONCEPTUAL SITE MODEL

3.1 Regulated Substances Released/Constituents of Concern

Historical soil and groundwater analytical data were reviewed to evaluate potential COCs at the site. Based on historical land use, a Phase II Environmental Site Assessment (ESA) was completed by STI to evaluate environmental impacts in the soil and groundwater. The Phase II ESA data indicated that the COCs included: Volatile Organic Compounds (VOCs), metals, Polycyclic Aromatic Hydrocarbons (PAHs), and Polychlorinated Biphenyls (PCBs). Additional assessment of the soil and groundwater at the site was completed by STI in 2011, and based on the results of the assessment, soil excavation was completed in six areas as reported in STI's February 2012 Soil Excavation and Groundwater Investigation Report. COCs have been assessed at the following areas of concern: outdoor metal bailing area; aboveground storage tank (AST), former underground storage tank (UST), and non-ferrous processing building area; metal shearing machine area; and the motor block storage area. GF has conducted assessment and remediation work at the site since 2014 to bring the site towards regulatory closure with institutional controls (such as restricting future land use to industrial activity) in accordance with 12-8-102(a)(9).

Based on the assessment and remediation activities conducted to date, there are currently two contaminant source areas at the site: the outdoor metal bailing area and the motor block storage area (shown on Figure 2). GF evaluated historic soil and groundwater sampling data (included in Appendix A) against non-residential Type Risk Reduction Standards (RRSs) that have been calculated for this site (Table 2). Based on this evaluation, the current COCs at the outdoor metal bailing area include: tetrachloroethene (PCE), trichloroethene (TCE), cis-1,1-dichloroethene (DCE), 1,1-DCE, and arsenic in groundwater. The current COCs at the motor block storage area include benzene, toluene, and total xylenes.

3.2 Soil, Groundwater, Surface Water and Sediment

No soil samples were collected during this VRP Progress Report No. 6 period of record. Soil remediation activities conducted in the motor block storage area in October 2016 were based on previous soil sampling data collected in July 2016 (included in Appendix A). Previous soil sampling data that was collected by GF and submitted to EPD in VRP Progress Reports is summarized in tables included in Appendix A.

Groundwater samples were collected from monitoring wells for laboratory analysis during this VRP Progress Report No. 6 period of record. These monitoring wells were located in the outdoor metal bailing area and the motor block storage area. Previous groundwater sampling data from these two areas of concern, and previous areas of concern, that has been collected by GF and submitted to EPD is summarized in tables included in Appendix A.

A surface water body is located in the southeast portion of the site (Figure 2). This surface water body has not been connected to or in close proximity of industrial/commercial operations conducted at the site. Surface water and sediment sampling were not included as part of assessment activities since these areas were not expected to have been adversely affected by industrial operations conducted at the site.

3.3 Delineation of Constituents of Concern

Historical sampling at the site indicates that groundwater is impacted with chlorinated VOCs and arsenic at the outdoor metal bailing area; and VOCs the motor block storage area. Groundwater samples collected from point of demonstration (POD) monitoring wells MW-3 and MW-11 indicated that COCs did not exceed their respective Type 3 RRSs that are listed in Table 2. Based on the most recent groundwater sampling results, it appears that the COCs have been delineated to their respective Type 3 RRSs onsite.

GF has discontinued groundwater sampling in the southern source area at the metal shearing machine area at monitoring wells MW-5, MW-5D, MW-6, MW-12, and MW-13. Monitoring well

locations are shown on Figure 2 and the laboratory data has been summarized in tables included in Appendix A.

STI conducted soil source removal activities at two locations in this area in October 2011. Based on confirmation soil samples collected by STI following soil source removal activities, no COC exceeded their respective cleanup criteria. Following soil source removal activities, monitoring wells MW-5, MW-6, MW-7, and MW-9 were sampled for VOCs and metals. Laboratory results indicated that benzene was detected above the Type 3 RRS in 2011. Subsequently, detections of benzene in MW-5 were below the Type 3 RRS for three consecutive sampling events performed by GF in April 2015, October 2015, and April 2016. No COCs have been detected exceeding their respective Type 3 RRSs in MW-5D for four consecutive sampling events conducted in August 2014, April 2015, October 2015, and April 2016. No COCs have exceeded their respective Type 3 RRSs in MW-6 for three consecutive sampling events conducted in July 2014, April 2015, and October 2015. No COCs have exceeded their respective Type 3 RRSs in MW-12 or MW-13 for four consecutive sampling events conducted in August 2014, April 2015, October 2015, and April 2016. The results of groundwater monitoring in this area indicates that the detection of benzene identified in 2011 has naturally attenuated to below the Type 3 RRS. Therefore, based on the source removal conducted in October 2011 by STI (including confirmation soil sampling), and the results of groundwater monitoring conducted for up to four consecutive groundwater monitoring events (in accordance with EPD's May 22, 2014, VRP Application approval letter), no further monitoring or assessment is warranted in the metal shearing machine area of the site.

GF has discontinued groundwater sampling in the northern source area at the AST, former UST and non-ferrous processing building areas at monitoring wells MW-3, MW-4, MW-10, and MW-14; and the water well. Monitoring well locations are shown on Figure 2 and the laboratory data has been summarized in tables included in Appendix A.

STI conducted soil source removal activities at this area in October 2011. Based on confirmation soil samples collected by STI following soil source removal activities, no COC exceeded their respective cleanup criteria. Following soil source removal activities, monitoring wells MW-3 and MW-4 were sampled for metals. Laboratory results indicated that no metals were detected at

concentrations above their respective RRSs. Groundwater samples collected from MW-3, MW-4, and MW-10 indicate that no COCs have been detected above their respective Type 3 RRSs for four consecutive sampling events (conducted in July 2014, April 2015, October 2015, and April 2016). Groundwater monitoring has been conducted at MW-11 for VOCs in July 2014, April 2015, October 2015, and April 2016; and results indicate that COCs haven not been detected exceeding their respective Type 3 RRSs. Groundwater monitoring has been conducted at MW-14 for VOCs and arsenic in September 2014, August 2015, October 2015, and April 2016; and results indicate that COCs haven not been detected exceeding their respective Type 3 RRSs. The water well has been sampled for VOCs and arsenic in April 2015, October 2015, and April 2016; and results indicate that COCs haven not been detected exceeding their respective Type 3 RRSs. Therefore, based on the source removal conducted in October 2011 by STI (including confirmation soil sampling), and the results of groundwater monitoring conducted for up to four consecutive groundwater monitoring events (in accordance with EPD's May 22, 2014, VRP Application approval letter), no further monitoring or assessment is warranted in the AST, former UST and non-ferrous processing building areas of the site.

3.4 Hydrogeologic Characteristics

According to the United States Department of Agriculture Soil Conservation Service's State Soil Geographic Database, the subject property soils have been mapped and classified as Albany and Chipley Sand. The soil surface texture is sand; soils are not hydric; and these Class A soils are poorly drained to moderately well drained.

Georgia consists of four distinct geologic regions (Geologic Map of Georgia, GDNR, Geologic and Water Resources Division, and Georgia Geological Society, 1976). Lowndes County is situated in South Georgia in the Coastal Plain geologic region. The Coastal Plain is a region comprised of Pleistocene and Pliocene sands and gravels; and Cretaceous and Cenozoic sedimentary rocks. The sedimentary rocks of the Coastal Plain partly consist of sediment eroded from the Piedmont over the last 100 million years and are partly limestone. These strata dip towards the southeast and are younger nearer the coast of the Atlantic Ocean. The sedimentary rocks are underlain by igneous and metamorphic rocks.

Four soil borings (B-1 through B-4) were advanced on August 5 through 7, 2014, at the site to 50 feet below land surface (bls) using the direct push drilling method. Soil samples were collected at 5.0-foot intervals using a Geoprobe with a stainless steel macrocore sampler (summarized in Progress Report No. 1, geologic cross-sections were originally provided in Progress Report No. 2 and have been included in this Progress Report as Appendix B). The general site lithology consists of sand from approximately 0.0 to 5.0 feet bls, then sandy clay from approximately 5.0 to 15 feet bls, and then sandy clay or clay with various layers of medium grain sand lenses from approximately 15 to 50 feet bls. Groundwater was generally encountered during drilling at approximately 9.0 feet bls. These unconsolidated sands and the occurrence of an unconfined water table is consistent with the hydrogeology of the Surficial Aquifer.

The Coastal Plain geologic region of Southeast Georgia is underlain by the Coastal Plain Aquifer System that includes the Floridan Aquifer System (Hydrogeology of the Southeastern Coastal Plain Aquifer System in Mississippi, Alabama, Georgia, and South Carolina, USGS Professional Paper 1410-B, 1996). In the immediate vicinity of the site, the Floridan Aquifer System consists of the Surficial Aquifer (corresponding to the Pleistocene and Pliocene undifferentiated sediments consisting of sands and gravels with varying amounts of clay) that serves to recharge deeper aquifers; the Intermediate Confining Unit (corresponding to the Hawthorn Formation) which is comprised of less permeable material (such as clays, phosphatic sands and limestone/dolostone lenses) and acts as a confining unit between the Surficial Aquifer and the Floridan Aquifer; and the Floridan Aquifer (consisting of the Avon Park Formation) which is generally comprised of limestone. Based on soil boring logs from monitoring wells installed as part of assessment activities, the Surficial Aquifer has been assessed, and no assessment has occurred in the Intermediate Confining Unit or the Floridan Aquifer.

Groundwater quality parameters collected during purging to evaluate aquifer stabilization, are generally consistent with published values for the unconfined surficial aquifer in the Coastal Plain (Water Quality of Surficial Aquifers in the Georgia-Florida Coastal Plain, USGS Water-Resources Investigations Report 95-4269, 1996). For example, the mean published temperature values for temperature and pH indicate 22º Celsius and a slightly acidic pH, which is generally consistent with water quality parameters observed in MW-1R, MW-1D, and MW-1DD. Published values also

indicate an aerobic dissolved oxygen [greater than 1 milligram per liter (mg/L)] and fresh water specific conductivity [less than 10,000 microsiemens per centimeter (µS/cm) which is also generally consistent with values recorded during purging MW-1R, MW-1D, and MW-1DD.

Water level measurements have been collected during each groundwater monitoring event (listed in Table 3) to evaluate hydraulic gradients and groundwater flow direction at the site. The top of casings of each of the monitoring wells has been surveyed to a common benchmark. The average depth to water measured in the upper surficial aquifer is approximately 6.0 feet bls, with seasonal variability. Groundwater flow direction in the upper surficial aquifer at the site has fluctuated seasonally and has been shown towards the west. There has been some variability in the northern portion of the site with groundwater flow to the southwest and southeast. Groundwater flow direction in the intermediate portion of the surficial aquifer has generally been consistent with the upper surficial aquifer. To evaluate vertical gradients at the site, groundwater elevations measured on April 5, 2016, in wells MW-1R (upper surficial aquifer), MW-1D (intermediate surficial aquifer), and MW-1DD (lower surficial aquifer) were used with the midpoint elevation of the well screen. Based on this data, the upper, intermediate, and lower portions of the surficial aquifer exhibited a downward vertical gradient ranging from 0.04 to 0.83 feet per foot (ft/ft). Horizontal and vertical gradients indicate that the upper and intermediate portions of the surficial aquifer are hydraulically connected.

Slug testing was performed on September 23, 2014, in shallow monitoring wells MW-12, MW-13, and MW-14 to estimate physical aquifer properties at the site. Each of the shallow monitoring wells is approximately 20 feet deep (with 10 feet of screen) and is screened in the unconfined upper surficial aquifer. The slug test data were analyzed using the software package AQTESOLV (Geraghty & Miller, Inc., 1987) and the analytical method outlined by Bouwer and Rice (1976), resulting in a value for hydraulic conductivity (K) in feet per minute. These values were converted into feet/day (ft/day) and ranged from 0.0016 ft/day in MW-13 to 0.0392 ft/day in MW-14 for an average hydraulic conductivity value for the upper surficial aquifer of 0.0144 ft/day. On September 23, 2014, depth to water was measured in each monitoring well and converted to an elevation. The groundwater elevations from monitoring well pairs MW-15/MW-3, MW-8/MW-11, and MW-12/MW-6 were used to establish an average hydraulic gradient from east to west with groundwater

flow direction. The average hydraulic gradient in the upper surficial aquifer was 0.0011 ft/ft. Based on the observed lithology (sand and clayey sand), an average effective porosity of 30% was established for the sediments in the upper surficial aquifer. Therefore, where the average hydraulic conductivity (K) is 0.0144 ft/day; the average hydraulic horizontal gradient (i) is 0.0011 ft/ft; and the average estimated effective porosity (n) is 30%; the average linear groundwater velocity (V) where V=(K*i)/n is 0.0001 ft/day or 0.019 feet per year.

3.5 Potential Receptors/Exposure Pathways

The nearest water wells and the nearest surface water bodies within the general area of the site is shown on Figure 3. POD monitoring wells MW-3 and MW-11 are also shown on Figure 3 with an indication of a 1,000-foot radius from the COC-impacted groundwater at the outdoor metal bailing area and the motor block storage area. The exposure pathway of COC-impacted groundwater migrating to these potential receptors was evaluated by conducting a potable well survey for a ½-mile radius of the site during multiple site visits for the period of July through November 2014. Available data regarding potable wells in the site vicinity were collected from the following sources:

1. Georgia Environmental Protection Division
2. Lowndes County Health Department
3. Well survey to visually locate any private or irrigation wells not found in the records

The site contains two water wells. One water well is located along the northeast property boundary of the site and one water well is located in the southern area of the site, near MW-5 (shown on Figure 2). The northeast well was in use at the facility for non-potable water prior to closure of the facility. The water well in the southern area has been capped and closed. Residential properties with private water wells are located less than ½ mile to the east and southwest of the property. Well proximity was noted when evaluating potential human exposure. The locations of nearby drinking water supply wells were verified; however the depths of the wells could not be verified by inspection. No public water supply wells were identified during the ½-mile radius survey performed around the site. Based on review of state records, the site was not found to be located within a

wellhead protection zone for any public water supply or well field. No public water supply wells, public supply conversion (top 20) wells, or public supply conversion/reclass wells were identified within a ½-mile radius of the site. No industrial wells were identified within a ½-mile radius of the site. The results from the potable well and sensitive receptor survey map were included in previous Progress Reports.

Based on soil remediation conducted by STI in 2011 and subsequent soil sampling conducted by GF, there does not appear to be COC-impacted soil at the site that exceeds a non-residential Type 3 RRS (equation 7). Groundwater assessment activities completed to date by GF indicated that COCs associated with former industrial scrap metal operations appear to have been delineated to their applicable Type 3 RRSs onsite and do not appear to have migrated offsite to adversely impact potential receptors. Therefore the exposure pathway to potential receptors within 1,000 feet appears to be incomplete.

4.0 INVESTIGATION AND REMEDIATION PLAN

4.1 Delineation Criteria and Standards

The proposed delineation standards for COCs in groundwater are summarized in Table 2. The proposed delineation standards were developed based on the "Process Chart for the Development of RRS at HSRA, Brownfield, and VRP Sites (Rule 391-3-19-.07)" (included in Appendix C).

The site was developed for industrial uses and the historic use of the site has been for conducting industrial business operations relating to scrap metal processing. The proposed future use of the site is for industrial purposes, and therefore GF has selected non-residential RRS for delineation criteria and standards at the site as described below:

- For groundwater, the non-residential default Type 3/4 RRS have been selected for delineation criteria and standards. During the development of institutional controls for risk based corrective action at the site, land use will be restricted to industrial, therefore Type 1 and Type 2 RRSs were not considered to be applicable. Additionally, groundwater sampling data has shown that application of Type 3/4 RRSs will not result in an unacceptable risk to downgradient receptors or result in non-compliance with applicable cleanup standards on downgradient offsite properties.

- For soil, the non-residential default Type 3/4 RRS have been selected for delineation criteria and standards. Calculations for Type 3 RRS equations 6 and 7 are included in Appendix C and have been summarized in Table 3. During the development of institutional controls for risk based corrective action at the site, land use will be restricted to industrial, therefore Type 1 and Type 2 RRSs were not considered to be applicable.

Soil and groundwater delineation criteria are consistent with Code Section 12-8-108(1)(A) through (E). Based on the proposed delineation standards, it has been demonstrated that horizontal delineation of impacted soil and groundwater within the boundaries of the site has been achieved.

4.3 Proposed Additional Investigation and Corrective Actions

The following additional investigation and corrective actions are proposed for the site during 2017. These investigation and corrective action activities will be conducted in conjunction with groundwater monitoring at the outdoor metal bailing area and the motor block storage area.

- A groundwater model will be prepared for COC-impacted groundwater at the outdoor metal bailing area. Pending the results of future groundwater sampling, a groundwater model may be prepared for impacts at the motor block storage area.

- Before the next groundwater monitoring event, monitoring well MW-8R will be installed in the immediate vicinity as the former MW-8, and the casing on MW-11 will be repaired and re-surveyed.

4.4 Milestone Schedule

A VRP milestone schedule is included in Table 1. This milestone schedule was prepared based on the VRP application approved on May 22, 2014; a minimum of two semi-annual status reports per year; and the due date for the CSR on or before April 18, 2019.

4.5 Groundwater Contaminant Fate and Transport Modeling

Groundwater contaminant fate and transport modeling will be completed to evaluate potential risks to Points of Exposure (POEs) downgradient of the site. Modeling will be evaluated for COCs detected in groundwater at concentrations greater than Type 3/4 RRS (listed in Table 2) which also exceed the Type 1/2 RRS used for groundwater modeling. The COCs include chlorinated VOCs,

benzene, toluene, xylenes and arsenic. BIOCHLOR (or similar such as Bioplume II or BIOSCREEN) will be used for conducting groundwater modeling.

5.0 SITE INVESTIGATION AND REMEDIATION

The purpose of this section is to provide the results of site investigation and remediation activities that have been completed since submittal of the last VRP Status Report and to provide additional data for a CSM. The additional site assessment and remediation activities are described in the following sections and included: groundwater sampling and source removal.

5.1 Groundwater Sampling

During the October 2016 sampling event, ten monitoring wells (shown on Figure 2) were sampled. Groundwater samples were collected from monitoring wells installed in the motor block storage area to evaluate the spike in VOC impacted groundwater and evaluate delineation. GF collected groundwater samples from MW-8 (the source well), MW-11 (downgradient), and MW-16 (upgradient). Groundwater samples were also collected from monitoring wells installed in the outdoor metal bailing area to evaluate delineation of VOC and arsenic impacted groundwater. GF collected groundwater samples from: MW-1R (the source well); MW-1D and MW-1DD (for vertical delineation); MW-2R and MW-14 (crossgradient); MW-15 (upgradient); and MW-3 (downgradient). The groundwater samples were submitted to SGS Accutest for laboratory analysis; groundwater sampling was performed in accordance with USEPA Operating Procedure SESDPROC-301-R3 dated March 4, 2013.

Prior to groundwater sampling on October 17, 2016, depth to water was measured from each accessible monitoring well at the site and converted to groundwater elevations to evaluate the inferred groundwater flow direction. The inferred groundwater flow direction for the monitoring wells screened in the upper surficial aquifer, is generally toward the east, showing some variability which is likely the result of seasonal rainfall fluctuations; but are generally consistent with groundwater elevations documented in previous groundwater monitoring events. The groundwater elevation data is listed in Table 3 and plotted on Figure 5.

Before sampling, each monitoring well was purged with a peristaltic pump and new disposable polyethylene tubing using the low-flow sampling technique. During purging, physical water quality parameters (pH, temperature, specific conductivity, dissolved oxygen, turbidity, oxygen reduction potential, and observations) were recorded on groundwater sampling logs to evaluate aquifer stabilization, and characterize the aquifer environment for the capacity to sustain biotic natural attenuation of dissolved petroleum hydrocarbons. Groundwater sampling and calibration logs are included in Appendix D.

The water supply well located in the southern portion of the property, near monitoring well MW-5, will be maintained and used if operations at the site resume. If the well remains unused for three years or more from November 2015 (the approximate timeframe the facility ceased operations) it will be permanently abandoned in accordance with 12-5-134(6) of the Georgia Water Well Standards Act of 1985, et. seq. If the well is permanently decommission, documentation, including well abandonment field logs, will be submitted to the Response and Remediation Program within 60 days of abandonment.

5.2 Groundwater Sampling Results

The laboratory report from the October 2016 sampling event is summarized in Table 4, plotted on Figure 5, and included in Appendix E. Historic groundwater analytical data is summarized on Tables included in Appendix A. The following is a summary of notable observations:

- No free product or sheens were noted during groundwater sampling activities.

- Laboratory analysis of groundwater samples collected from monitoring well MW-1R (outdoor meatal bailing area) indicated that PCE, TCE, cis-1,1-DCE, and arsenic exceeded their respective Type 3 RRSs. Groundwater quality in the outdoor metal bailing area continues to improve, as 1,1-DCE was not detected above the Type 3 RRS for the first time since sampling was initiated by GF in August 2014.

- A detection in MW-1DD (screened 70 to 75 feet bls) of PCE of 7.1 micrograms per liter (µg/L) exceeded the Type 3 RRS of 5 µg/L. While concentrations of COCs in MW-1D (screened 35 to 40 feet bls) have remained below Type 3 RRSs for the past five consecutive sampling events, PCE has sporadically been observed in MW-1DD (screened 70 to 75 feet bls) exceeding the Type 3 RRS.

- Laboratory analysis of groundwater samples collected from monitoring well MW-8 (motor block storage area) indicated that benzene, toluene, and total xylenes exceeded their respective Type 3 RRSs. The decreased concentrations of these COCs is likely due to the fluctuating groundwater table which has decreased by 5.81 feet since these COCs were first detected during the April 2016 groundwater monitoring event.

5.3 Source Removal

During the July 2016 mobilization (summarized in VRP Status Report #5) a soil assessment was conducted in the area of monitoring well MW-8 to evaluate a spike in petroleum-related COCs. A monitoring well (MW-16) was also installed upgradient of MW-8 and both monitoring wells were sampled to assess groundwater quality in this area of the site. Based on the soil and groundwater data, it appears that the petroleum compound impacts at MW-8 are limited to groundwater as the result of residual petroleum compounds in the smear zone being mobilized to groundwater by a fluctuating groundwater table (as much as 5.81 feet from April 2016 to October 2016). GF conducted the source removal at MW-8 in conjunction with the October 2016 groundwater monitoring event. The July 2016 soil boring locations and the footprint of the October 2016 source removal are shown on Figure 6.

In accordance with the Georgia Utility Facility Protection Act, GF notified Georgia 811 on October 10, 2016, of excavation activities (Ticket Number 10106-276-012-000) to have underground utilities marked that may be in conflict with the excavation. On October 17, 2016, before excavation activities, monitoring well MW-8 was properly abandoned by Partridge Well Drilling Company, Inc. (Georgia Water Well Contractor License GA 409 WD). Following well abandonment, approximately 107.09 tons of soil in the immediate vicinity of monitoring well MW-8 were

excavated to a depth of approximately 12 feet bls (the footprint of the excavation is shown on Figure 6). The soil was profiled as non-hazardous waste and disposed of at the Evergreen Landfill; non-hazardous waste manifests and weight tickets are included in Appendix D. Following soil excavation activities, imported backfill (recycled - concrete) was placed in lifts into the excavation and compacted with the excavator until it was level with land surface.

5.4 Groundwater Polishing

To facilitate groundwater polishing after the soil excavation, GF applied 110 pounds of an amendment to the backfill for placement below the groundwater table and in the smear zone. The COCs identified in this area of the site are petroleum hydrocarbons; therefore, Oxygen Release Compound (ORC) Advanced was selected as the amendment. On October 10, 2016, Underground Injection Control (UIC) Notification was emailed to GAEPD, in accordance with Procedure EPD-UIC-003, to inform GAEPD in writing of GF's intent to use the ORC Advanced amendment at the site. The UIC Notification is included in Appendix F.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations have been prepared by GF for the TMR site (VRP No. VRP1348601340 and HSI No. 10923) based historical sampling data; and assessment and remediation conducted during October 2016. Conclusions are presented in Section 6.1 and recommendations are presented in Section 6.2.

6.1 Conclusions

Based on previous sampling events and the assessment and remediation conducted in October 2016, GF concludes the following:

- As summarized in this Progress Report, Equation 6 and Equation 7 were used to calculate the Non-Residential Type 3 Soil RRSs for past and current COCs at the site. During the development of institutional controls for risk based corrective action at the site, land use will be restricted to industrial, therefore Type 1 and Type 2 RRSs were not considered to be applicable. Additionally, groundwater sampling data has shown that application of Type 3 RRSs will not result in an unacceptable risk to downgradient receptors or result in non-compliance with applicable cleanup standards on downgradient offsite properties.

- Soil remediation and groundwater polishing activities were conducted in the motor block storage area of the site to address COC-impacted groundwater at MW-8R. Remediation activities included excavating 107.09 tons of soil for offsite disposal as non-hazardous waste and applying 110 pounds of ORC Advanced to the subsurface for groundwater polishing.

- Groundwater sampling results from MW-1R indicate that water quality has generally improved at the outdoor metal bailing area. 1,1-DCE is below the Type 3 RRS for the first time and the other chlorinated VOCs have remained below their historic highs. Arsenic concentrations in MW-1R appear to be relatively consistent and below historic high concentrations.

- Groundwater sampling results from MW-8, collected before the soil and groundwater remediation activities, indicate that COCs remained above Type 3 RRSs and appear to have been fluctuating with the fluctuating groundwater table.

- COCs detected in MW-1R in the outdoor metal bailing area and MW-8 in the motor block storage area appear to be decreasing or consistent, indicating that these COC plumes are stable or shrinking. Additionally, groundwater sampling data indicates that these COC impacts have been adequately characterized and delineated.

- COCs were not detected in POD monitoring wells at the site's property boundaries exceeding their respective Type 3 RRSs and in most cases, were not detected above laboratory method detection limits.

6.2 Recommendations

Based on previous sampling events and the conclusions noted in Section 6.1, GF recommends the following:

- GF recommends groundwater modeling for COCs remaining in groundwater at the site in the outdoor metal bailing area (MW-1R). GF anticipates that remediation activities conducted at the motor block storage area will be successful in remediating COC-impacted groundwater to below the Type 3 RRSs (however, if COCs remain elevated at MW-8R these COCs will also be included in the groundwater model). The groundwater model will be used to support the use of institutional controls during risk-based action and closure of contamination issues associated with this site.

- GF recommends installing MW-8R and repairing/re-surveying the casing on MW-11 before the next regular groundwater sampling event. The next regular groundwater sampling event will be conducted before April 2017.

- GF recommends the continuation of regular groundwater sampling which is tentatively scheduled to be completed before April 2017, to be summarized in Progress Report No. 7, and submitted to EPD for review. A monitoring well sampling list is included as Table 5.

FIGURES

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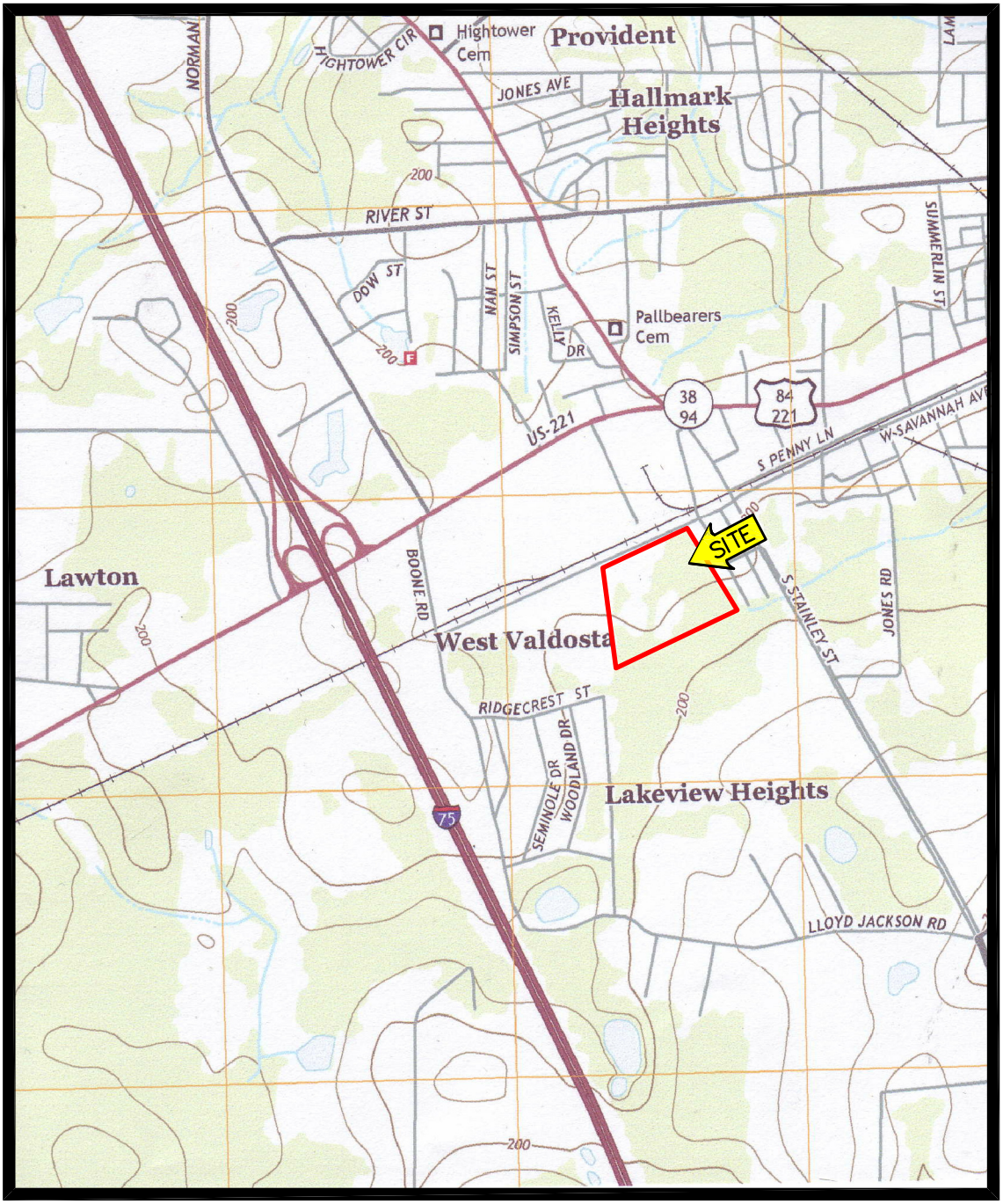
FIGURE 1

TRADEMARK METALS RECYCLING
2000 WEST SAVANNAH AVENUE
VALDOSTA, GEORGIA



SCALE 1"=2,000'

U.S.G.S. 7.5 MINUTE QUADRANGLE
VALDOSTA, GEORGIA

SITE LOCATION MAP

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FIGURE 2

LEGEND

Monitoring Well Location

0 200

Approximate Scale in Feet

SITE LAYOUT MAP

TRADEMARK METALS RECYCLING
2000 WEST SAVANNAH AVENUE
VALDOSTA, GEORGIA

083116

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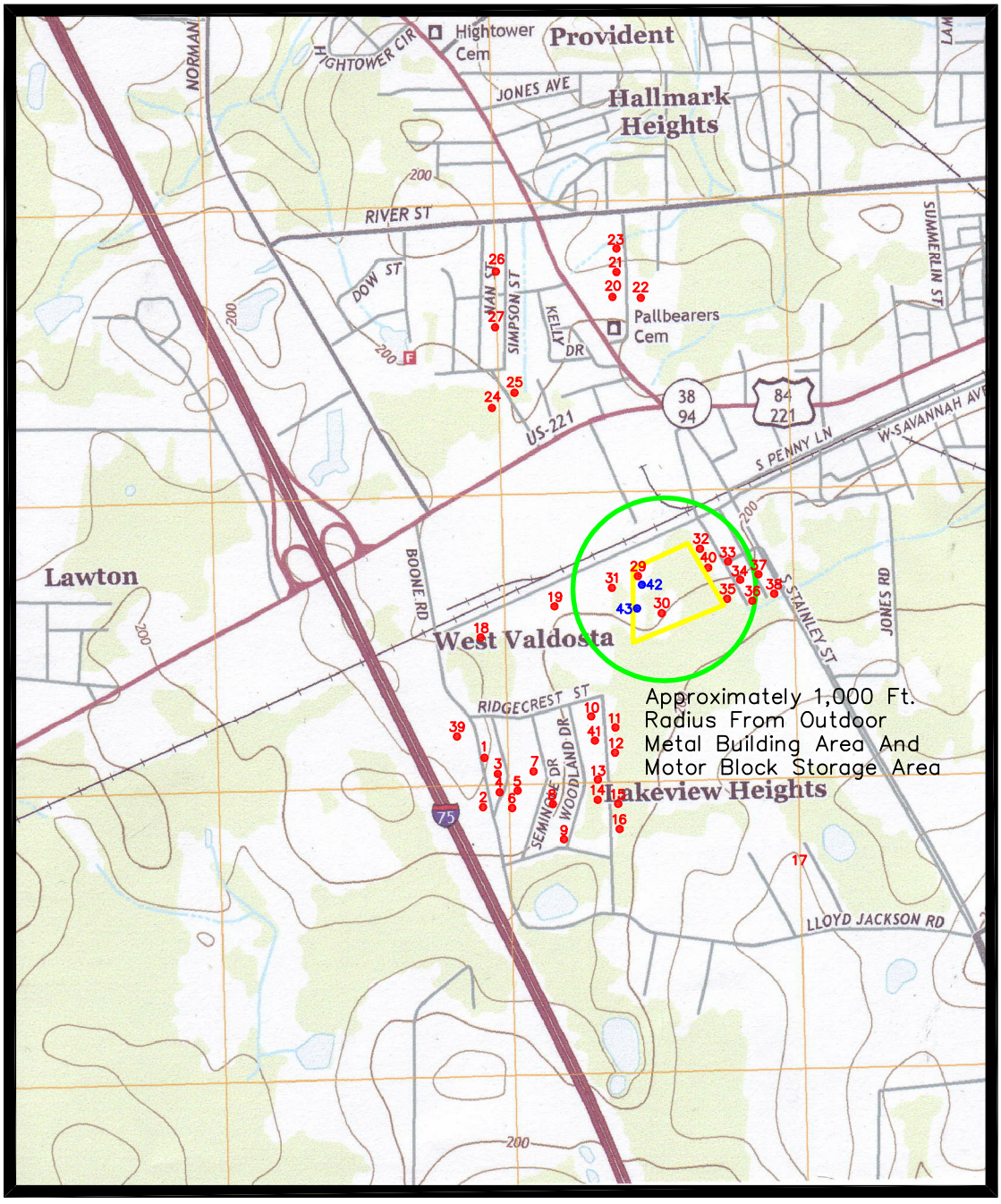
FIGURE 3

POTENTIAL RECEPTOR MAP



1. 2124 BOONE RD.
2. 1660 BOONE RD.
3. 2038 WOODY CIRCLE
4. 2050 WOODY CIRCLE
5. 2057 WOODY CIRCLE
6. 2059 WOODY CIRCLE
7. 1936 SEMINOLE DR.
8. 1951 SEMINOLE DR.
9. 1890 WOOLAND DR.
10. 1690 RIDGECREST ST.
11. 1722 RIDGECREST ST.
12. 1726 RIDGECREST ST.
13. 1758 RIDGECREST ST.
14. 1770 RIDGECREST ST.
15. 1771 RIDGECREST ST.
16. 1783 RIDGECREST ST.
17. 1757 MYERS RD.
18. 2301 WEST SAVANNAH AVE.
19. 2305 WEST SAVANNAH AVE.
20. 222 BECK ST.
21. 230 BECK ST.
22. 231 BECK ST.
23. 234 BECK ST.
24. 128 HAZELTON ST.
25. 121 HAZELTON ST.
26. 308 SIMPSON ST.
27. 306 SIMPSON ST.
28. 202 SIMPSON ST.
29. 2000 WEST SAVANNAH AVE.
30. 2000 WEST SAVANNAH AVE.
31. 2005 WEST SAVANNAH AVE.
32. 501 BURNETTE BLVD.
33. 512 GREEN ACRES DR.
34. 544 BURNETTE BLVD.
35. 540 BURNETTE BLVD.
36. 549 BURNETTE BLVD.
37. 442, 442 1/2, 444 GREEN ACRES BLVD.
38. 449 GREEN ACRES BLVD.
39. 2072 BOONE RD.
40. 509 BURNETTE BLVD.
41. 1710 RIDGECREST ST.
42. POD MW-3
43. POD MW-11

SCALE 1"=2,000'

- WELL LOCATIONS
- SITE
- 1,000 FT. RADIUS FROM ONSITE IMPACTED GROUNDWATER

TRADEMARK METALS RECYCLING
2000 WEST SAVANNAH AVENUE
VALDOSTA, GEORGIA

Gannett Fleming

FIGURE 4

LEGEND

- Monitoring Well Location
- 191.00 Water Level Elevation Contour
- (188.81) Relative Water Level Elevation
- Inferred Groundwater Flow Direction

Elevations Relative To An On-Site Benchmark

MW-3 Was not used for contouring due to anomalous data.

0 200

Approximate Scale in Feet

GROUNDWATER ELEVATIONS UPPER SURFICIAL AQUIFER

OCTOBER 17, 2016

TRADEMARK METALS RECYCLING

2000 WEST SAVANNAH AVENUE

VALDOSTA, GEORGIA

120816

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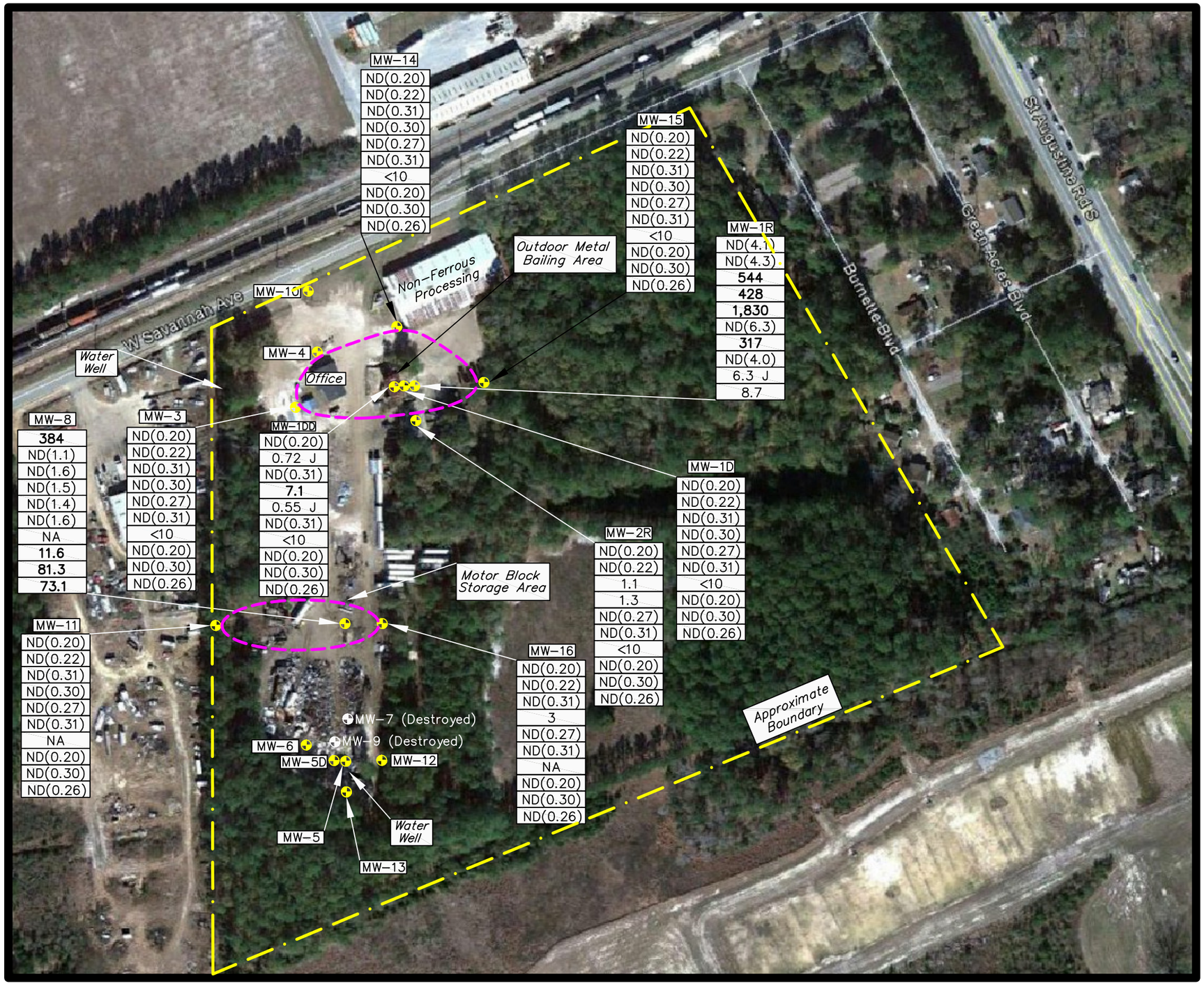
FIGURE 5



LEGEND

Monitoring Well Location

Type 3 RRS

5.0	Benzene In ug/L
7.0	1,1-Dichloroethylene In ug/L
70.0	cis-1,2-Dichloroethylene In ug/L
5.0	Tetrachloroethylene In ug/L
5.0	Trichloroethylene In ug/L
2.0	Vinyl Chloride In ug/L
10.0	Arsenic In ug/L
1,000	Toluene In ug/L
10.0	m,p-Xylene In ug/L
10.0	o-Xylene In ug/L

ND – Non Detect

NA – Not Analyzed For Constituent

J – Value between MDL and PQL

Note: All other 8260's are below lab detection limit (Non Detect) or below groundwater criteria listed in table.

Inferred Type 3 RRS Isocontour

0 200

Approximate Scale in Feet

GROUNDWATER QUALITY MAP

OCTOBER 17 & 18, 2016

TRADEMARK METALS RECYCLING

2000 WEST SAVANNAH AVENUE

VALDOSTA, GEORGIA

121216

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FIGURE 6

LEGEND

- Monitoring Well Location
- Soil Boring Location (July 2016)
- Footprint of October 2016 Soil Excavation

SOIL EXCAVATION MAP

TRADEMARK METALS RECYCLING
2000 WEST SAVANNAH AVENUE
VALDOSTA, GEORGIA

0 80
Approximate Scale In Feet

121216

TABLES

Table 1:
VRP Milestone Schedule

Trademark Metals Recycling
2000 West Savannah, Valdosta, GA

VRP Milestone	Deliverable Date	Status
VRP Application	3/7/2013	Approved 5/22/14
VRP Status Report #1	11/26/2014	Submitted
VRP Status Report #2	5/28/2015	Submitted
VRP Status Report #3	12/15/2015	Submitted
VRP Status Report #4	5/31/2016	Submitted
VRP Status Report #5	9/15/2016	Submitted
VRP Status Report #6	December 2016	Submitted
VRP Status Report #7	May 2017	Pending
VRP Status Report #8	December 2017	Pending
VRP Status Report #9	May 2018	Pending
VRP Status Report #10	December 2018	Pending
Compliance Status Report	4/18/2019	Pending

Table 2:
Delineation Criteria and Standards
Trademark Metals Recycling
2000 West Savannah, Valdosta, GA

Compound	Default Non-residential Type 3 Groundwater Risk Reduction Standard (µg/l)	Non-Residential Type 3 Soil Risk Reduction Standard (mg/kg)	
		Equation 6	Equation 7
VOCs by EPA Method 8260B			
Benzene	5	20.9	896
1,1-Dichloroethylene	7	-	5,677
cis-1,2-Dichloroethylene	70	-	-
Ethylbenzene	700	2710	57,200
Tetrachloroethylene	5	2730	2,889
Toluene	1000	-	292,728
Trichloroethylene	5	155	138
Vinyl Chloride	2	29	1,825
m,p-Xylene	10	-	21,447
o-Xylene	10	-	24,460
PCBs by EPA Method 8082			
Arochlor 1248	Not Applicable	-	-
Arochlor 1254	Not Applicable	-	-
Arochlor 1260	Not Applicable	-	-
Arsenic by EPA Method 6010B			
Arsenic	10	38	1707

Notes:
EPA = Environmental Protection Agency
VOCs = volatile organic compounds
mg/kg = miligrams per kilogram (parts per million)
µg/l = micrograms per liter (parts per billion)
Groundwater Default Non-residential Type 3 RRS's = Appendix III Table 1 Groundwater Criteria
Reference “Process Chart for the Development of RRS at HSRA, Brownfield, and VRP Sites (Rule 391-3-19-.07)”.
- indicates a concentration could not be calculated as variables were undefined.

Table 3:
Monitoring Well and Groundwater Elevation Data

Trademark Metals Recycling, 2000 West Savannah, Valdosta, GA

WELL ID	MW-1R			MW-2R			MW-3			MW-4		
AQUIFER	Upper Surficial			Upper Surficial			Upper Surficial			Upper Surficial		
DIAMETER (inches)	2.0			2.0			1.0			1.0		
WELL DEPTH (feet BLS)	20			20			20			20		
SCREEN (feet BTOC)	10			10			10			10		
TOC ELEVATION (feet MSL)	199.77			199.31			198.79			200.21		
DATE	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**
07/21/14	-	-	-	-	-	-	191.53	7.26	0.00	191.53	8.68	0.00
08/11/14	189.62	10.15	0.00	189.56	9.75	0.00	189.86	8.93	0.00	189.84	10.37	0.00
11/11/14	188.39	11.38	0.00	188.31	11.00	0.00	188.89	9.90	0.00	188.66	11.55	0.00
04/14/15	194.52	5.25	0.00	194.44	4.87	0.00	195.11	3.68	0.00	194.92	5.29	0.00
10/19/15	194.10	5.67	0.00	193.89	5.42	0.00	195.15	3.64	0.00	194.26	5.95	0.00
04/05/16	196.76	3.01	0.00	196.74	2.57	0.00	196.51	2.28	0.00	196.85	3.36	0.00
07/27/16	192.21	7.56	0.00	192.17	7.14	0.00	193.00	5.79	0.00	192.42	7.79	0.00
10/17/16	190.08	9.69	0.00	189.82	9.49	0.00	188.84	9.95	0.00	191.97	8.24	0.00

WELL ID	MW-5			MW-5D			MW-6			MW-8		
AQUIFER	Upper Surficial			Intermediate Surficial			Upper Surficial			Upper Surficial		
DIAMETER (inches)	1.0			2.0			1.0			1.0		
WELL DEPTH (feet BLS)	20			40			20			20		
SCREEN (feet BTOC)	10			5.0			10			10		
TOC ELEVATION (feet MSL)	197.10			197.22			196.79			198.42		
DATE	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**
07/21/14	191.92	5.18	0.00	-	-	-	191.32	5.47	0.00	191.75	6.67	0.00
08/11/14	190.62	6.48	0.00	188.39	8.83	0.00	190.09	6.70	0.00	190.19	8.23	0.00
11/11/14	189.75	7.35	0.00	187.23	9.99	0.00	188.92	7.87	0.00	189.10	9.32	0.00
04/14/15	194.73	2.37	0.00	192.45	4.77	0.00	194.91	1.88	0.00	194.12	4.30	0.00
10/19/15	194.62	2.48	0.00	191.71	5.51	0.00	193.80	2.99	0.00	193.85	4.57	0.00
04/05/16	196.38	0.72	0.00	194.87	2.35	0.00	Not Available			196.58	1.84	0.00
07/27/16	193.01	4.09	0.00	190.04	7.18	0.00	192.10	4.69	0.00	192.01	6.41	0.00
10/17/16	190.91	6.19	0.00	188.48	8.74	0.00	190.38	6.41	0.00	190.77	7.65	0.00

WELL ID	MW-10			MW-11			MW-12			MW-13		
AQUIFER	Upper Surficial			Upper Surficial			Upper Surficial			Upper Surficial		
DIAMETER (inches)	1.0			1.0			1.0			2.0		
WELL DEPTH (feet BLS)	20			20			20			20		
SCREEN (feet BTOC)	10			10			10			10		
TOC ELEVATION (feet MSL)	200.16			197.00			197.67			197.36		
DATE	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**
07/21/14	191.65	8.51	0.00	-	-	-	-	-	-	-	-	-
08/11/14	189.95	10.21	0.00	-	-	-	190.41	7.26	0.00	190.53	6.83	0.00
11/11/14	188.78	11.38	0.00	188.91	8.09	0.00	189.49	8.18	0.00	189.61	7.75	0.00
04/14/15	194.96	5.20	0.00	194.52	2.48	0.00	195.35	2.32	0.00	194.94	2.42	0.00
10/19/15	192.90	7.26	0.00	193.89	3.11	0.00	194.42	3.25	0.00	194.71	2.65	0.00
04/05/16	196.92	3.24	0.00	196.22	0.78	0.00	196.57	1.10	0.00	196.49	0.87	0.00
07/27/16	192.73	7.43	0.00	Not Available			192.66	5.01	0.00	192.52	4.84	0.00
10/17/16	190.72	9.44	0.00	Not Available			190.89	6.78	0.00	191.01	6.35	0.00

Table 3:
Monitoring Well and Groundwater Elevation Data

Trademark Metals Recycling, 2000 West Savannah, Valdosta, GA

WELL ID	MW-14			MW-15			MW-1D			MW-1DD		
AQUIFER	Upper Surficial			Upper Surficial			Intermediate Surficial			Lower Surficial		
DIAMETER (inches)	2.0			2.0			2.0			2.0		
WELL DEPTH (feet BLS)	20			20			40			75		
SCREEN (feet BTOC)	10			10			5			5		
TOC ELEVATION (feet MSL)	200.51			199.19			199.94			199.85		
DATE	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**	**ELEV**	**DTW**	**FP**
07/21/14	-	-	-	-	-	-	-	-	-	-	-	-
08/11/14	-	-	-	-	-	-	-	-	-	-	-	-
11/11/14	188.35	12.16	0.00	188.16	11.03	0.00	187.80	12.14	0.00	161.68	38.17	0.00
04/14/15	194.44	6.07	0.00	194.52	4.67	0.00	193.51	6.43	0.00	166.21	33.64	0.00
10/19/15	193.93	6.58	0.00	194.32	4.87	0.00	192.68	7.26	0.00	164.45	35.40	0.00
04/05/16	196.72	3.79	0.00	196.81	2.38	0.00	195.83	4.11	0.00	166.84	33.01	0.00
07/27/16	192.31	8.20	0.00	191.91	7.28	0.00	191.08	8.86	0.00	165.19	34.66	0.00
10/17/16	189.95	10.56	0.00	189.74	9.45	0.00	190.34	9.60	0.00	162.90	36.95	0.00

WELL ID	MW-16		
AQUIFER	Upper Surficial		
DIAMETER (inches)	2.0		
WELL DEPTH (feet BLS)	20		
SCREEN (feet BTOC)	10		
TOC ELEVATION (feet MSL)	198.22		
DATE	**ELEV**	**DTW**	**FP**
07/21/14	Not Available		
08/11/14	Not Available		
11/11/14	Not Available		
04/14/15	Not Available		
10/19/15	Not Available		
04/05/16	Not Available		
07/27/16	191.57	6.65	0.00
10/17/16	190.00	8.22	0.00

Notes:
BLS = below land surface
DTW = Depth to Water
ELE = Elevation
FP = Free Product
MSL = Mean Sea Level

Table 4:
Groundwater Analytical Data
Trademark Metals Recycling
2000 West Savannah, Valdosta, GA

Compound	Units	Default Non-residential Type 3 RRS	MW-1D	MW-1DD	MW-1R	MW-2R	MW-3	MW-8	MW-11	MW-14	MW-15	MW-16
			10/17/2016	10/17/2016	10/17/2016	10/18/2016	10/18/2016	10/17/2016	10/18/2016	10/18/2016	10/18/2016	10/18/2016
VOCs by EPA Method 8260B												
Benzene	µg/l	5	ND (0.20)	ND (0.20)	ND (4.1)	ND (0.20)	ND (0.20)	**384**	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
Bromodichloromethane	µg/l	NC	ND (0.24)	ND (0.24)	ND (4.8)	ND (0.24)	ND (0.24)	ND (1.2)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)
Chlorobenzene	µg/l	100	ND (0.20)	ND (0.20)	ND (4.0)	ND (0.20)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
Chloroform	µg/l	80	ND (0.30)	ND (0.30)	ND (6.0)	ND (0.30)	ND (0.30)	ND (1.5)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)
1,2-Dichlorobenzene	µg/l	600	ND (0.27)	ND (0.27)	ND (5.3)	ND (0.27)	ND (0.27)	ND (1.3)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)
1,3-Dichlorobenzene	µg/l	600	ND (0.24)	ND (0.24)	ND (4.7)	ND (0.24)	ND (0.24)	ND (1.2)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)
1,1-Dichloroethane	µg/l	4000	ND (0.26)	5.1	ND (5.1)	ND (0.26)	ND (0.26)	ND (1.3)	0.77 J	ND (0.26)	ND (0.26)	ND (0.26)
1,1-Dichloroethylene	µg/l	7	ND (0.22)	0.72 J	ND (4.3)	ND (0.22)	ND (0.22)	ND (1.1)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)
cis-1,2-Dichloroethylene	µg/l	70	ND (0.31)	ND (0.31)	**544**	1.1	ND (0.31)	ND (1.6)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.31)
trans-1,2-Dichloroethylene	µg/l	100	ND (0.33)	ND (0.33)	ND (6.6)	ND (0.33)	ND (0.33)	ND (1.7)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)
Ethylbenzene	µg/l	700	ND (0.25)	ND (0.25)	6.8 J	ND (0.25)	ND (0.25)	84.5	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)
Isopropylbenzene	µg/l	NC	ND (0.33)	ND (0.33)	ND (6.6)	ND (0.33)	ND (0.33)	ND (1.6)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)
p-Isopropyltoluene	µg/l	NC	ND (0.28)	ND (0.28)	ND (5.6)	ND (0.28)	ND (0.28)	ND (1.4)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)
o-Dichlorobenzene	µg/l	600	-	-	-	-	-	-	-	-	-	-
p-Dichlorobenzene	µg/l	75	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (total)	µg/l	NC	-	-	-	-	-	-	-	-	-	-
Methyl Tert Butyl Ether	µg/l	NC	ND (0.20)	ND (0.20)	ND (4.0)	ND (0.20)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
Naphthalene	µg/l	20	ND (1.0)	ND (1.0)	ND (20)	ND (1.0)	ND (1.0)	ND (5.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
n-Propylbenzene	µg/l	NC	ND (0.20)	ND (0.20)	ND (4.0)	ND (0.20)	ND (0.20)	2.2 J	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
Tetrachloroethylene	µg/l	5	ND (0.30)	**7.1**	**428**	1.3	ND (0.30)	ND (1.5)	ND (0.30)	ND (0.30)	ND (0.30)	3
Toluene	µg/l	1000	ND (0.20)	ND (0.20)	ND (4.0)	ND (0.20)	ND (0.20)	**11.6**	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
1,2,3-Trichlorobenzene	µg/l	NC	ND (0.51)	ND (0.51)	ND (10)	ND (0.51)	ND (0.51)	ND (2.6)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)
1,2,4-Trichlorobenzene	µg/l	70	ND (0.50)	ND (0.50)	ND (10)	ND (0.50)	ND (0.50)	ND (2.5)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
Trichloroethylene	µg/l	5	ND (0.27)	0.55 J	**1,830**	ND (0.27)	ND (0.27)	ND (1.4)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)
1,2,4-Trimethylbenzene	µg/l	NC	ND (0.20)	ND (0.20)	ND (4.0)	ND (0.20)	ND (0.20)	16.1	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
1,3,5-Trimethylbenzene	µg/l	NC	ND (0.20)	ND (0.20)	ND (4.0)	ND (0.20)	ND (0.20)	3.4 J	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
Vinyl Chloride	µg/l	2	ND (0.31)	ND (0.31)	ND (6.3)	ND (0.31)	ND (0.31)	ND (1.6)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.31)
m,p-Xylene	µg/l	10	ND (0.30)	ND (0.30)	6.3 J	ND (0.30)	ND (0.30)	**81.3**	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)
o-Xylene	µg/l	10	ND (0.26)	ND (0.26)	8.7 J	ND (0.26)	ND (0.26)	**73.1**	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)
Arsenic by EPA Method 6010B												
Arsenic	µg/l	10	<10	<10	**317**	<10	<10	-	-	<10	<10	-

Notes:
NC = No Criteria
ND = No Detection
J = Indicates an estimated value
b = blank spike recovery outside control limits
EPA = Environmental Protection Agency
VOCs = volatile organic compounds
µg/l = micrograms per liter (parts per billion)

Table 5:
Monitoring Well Sampling Schedule
Trademark Metals Recycling
2000 West Savannah, Valdosta, GA

Monitoring Well ID	Site Area	Comment	Laboratory Analysis	Sampling Schedule
MW-1R	Outdoor Metal Bailing	Source Area Monitoring Well	VOCs and arsenic	Semiannual (April and October)
MW-1D	Outdoor Metal Bailing	Vertical Delineation	VOCs and arsenic	Semiannual (April and October)
MW-1DD	Outdoor Metal Bailing	Deeper Vertical Delineation	VOCs and arsenic	Semiannual (April and October)
MW-2R	Outdoor Metal Bailing	Horizontal Delineation	VOCs and arsenic	Semiannual (April and October)
MW-3	Outdoor Metal Bailing	POD	VOCs and arsenic	Semiannual (April and October)
MW-4	AST, Former UST, and Non-ferrous Process Building	Source Area Monitoring Well	Discontinue	Discontinue
MW-5	Metal Shearing Machine	Source Area Monitoring Well	Discontinue	Discontinue
MW-5D	Metal Shearing Machine	Vertical Delineation	Discontinue	Discontinue
MW-6	Metal Shearing Machine	Horizontal Delineation	Discontinue	Discontinue
MW-8R	Motor Block Storage	Source Area Monitoring Well	VOCs	Semiannual (April and October)
MW-10	AST, Former UST, and Non-ferrous Process Building	Horizontal Delineation	Discontinue	Discontinue
MW-11	Motor Block Storage	POD	VOCs	Semiannual (April and October)
MW-12	Metal Shearing Machine	Horizontal Delineation	Discontinue	Discontinue
MW-13	Metal Shearing Machine	Horizontal Delineation	Discontinue	Discontinue
MW-14	Outdoor Metal Bailing	Horizontal Delineation	VOCs and arsenic	Semiannual (April and October)
MW-15	Outdoor Metal Bailing	Horizontal Delineation	VOCs and arsenic	Semiannual (April and October)
MW-16	Motor Block Storage	Horizontal Delineation	VOCs	Semiannual (April and October)

Notes:
AST = aboveground storage tank
POD = Point of Demonstration
Groundwater flow direction has generally been towards the west
UST = underground storage tank
VOCs = volatile organic compounds

APPENDIX A

Table 2 Soil Quality Data

Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Results flagged as "Exceed" if any of the selected criteria exceeded (most stringent). | **Legend:** Hit | **Exceed**

Client Sample ID:		EPA Region 3,6, 9 RSL - Industrial Soil THQ=1.0 (USEPA 5/14)	EPA Region 3,6, 9 RSL - Industrial Soil THQ=0.1 (USEPA 5/14)	B-5 6-8	B-6 6-8	B-7 6-8	B-8 6-8	B-9 6-8
Lab Sample ID:				FA18404-1	FA18404-2	FA18404-3	FA18404-4	FA18404-5
Date Sampled:				9/17/2014	9/17/2014	9/17/2014	9/17/2014	9/17/2014
Matrix:				Soil	Soil	Soil	Soil	Soil
GC/MS Volatiles (SW846 8260B)								
Bromodichloromethane	ug/kg	1300	1300	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
Bromoform	ug/kg	290000	290000	ND (0.76)	ND (0.86)	ND (0.79)	ND (0.95)	ND (0.78)
Chlorobenzene	ug/kg	1300000	130000	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
Chloroethane	ug/kg	57000000	5700000	ND (1.6)	ND (1.8)	ND (1.6)	ND (2.0)	ND (1.6)
Chloroform	ug/kg	1400	1400	ND (0.79)	ND (0.90)	ND (0.82)	ND (0.99)	ND (0.81)
2-Chloroethyl vinyl ether	ug/kg	-	-	ND (7.0)	ND (7.9)	ND (7.3)	ND (8.8)	ND (7.2)
Carbon tetrachloride	ug/kg	2900	2900	ND (0.98)	ND (1.1)	ND (1.0)	ND (1.2)	ND (1.0)
1,1-Dichloroethane	ug/kg	16000	16000	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
1,1-Dichloroethylene	ug/kg	1000000	100000	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
1,2-Dichloroethane	ug/kg	2000	2000	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
1,2-Dichloropropane	ug/kg	4400	4400	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
Dibromochloromethane	ug/kg	3200	3200	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
Dichlorodifluoromethane	ug/kg	370000	37000	ND (0.89)	ND (1.0)	ND (0.92)	ND (1.1)	ND (0.91)
cis-1,2-Dichloroethylene	ug/kg	2300000	230000	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
cis-1,3-Dichloropropene	ug/kg	-	-	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
m-Dichlorobenzene	ug/kg	-	-	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
o-Dichlorobenzene	ug/kg	9300000	930000	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
p-Dichlorobenzene	ug/kg	11000	11000	ND (0.79)	ND (0.89)	ND (0.81)	ND (0.98)	ND (0.81)
trans-1,2-Dichloroethylene	ug/kg	23000000	2300000	ND (0.94)	ND (1.1)	ND (0.97)	ND (1.2)	ND (0.97)
1,2-Dichloroethene (total)	ug/kg	-	-	ND (1.6)	ND (1.8)	ND (1.6)	ND (2.0)	ND (1.6)
trans-1,3-Dichloropropene	ug/kg	-	-	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
Methyl bromide	ug/kg	30000	3000	ND (1.3)	ND (1.5)	ND (1.4)	ND (1.6)	ND (1.3)
Methyl chloride	ug/kg	460000	46000	ND (1.4)	ND (1.6)	ND (1.5)	ND (1.8)	ND (1.4)
Methylene chloride	ug/kg	1000000	320000	ND (2.8)	ND (3.2)	ND (2.9)	ND (3.5)	ND (2.9)
1,1,1-Trichloroethane	ug/kg	36000000	3600000	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
1,1,2,2-Tetrachloroethane	ug/kg	2700	2700	ND (0.99)	ND (1.1)	ND (1.0)	ND (1.2)	ND (1.0)
1,1,2-Trichloroethane	ug/kg	5000	630	ND (1.1)	ND (1.3)	ND (1.2)	ND (1.4)	ND (1.2)
Tetrachloroethylene	ug/kg	100000	39000	17.5	ND (1.0)	2.6 J	3.9 J	ND (0.91)
Trichloroethylene	ug/kg	6000	1900	ND (0.72)	ND (0.81)	ND (0.74)	ND (0.89)	ND (0.73)
Trichlorofluoromethane	ug/kg	3100000	310000	ND (0.70)	ND (0.79)	ND (0.73)	ND (0.88)	ND (0.72)
Vinyl chloride	ug/kg	1700	1700	ND (0.72)	ND (0.81)	ND (0.74)	ND (0.89)	ND (0.73)
Metals Analysis								
Arsenic	mg/kg	3	3	**492**	1.1 [a]	**3.8**	**96.7**	**61.9** [a]
General Chemistry								
Solids, Percent	%	-	-	84.8	82.3	92.3	90.6	87.4

Footnotes:

[a] Elevated reporting limit(s) due to matrix interference.

4 results exceeded regulatory criteria.

Table 1 - Soil Analytical Data

Trademark Metals Recycling, 2000 West Savannah, Valdosta, GA

		Client Sample ID:	SB-1 0-2	SB-1 2-4	SB-2 0-2	SB-2 2-4	SB-3 0-2	SB-3 2-4	SB-4 0-2	SB-4 2-4	SB-5 0-2	SB-5 2-4
		Date Sampled:	4/14/2015	4/14/2015	4/14/2015	4/14/2015	4/14/2015	4/14/2015	4/14/2015	4/14/2015	4/14/2015	4/14/2015
Matrix:	**Units**	**Appendix I Regulated Substances and Soil Concentrations that Trigger Notification**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**
GC Semi-volatiles (SW846 8082A)												
Aroclor 1016	ug/kg	1,550	ND (7.2)	-	ND (7.6)	-	ND (7.2)	-	ND (7.7)	-	ND (7.5)	-
Aroclor 1221	ug/kg	1,550	ND (9.0)	-	ND (9.4)	-	ND (9.0)	-	ND (9.6)	-	ND (9.4)	-
Aroclor 1232	ug/kg	1,550	ND (9.0)	-	ND (9.4)	-	ND (9.0)	-	ND (9.6)	-	ND (9.4)	-
Aroclor 1242	ug/kg	1,550	ND (7.2)	-	ND (7.6)	-	ND (7.2)	-	ND (7.7)	-	ND (7.5)	-
Aroclor 1248	ug/kg	1,550	ND (7.2)	-	ND (7.6)	-	29.2 [a]	-	62.8 [a]	-	7.7 J [a]	-
Aroclor 1254	ug/kg	1,550	ND (7.2)	-	ND (7.6)	-	ND (7.2)	-	67.7	-	8.0 J	-
Aroclor 1260	ug/kg	1,550	ND (7.2)	-	12.3 J	-	26.9	-	ND (7.7)	-	ND (7.5)	-
Footnotes:												
[a] Aroclor pattern appears to be weathered.												

Table 1 - Soil Analytical Data
Drum Storage Shed

Trademark Metals Recycling, 2000 West Savannah, Valdosta, GA

		Client Sample ID:	**SB-1 0-2**	**SB-2 0-2**	**SB-3 0-2**	**SB-4 0-2**
		Date Sampled:	**10/21/2015**	**10/21/2015**	**10/21/2015**	**10/21/2015**
Matrix:	**Units**	**Appendix I Regulated Substances and Soil Concentrations that Trigger Notification**	**Soil**	**Soil**	**Soil**	**Soil**
GC Semi-volatiles (SW846 8082A)						
Aroclor 1248	µg/kg	1,550	ND (6.5)	ND (7.1)	ND (7.5)	ND (7.1)
Aroclor 1254	µg/kg	1,550	ND (6.5)	ND (7.1)	ND (7.5)	ND (7.1)
Aroclor 1260	µg/kg	1,550	ND (6.5)	ND (7.1)	ND (7.5)	ND (7.1)
Footnotes:						

Table 5:
Soil Analytical Data

Trademark Metals Recycling
2000 West Savannah, Valdosta, GA

Compound	Units	Trigger Notification Requirements	SB-1 (4-6 ft BLS)	SB-2 (0-2 ft BLS)	SB-3 (0-2 ft BLS)	SB-4 (2-4 ft BLS)	SB-5 (2-4 ft BLS)
			7/26/2016	7/26/2016	7/26/2016	7/26/2016	7/26/2016
VOCs by EPA Method 8260B							
Acetone	mg/kg	2.47	0.0175 J	ND (0.0081)	0.18	0.119	ND (0.0082)
Benzene	mg/kg	0.02	0.0098	ND (0.0010)	ND (0.0016)	ND (0.0011)	0.0102
2-Butanone (MEK)	mg/kg	0.79	ND (0.0064)	ND (0.0072)	0.0267 J	0.0141 J	ND (0.0073)
Carbon Disulfide	mg/kg	NC	ND (0.00071)	ND (0.00080)	0.0227	0.0013 J	ND (0.00080)
Ethylbenzene	mg/kg	20	0.0034 J	ND (0.00087)	0.0169	0.0023 J	0.133 J
Isopropylbenzene	mg/kg	21.88	ND (0.0010)	ND (0.0011)	0.0058 J	ND (0.0013)	ND (0.0011)
p-Isopropyltoluene	mg/kg	NC	ND (0.00071)	ND (0.00080)	0.0194	ND (0.00091)	ND (0.00080)
Methylene Chloride	mg/kg	0.04	ND (0.0028)	ND (0.0032)	0.0197 B a	0.0054 JB a	ND (0.0032)
Naphthalene	mg/kg	100	ND (0.0014)	ND (0.0016)	0.0065	0.0026 J	ND (0.0016)
n-Propylbenzene	mg/kg	NC	ND (0.00088)	ND (0.00099)	0.0026 J	ND (0.0011)	ND (0.00099)
Styrene	mg/kg	14	ND (0.00071)	ND (0.00080)	0.0106	ND (0.00091)	ND (0.00080)
Toluene	mg/kg	14.4	0.046	ND (0.00090)	0.0053 J	0.0011 J	0.0049
1,2,4-Trimethylbenzene	mg/kg	NC	0.0017 J	ND (0.00080)	0.0176	0.0043 J	ND (0.00080)
1,3,5-Trimethylbenzene	mg/kg	NC	ND (0.00071)	ND (0.00080)	0.0062 J	0.0012 J	0.0014 J
m,p-Xylene	mg/kg	20 (total)	0.0178	ND (0.0014)	0.0099 J	0.0019 J	0.699
o-Xylene	mg/kg	20 (total)	0.0136	ND (0.00087)	0.0078	0.0015 J	0.425

Notes:
a = detections confirmed by dual column analysis
B = analyte was found in the associated method blank
EPA = Environmental Protection Agency
ft BLS = feet below land surface
J = Indicates an estimated value
mg/kg = micrograms per kilogram (parts per million)
NC = No Criteria
ND = No Detection
This table lists compounds detected one or more times
Trigger Notification Requirements = Rule 391-3-19-.04(3)(b)
VOCs = volatile organic compounds

Table 6:
Groundwater Analytical Data

Trademark Metals Recycling
2000 West Savannah, Valdosta, GA

Compound	Units	Default Non-residential Type 3 RRS	MW-1D					MW-1DD					MW-1R						MW-2R				
			9/22/2014	4/15/2015	10/19/2015	4/6/2016	10/17/2016	11/11/2014	4/15/2015	10/19/2015	4/6/2016	10/17/2016	8/12/2014	4/15/2015	10/20/2015	4/6/2016	7/27/2016	10/17/2016	8/12/2014	4/15/2015	10/20/2015	4/6/2016	10/18/2016
VOCs by EPA Method 8260B																							
Benzene	µg/l	5	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	0.91 J	0.71 J	ND (5.0)	ND (250)	ND (4.1)	ND (4.1)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
Bromodichloromethane	µg/l	NC	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	2.3	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	ND (0.26)	ND (0.22)	ND (5.4)	ND (6.0)	ND (4.8)	ND (4.8)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)
Chlorobenzene	µg/l	100	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	0.21 J	ND (5.0)	ND (5.0)	ND (4.0)	ND (4.0)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
Chloroform	µg/l	80	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)	26.7	3.9	1.1	ND (0.30)	ND (0.30)	0.41 J	0.79 J	ND (7.5)	ND (7.5)	ND (6.0)	ND (6.0)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)
1,2-Dichlorobenzene	µg/l	600	-	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)	-	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)	-	0.34 J	ND (5.6)	ND (6.7)	ND (5.3)	ND (5.3)	-	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)
1,3-Dichlorobenzene	µg/l	600	-	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	-	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	-	ND (0.22)	ND (5.4)	ND (5.9)	ND (4.7)	ND (4.7)	-	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)
1,1-Dichloroethane	µg/l	4000	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)	5.1	1.6	0.70 J	ND (5.0)	ND (6.4)	ND (5.1)	ND (5.1)	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)
1,1-Dichloroethylene	µg/l	7	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.22)	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	0.72 J	**24.8**	**13.8**	**11.5 J**	**10.4**	**10.5 J**	ND (4.3)	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.22)
cis-1,2-Dichloroethylene	µg/l	70	2	ND (0.22)	ND (0.22)	ND (0.31)	ND (0.31)	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.31)	ND (0.31)	**1770**	**612**	**473**	**385**	**472**	**544**	ND (0.33)	ND (0.22)	ND (0.22)	0.37 J	1.1
trans-1,2-Dichloroethylene	µg/l	100	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.33)	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.33)	20.1	11.1	7.9 J	ND (8.3)	7.4 J	ND (6.6)	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.33)
Ethylbenzene	µg/l	700	-	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.25)	-	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.25)	22.5	10.2	8.8 J	6.9	6.7 J	6.8 J	ND (0.28)	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.25)
Isopropylbenzene	µg/l	NC	-	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.33)	-	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.33)	1.1	0.59 J	ND (5.0)	ND (8.2)	ND (6.6)	ND (6.6)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.33)
p-Isopropyltoluene	µg/l	NC	-	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.28)	-	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.28)	0.28 J	ND (0.20)	ND (5.0)	ND (7.0)	ND (5.6)	ND (5.6)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.28)
o-Dichlorobenzene	µg/l	600	ND (0.29)	-	-	-	-	ND (0.29)	-	-	-	-	0.60 J	-	-	-	-	-	ND (0.29)	-	-	-	-
p-Dichlorobenzene	µg/l	75	ND (0.20)	-	-	-	-	ND (0.20)	-	-	-	-	0.33 J	-	-	-	-	-	ND (0.20)	-	-	-	-
1,2-Dichloroethene (total)	µg/l	NC	2	-	-	-	-	ND (0.67)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Tert Butyl Ether	µg/l	NC	-	ND (0.30)	ND (0.30)	ND (0.20)	ND (0.20)	-	ND (0.30)	ND (0.30)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.30)	ND (7.5)	ND (5.0)	ND (4.0)	ND (4.0)	ND (0.20)	ND (0.30)	ND (0.30)	ND (0.20)	ND (0.20)
Naphthalene	µg/l	20	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	2.9 J	12.6	ND (25)	ND (25)	ND (20)	ND (20)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
n-Propylbenzene	µg/l	NC	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	2.6	1.2	ND (5.0)	ND (5.0)	ND (4.0)	ND (4.0)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
Tetrachloroethylene	µg/l	5	0.67 J	ND (0.33)	ND (0.33)	3.9	ND (0.30)	1.8	3.9	**12.6**	ND (0.30)	**7.1**	**130**	**389**	**464**	**321**	**392**	**428**	2.3	2.1	2.2	2.3	1.3
Toluene	µg/l	1000	-	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.20)	-	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.20)	2.9	1.3	ND (10)	ND (5.0)	ND (4.0)	ND (4.0)	ND (0.20)	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.20)
1,2,3-Trichlorobenzene	µg/l	NC	-	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.51)	-	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.51)	ND (0.50)	ND (0.50)	ND (13)	ND (13)	ND (10)	ND (10)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.51)
1,2,4-Trichlorobenzene	µg/l	70	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (13)	ND (13)	ND (10)	ND (10)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
Trichloroethylene	µg/l	5	**7.9**	ND (0.22)	ND (0.22)	0.60 J	ND (0.27)	0.99 J	0.79 J	1.4	ND (0.27)	0.55 J	**3,060**	**1,790**	**1,830**	**1,240**	**1,730**	**1,830**	ND (0.30)	ND (0.22)	ND (0.22)	0.33 J	ND (0.27)
1,2,4-Trimethylbenzene	µg/l	NC	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	6.6	3.8	ND (5.0)	ND (5.0)	ND (4.0)	ND (4.0)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
1,3,5-Trimethylbenzene	µg/l	NC	-	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.20)	-	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.20)	2.3	1.2 J	ND (5.6)	ND (5.0)	ND (4.0)	ND (4.0)	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.20)
Vinyl Chloride	µg/l	2	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.31)	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.31)	**4.2**	1.3	ND (6.3)	ND (7.9)	ND (6.3)	ND (6.3)	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.31)
m,p-Xylene	µg/l	10	-	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.30)	-	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.30)	**27.5**	**13.9**	ND (7.9)	ND (7.5)	ND (6.0)	6.3 J	ND (0.48)	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.30)
o-Xylene	µg/l	10	-	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)	-	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)	**29.6**	**12.9**	7.0 J	ND (6.6)	5.7 J	8.7 J	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)
Arsenic by EPA Method 6010B																							
Arsenic	µg/l	10	ND (10)	ND (10)	ND (10)	<10	<10	ND (10)	ND (10)	ND (10)	ND (10)	<10	**225**	**283**	**265**	**232**	**348**	**317**	ND (10)	ND (10)	ND (10)	<10	<10

Notes:
NC = No Criteria
ND = No Detection
J = Indicates an estimated value
b = blank spike recovery outside control limits
EPA = Environmental Protection Agency
VOCs = volatile organic compounds
µg/l = micrograms per liter (parts per billion)

Table 6:
Groundwater Analytical Data

Trademark Metals Recycling
2000 West Savannah, Valdosta, GA

Compound	Units	Default Non-residential Type 3 RRS	MW-3					MW-4				MW-5				MW-5D				MW-6			MW-8					
			7/22/2014	4/15/2015	10/20/2015	4/6/2016	10/18/2016	7/22/2014	4/15/2015	10/20/2015	4/6/2016	7/22/2014	4/14/2015	10/20/2015	4/7/2016	8/11/2014	4/14/2015	10/20/2015	4/7/2016	7/22/2014	4/14/2015	10/20/2015	7/22/2014	4/15/2015	10/20/2015	4/6/2016	7/27/2016	10/17/2016
VOCs by EPA Method 8260B																												
Benzene	µg/l	5	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	**12.9**	2.7	1.4	0.72 J	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	0.61 J	ND (0.20)	ND (0.20)	**1600**	**1230**	**384**
Bromodichloromethane	µg/l	NC	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.52)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)	ND (12)	ND (1.2)
Chlorobenzene	µg/l	100	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.48)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (10)	ND (1.0)
Chloroform	µg/l	80	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.62)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (15)	ND (1.5)
1,2-Dichlorobenzene	µg/l	600	-	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)	-	ND (0.22)	ND (0.22)	ND (0.27)	-	ND (0.22)	ND (0.22)	ND (0.27)	-	ND (0.22)	ND (0.22)	ND (0.27)	-	ND (0.22)	ND (0.22)	-	ND (0.22)	ND (0.22)	0.28 J	ND (13)	ND (1.3)
1,3-Dichlorobenzene	µg/l	600	-	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	-	ND (0.22)	ND (0.22)	ND (0.24)	-	ND (0.22)	ND (0.22)	ND (0.24)	-	ND (0.22)	0.23 J	ND (0.24)	-	ND (0.22)	ND (0.22)	-	ND (0.22)	ND (0.22)	ND (0.24)	ND (12)	ND (1.2)
1,1-Dichloroethane	µg/l	4000	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.51)	ND (0.20)	ND (0.20)	ND (0.26)	0.34 J	ND (0.20)	0.30 J	0.32 J	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)	ND (13)	ND (1.3)
1,1-Dichloroethylene	µg/l	7	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.22)	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.51)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	ND (11)	ND (1.1)
cis-1,2-Dichloroethylene	µg/l	70	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.31)	ND (0.31)	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.31)	ND (0.65)	ND (0.22)	ND (0.22)	ND (0.31)	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.31)	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.31)	ND (16)	ND (1.6)
trans-1,2-Dichloroethylene	µg/l	100	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.33)	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.69)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (17)	ND (1.7)
Ethylbenzene	µg/l	700	ND (0.28)	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.25)	ND (0.28)	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.56)	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.28)	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.28)	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.20)	ND (0.20)	132	205	84.5
Isopropylbenzene	µg/l	NC	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.33)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	1.8	ND (16)	ND (1.6)
p-Isopropyltoluene	µg/l	NC	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.28)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.48)	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.28)	ND (14)	ND (1.4)
o-Dichlorobenzene	µg/l	600	ND (0.29)	-	-	-	-	ND (0.29)	-	-	-	ND (0.59)	-	-	-	ND (0.29)	-	-	-	ND (0.29)	-	-	ND (0.29)	-	-	-	-	-
p-Dichlorobenzene	µg/l	75	ND (0.20)	-	-	-	-	ND (0.20)	-	-	-	ND (0.40)	-	-	-	ND (0.20)	-	-	-	ND (0.20)	-	-	ND (0.20)	-	-	-	-	-
1,2-Dichloroethene (total)	µg/l	NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Tert Butyl Ether	µg/l	NC	ND (0.20)	ND (0.30)	ND (0.30)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.30)	ND (0.30)	ND (0.20)	149	56.6	33.1	22.3	0.38 J	0.52 J	0.51 J	0.46 J	1.5	1.1	1	0.41 J	ND (0.30)	ND (0.30)	0.93 J	ND (10)	ND (1.0)
Naphthalene	µg/l	20	ND (1.0)	ND (1.0) [b]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0) [b]	ND (1.0)	ND (1.0)	ND (2.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0) [b]	ND (1.0)	2.5 J	ND (50)	ND (5.0)
n-Propylbenzene	µg/l	NC	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.48)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	2.1	ND (10)	2.2 J
Tetrachloroethylene	µg/l	5	ND (0.26)	ND (0.33)	ND (0.33)	ND (0.30)	ND (0.30)	ND (0.26)	ND (0.33)	ND (0.33)	ND (0.30)	ND (0.51)	ND (0.33)	ND (0.33)	ND (0.30)	ND (0.26)	ND (0.33)	ND (0.33)	ND (0.30)	ND (0.26)	ND (0.33)	ND (0.33)	ND (0.26)	ND (0.33)	ND (0.33)	ND (0.30)	ND (15)	ND (1.5)
Toluene	µg/l	1000	ND (0.20)	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.40)	ND (0.40)	**3830**	**2690**	**11.6**
1,2,3-Trichlorobenzene	µg/l	NC	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.51)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.51)	ND (1.0)	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.50)	ND (0.50)	0.68 J	ND (0.51)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.51)	ND (26)	ND (2.6)
1,2,4-Trichlorobenzene	µg/l	70	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.0)	ND (0.50)	ND (0.50)	ND (0.50)	0.51 J	1.1	1.6	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (25)	ND (2.5)
Trichloroethylene	µg/l	5	ND (0.30)	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)	ND (0.30)	0.24 J	ND (0.22)	ND (0.27)	ND (0.60)	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.30)	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.30)	ND (0.22)	ND (0.22)	ND (0.30)	ND (0.22)	ND (0.22)	ND (0.27)	ND (14)	ND (1.4)
1,2,4-Trimethylbenzene	µg/l	NC	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.49)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	32.6	13.1 J	16.1
1,3,5-Trimethylbenzene	µg/l	NC	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.40)	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.22)	ND (0.22)	6.1	ND (10)	3.4 J
Vinyl Chloride	µg/l	2	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.31)	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.65)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.33)	0.80 J	ND (0.25)	0.45 J	ND (16)	ND (1.6)
m,p-Xylene	µg/l	10	ND (0.48)	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.48)	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.96)	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.48)	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.48)	ND (0.31)	ND (0.31)	ND (0.48)	ND (0.31)	ND (0.31)	**536**	**780**	**81.3**
o-Xylene	µg/l	10	ND (0.29)	-	ND (0.20)	ND (0.26)	ND (0.26)	ND (0.29)	-	ND (0.20)	ND (0.26)	ND (0.58)	-	ND (0.20)	ND (0.26)	ND (0.29)	-	ND (0.20)	ND (0.26)	ND (0.29)	-	ND (0.20)	ND (0.29)	-	ND (0.20)	**283**	**486**	**73.1**
Arsenic by EPA Method 6010B																												
Arsenic	µg/l	10	ND (10)	ND (10)	ND (10)	<10	<10	ND (10)	ND (10)	ND (10)	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
NC = No Criteria
ND = No Detection
J = Indicates an estimated value
b = blank spike recovery outside control limits
EPA = Environmental Protection Agency
VOCs = volatile organic compounds
µg/l = micrograms per liter (parts per billion)

Table 6:
Groundwater Analytical Data

Trademark Metals Recycling
2000 West Savannah, Valdosta, GA

Compound	Units	Default Non-residential Type 3 RRS	MW-10				MW-11					MW-12				MW-13			
			7/22/2014	4/15/2015	10/20/2015	4/6/2016	7/22/2014	4/15/2015	10/20/2015	4/6/2016	10/18/2016	8/11/2014	4/14/2015	10/20/2015	4/7/2016	8/11/2014	4/14/2015	10/20/2015	4/7/2016
VOCs by EPA Method 8260B																			
Benzene	µg/l	5	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)
Bromodichloromethane	µg/l	NC	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)
Chlorobenzene	µg/l	100	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)
Chloroform	µg/l	80	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)
1,2-Dichlorobenzene	µg/l	600	-	ND (0.22)	ND (0.22)	ND (0.27)	-	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)	-	ND (0.22)	ND (0.22)	ND (0.27)	-	ND (0.22)	ND (0.22)	ND (0.27)
1,3-Dichlorobenzene	µg/l	600	-	ND (0.22)	ND (0.22)	ND (0.24)	-	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	-	ND (0.22)	ND (0.22)	ND (0.24)	-	ND (0.22)	ND (0.22)	ND (0.24)
1,1-Dichloroethane	µg/l	4000	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)	1.1	0.32 J	ND (0.20)	1.5	0.77 J	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)
1,1-Dichloroethylene	µg/l	7	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.22)	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)
cis-1,2-Dichloroethylene	µg/l	70	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.31)	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.31)	ND (0.31)	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.31)	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.31)
trans-1,2-Dichloroethylene	µg/l	100	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.33)	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)
Ethylbenzene	µg/l	700	ND (0.28)	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.28)	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.25)	ND (0.28)	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.28)	ND (0.20)	ND (0.20)	ND (0.25)
Isopropylbenzene	µg/l	NC	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.33)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.33)
p-Isopropyltoluene	µg/l	NC	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.28)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.28)
o-Dichlorobenzene	µg/l	600	ND (0.29)	-	-	-	ND (0.29)	-	-	-	-	ND (0.29)	-	-	-	ND (0.29)	-	-	-
p-Dichlorobenzene	µg/l	75	ND (0.20)	-	-	-	ND (0.20)	-	-	-	-	ND (0.20)	-	-	-	ND (0.20)	-	-	-
1,2-Dichloroethene (total)	µg/l	NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Tert Butyl Ether	µg/l	NC	ND (0.20)	ND (0.30)	ND (0.30)	ND (0.20)	ND (0.20)	ND (0.30)	ND (0.30)	ND (0.20)	ND (0.20)	6.1	3.1	1.5	1.1	ND (0.20)	ND (0.30)	ND (0.30)	ND (0.20)
Naphthalene	µg/l	20	ND (1.0)	ND (1.0) [b]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0) [b]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
n-Propylbenzene	µg/l	NC	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)
Tetrachloroethylene	µg/l	5	ND (0.26)	ND (0.33)	ND (0.33)	ND (0.30)	ND (0.26)	ND (0.33)	ND (0.33)	ND (0.30)	ND (0.30)	ND (0.26)	ND (0.33)	ND (0.33)	ND (0.30)	ND (0.26)	ND (0.33)	ND (0.33)	ND (0.30)
Toluene	µg/l	1000	ND (0.20)	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.40)	ND (0.40)	ND (0.20)
1,2,3-Trichlorobenzene	µg/l	NC	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.51)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.51)
1,2,4-Trichlorobenzene	µg/l	70	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
Trichloroethylene	µg/l	5	ND (0.30)	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.30)	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)	ND (0.30)	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.30)	ND (0.22)	ND (0.22)	ND (0.27)
1,2,4-Trimethylbenzene	µg/l	NC	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)
1,3,5-Trimethylbenzene	µg/l	NC	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.20)
Vinyl Chloride	µg/l	2	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.31)	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)
m,p-Xylene	µg/l	10	ND (0.48)	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.48)	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.48)	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.48)	ND (0.31)	ND (0.31)	ND (0.30)
o-Xylene	µg/l	10	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.26)
Arsenic by EPA Method 6010B																			
Arsenic	µg/l	10	ND (10)	ND (10)	ND (10)	<10	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
NC = No Criteria
ND = No Detection
J = Indicates an estimated value
b = blank spike recovery outside control limits
EPA = Environmental Protection Agency
VOCs = volatile organic compounds
µg/l = micrograms per liter (parts per billion)

Table 6:
Groundwater Analytical Data

Trademark Metals Recycling
2000 West Savannah, Valdosta, GA

Compound	Units	Default Non-residential Type 3 RRS	MW-14					MW-15					MW-16		WATER WELL		
			9/22/2014	4/15/2015	10/20/2015	4/6/2016	10/18/2016	9/22/2014	4/15/2015	10/20/2015	4/6/2016	10/18/2016	7/27/2016	10/18/2016	4/15/2015	10/20/2015	4/6/2016
VOCs by EPA Method 8260B																	
Benzene	µg/l	5	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
Bromodichloromethane	µg/l	NC	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.22)	ND (0.22)	ND (0.24)
Chlorobenzene	µg/l	100	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
Chloroform	µg/l	80	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)
1,2-Dichlorobenzene	µg/l	600	-	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)	-	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.22)	ND (0.27)
1,3-Dichlorobenzene	µg/l	600	-	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	-	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.22)	ND (0.22)	ND (0.24)
1,1-Dichloroethane	µg/l	4000	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.20)	ND (0.20)	ND (0.26)
1,1-Dichloroethylene	µg/l	7	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.22)	ND (0.25)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)	ND (0.22)
cis-1,2-Dichloroethylene	µg/l	70	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.31)	ND (0.31)	ND (0.33)	ND (0.22)	ND (0.22)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.22)	ND (0.22)	ND (0.31)
trans-1,2-Dichloroethylene	µg/l	100	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.33)	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.21)	ND (0.21)	ND (0.33)
Ethylbenzene	µg/l	700	-	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.25)	-	ND (0.20)	ND (0.20)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.20)	ND (0.20)	ND (0.25)
Isopropylbenzene	µg/l	NC	-	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.33)	-	ND (0.20)	ND (0.20)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.20)	ND (0.20)	ND (0.33)
p-Isopropyltoluene	µg/l	NC	-	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.28)	-	ND (0.20)	ND (0.20)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.20)	ND (0.20)	ND (0.28)
o-Dichlorobenzene	µg/l	600	ND (0.29)	-	-	-	-	ND (0.29)	-	-	-	-	-	-	-	-	-
p-Dichlorobenzene	µg/l	75	ND (0.20)	-	-	-	-	ND (0.20)	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (total)	µg/l	NC	ND (0.67)	-	-	-	-	ND (0.67)	-	-	-	-	-	-	-	-	-
Methyl Tert Butyl Ether	µg/l	NC	-	ND (0.30)	ND (0.30)	ND (0.20)	ND (0.20)	-	ND (0.30)	ND (0.30)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.30)	ND (0.30)	ND (0.20)
Naphthalene	µg/l	20	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	-	ND (1.0) [b]	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0) [b]	ND (1.0)	ND (1.0)
n-Propylbenzene	µg/l	NC	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
Tetrachloroethylene	µg/l	5	ND (0.26)	ND (0.33)	ND (0.33)	ND (0.30)	ND (0.30)	ND (0.26)	ND (0.33)	ND (0.33)	ND (0.30)	ND (0.30)	3.7	3	ND (0.33)	ND (0.33)	ND (0.30)
Toluene	µg/l	1000	-	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.20)	-	ND (0.40)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.40)	ND (0.40)	ND (0.20)
1,2,3-Trichlorobenzene	µg/l	NC	-	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.51)	-	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.50)	ND (0.50)	ND (0.51)
1,2,4-Trichlorobenzene	µg/l	70	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
Trichloroethylene	µg/l	5	ND (0.30)	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)	ND (0.30)	ND (0.22)	ND (0.22)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.22)	ND (0.22)	ND (0.27)
1,2,4-Trimethylbenzene	µg/l	NC	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
1,3,5-Trimethylbenzene	µg/l	NC	-	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.20)	-	ND (0.22)	ND (0.22)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.20)
Vinyl Chloride	µg/l	2	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.31)	ND (0.33)	ND (0.25)	ND (0.25)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.25)	ND (0.25)	ND (0.31)
m,p-Xylene	µg/l	10	-	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.30)	-	ND (0.31)	ND (0.31)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.31)	ND (0.31)	ND (0.30)
o-Xylene	µg/l	10	-	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)	-	ND (0.20)	ND (0.20)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	-	ND (0.20)	ND (0.26)
Arsenic by EPA Method 6010B																	
Arsenic	µg/l	10	ND (10)	ND (10)	ND (10)	<10	<10	ND (10)	ND (10)	ND (10)	<10	<10	-	-	ND (10)	ND (10)	<10

Notes:
NC = No Criteria
ND = No Detection
J = Indicates an estimated value
b = blank spike recovery outside control limits
EPA = Environmental Protection Agency
VOCs = volatile organic compounds
µg/l = micrograms per liter (parts per billion)

APPENDIX B

Gannett Fleming

FIGURE 5

LEGEND

- Monitoring Well Location
- Soil Boring Location

0 200

Approximate Scale in Feet

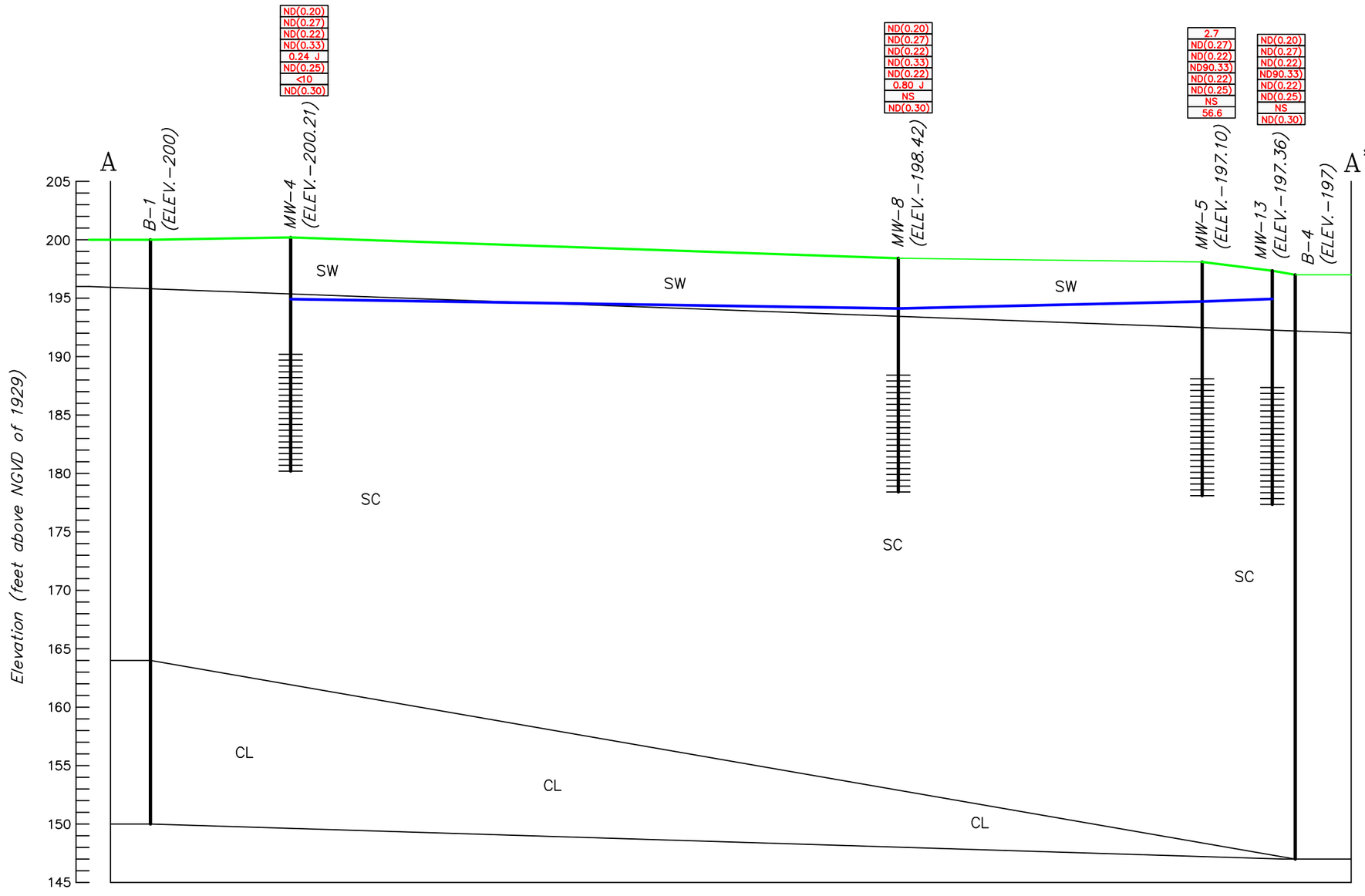
GEOLOGIC CROSS SECTION LOCATIONS

TRADEMARK METALS RECYCLING
2000 WEST SAVANNAH AVENUE
VALDOSTA, GEORGIA

050815

Gannett Fleming

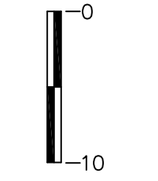
FIGURE 6



LEGEND

	SOIL BORING
SW	Sand With Little Or No Fines
SC	Clayey Sand
CL	Clay With Medium To Low Plasticity
	Water Table Elevation (4/14/15)

5.0	*Benzene In ug/L*
7.0	*1,1-Dichloroethylene In ug/L*
70.0	*cis-1,2-Dichloroethylene In ug/L*
5.0	*Tetrachloroethylene In ug/L*
5.0	*Trichloroethylene In ug/L*
2.0	*Vinyl Chloride In ug/L*
10.0	*Arsenic In ug/L*
--	*MTBE In ug/L*



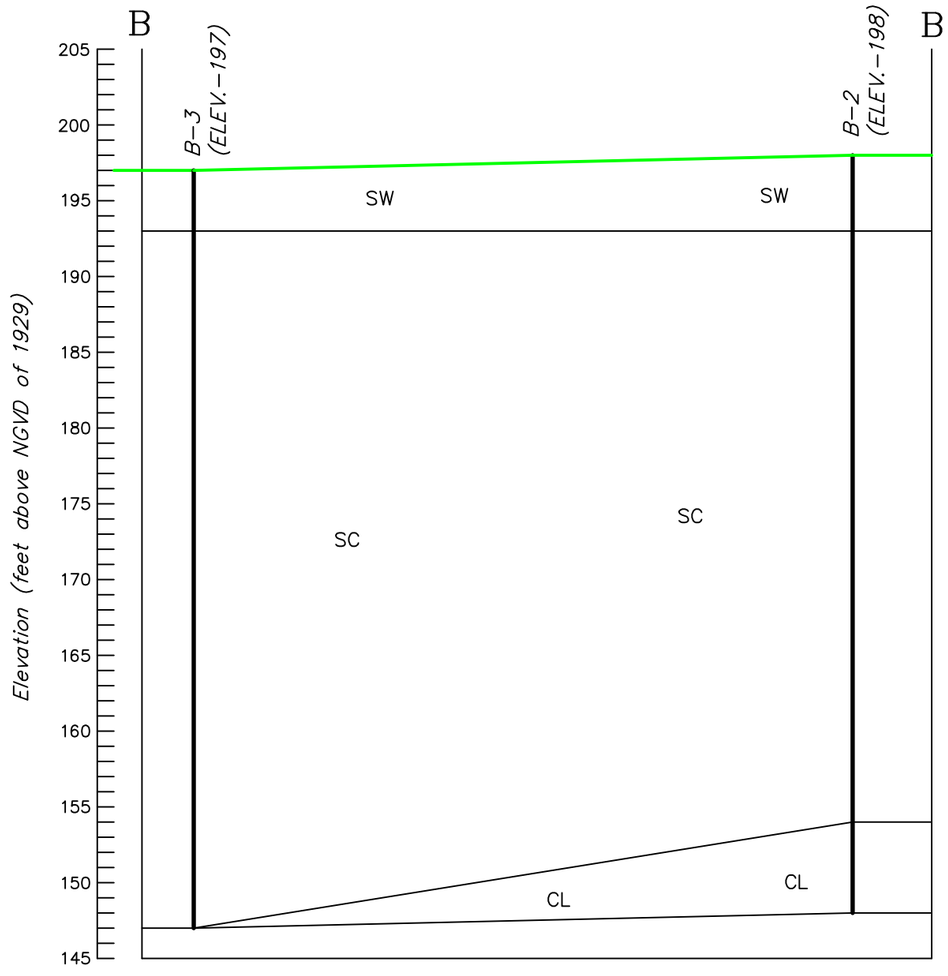
Vertical Scale in Feet

Horizontal Scale in Feet

GEOLOGIC CROSS SECTIONS NORTH TO SOUTH A-A'

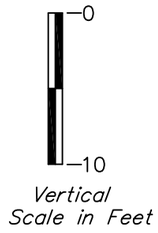
TRADEMARK METALS RECYCLING
2000 WEST SAVANNAH AVENUE
VALDOSTA, GEORGIA

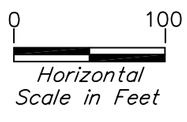
050815



LEGEND

|	SOIL BORING
SW	Sand With Little Or No Fines
SC	Clayey Sand
CL	Clay With Medium To Low Plasticity





GEOLOGIC CROSS SECTIONS
EAST TO WEST
B-B'

TRADEMARK METALS RECYCLING
2000 WEST SAVANNAH AVENUE
VALDOSTA, GEORGIA

050815

Gannett Fleming

FIGURE 8

LEGEND

SOIL BORING

SW Sand With Little Or No Fines

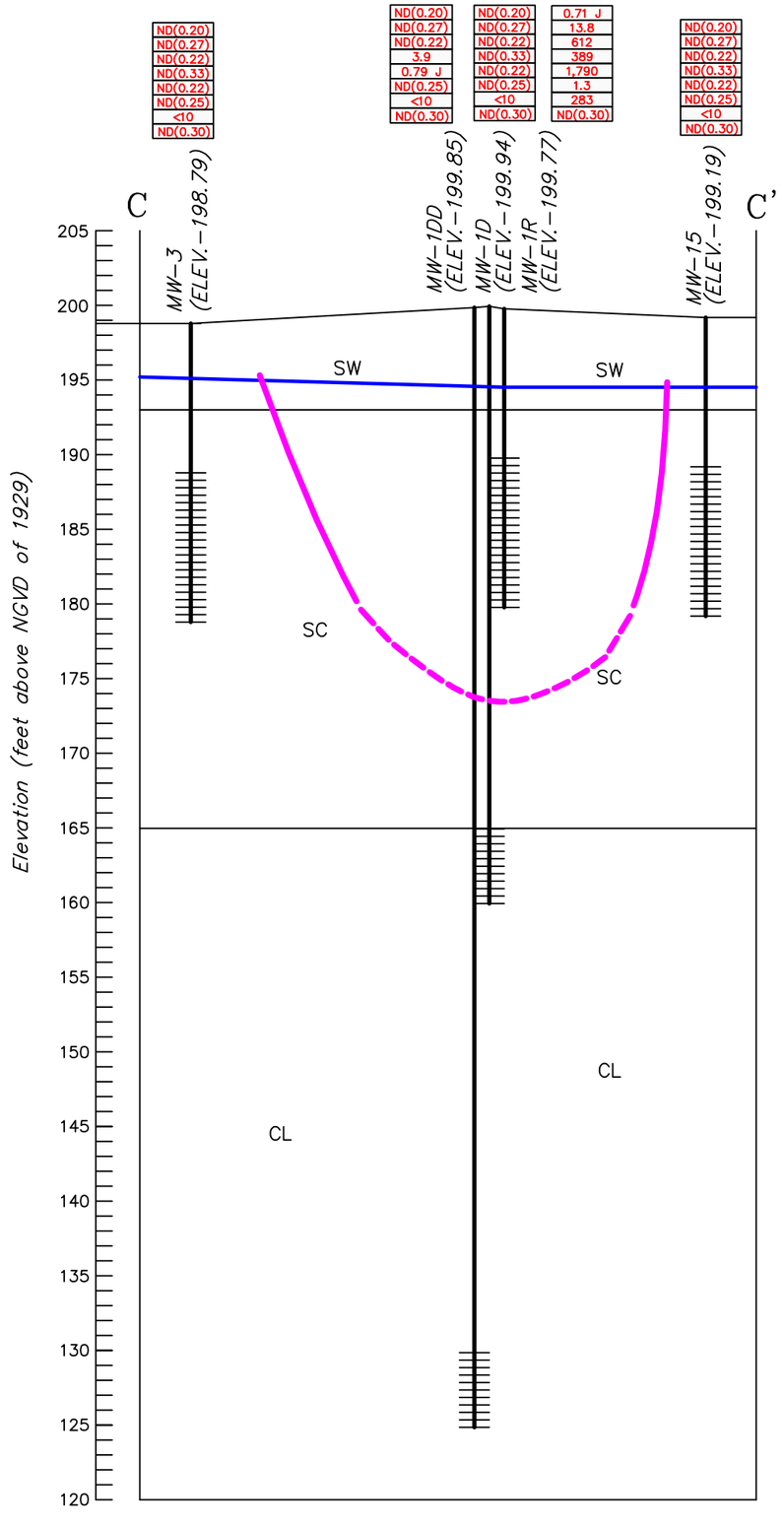
SC Clayey Sand

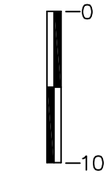
CL Clay With Medium To Low Plasticity

Water Table Elevation (4/14/15)

Extent of Impacted Groundwater

5.0	*Benzene In ug/L*
7.0	*1,1–Dichloroethylene In ug/L*
70.0	*cis–1,2–Dichloroethylene In ug/L*
5.0	*Tetrachloroethylene In ug/L*
5.0	*Trichloroethylene In ug/L*
2.0	*Vinyl Chloride In ug/L*
10.0	*Arsenic In ug/L*
––	*MTBE In ug/L*





Vertical Scale in Feet

Horizontal Scale in Feet

GEOLOGIC CROSS SECTIONS
EAST TO WEST
C–C'

TRADEMARK METALS RECYCLING
2000 WEST SAVANNAH AVENUE
VALDOSTA, GEORGIA

050815

LEGEND

SOIL BORING

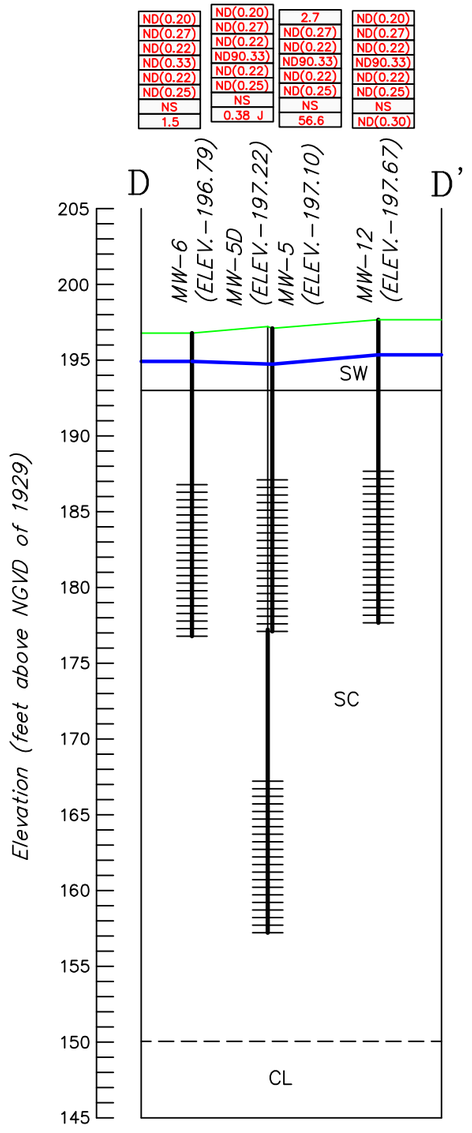
SW Sand With Little Or No Fines

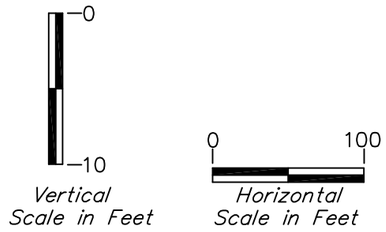
SC Clayey Sand

CL Clay With Medium To Low Plasticity

Water Table Elevation (4/14/15)

5.0	*Benzene In ug/L*
7.0	*1,1–Dichloroethylene In ug/L*
70.0	*cis–1,2–Dichloroethylene In ug/L*
5.0	*Tetrachloroethylene In ug/L*
5.0	*Trichloroethylene In ug/L*
2.0	*Vinyl Chloride In ug/L*
10.0	*Arsenic In ug/L*
--	*MTBE In ug/L*





GEOLOGIC CROSS SECTIONS
EAST TO WEST
D–D'

TRADEMARK METALS RECYCLING
2000 WEST SAVANNAH AVENUE
VALDOSTA, GEORGIA

050815

APPENDIX C

1,1-Dichloroethylene

Equation 6

$$C\ (mg/kg) = \frac{(TR)(BW)(AT)(365\ days/year)}{(EF)(ED)[(SFo)(10\text{-}6\ kg/mg)(IRs) + (SFi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration for which the upper bound excess cancer risk is less than or equal to 10^-5 (10^-4 for class C carcinogens) from soil ingestion and inhalation of volatiles and particulates using EQ 6 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	#DIV/0!	mg/kg	EQUATION 6
C=	#DIV/0!	mg/kg	EQUATION 6 NON-VOLATILE CHEMICAL

Equation 7

$$C\ (mg/kg) = \frac{(THI)(BW)(AT)(365\ days/year)}{(EF)(ED)[(1/RfDo)(10\text{-}6\ kg/mg)(IRs) + (1/RfDi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration unlikely to cause non-cancer toxic effects from soil ingestion and inhalation of volaitles and particulates using EQ 7 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	5.68E+03	mg/kg	EQUATION 7
C=	2.86E+05	mg/kg	EQUATION 7 NON-VOLATILE CHEMICAL

In soil, if the regulated substance is not volatile, then the inhalation pathway due to volatiles is incomplete and the (1/VF) term can be removed from the RAGS equation. USE ALTERNATIVE NON-VOLATILE EQ 6 & EQ 7 FOR NON-VOLATILE CHEMICALS (ex. Arsenic)

C – Concentration in soil (mg/kg)
THI – Target Hazard Index
TR– Target Excess Risk
BW – Body Weight (kg)
ED – Exposure Duration (years)
AT – Averaging Time (years)
VF – Soil to Air Volatilization Factor (m3/kg)
EF – Exposure Frequency (days/year)
IRs – Ingestion rate of soil (mg/day)
IRa – Ingestion rate of air (m3/day)
RfDi – Inhalation reference dose (mg/kg-day)
RfDo – Oral reference dose (mg/kg-day)
SFi – Inhalation cancer slope factor (mg/kg-day)-1
SFo – Oral cancer slope factor (mg/kg-day)-1
PEF – Particulate Emission Factor (m3/kg)
Daily water ingestion rate (L/day)
Water-to air volatilization factor (L/m3)

$$VF = \frac{LS * V * DH}{A} * \frac{(\pi * \alpha * T)^{1/2}}{(2 * D_{EI} * E * K_{as} * 10^{-3}\ Kg/g)}$$

WHERE:

	CALCULATED	
	CHEMICAL SPECIFIC TABLE	
THI	1	
TR	1.00E-04	10^-5 for Class A/B carcinogens; 10^-4 for Class C carcinogens
BW	70	kg
ED	25	years — 25 for non-residential; 30 for residential
AT	7.00E+01	years — **AT=ED, if non-cancer risk**
VF	7083.94	m3/kg
EF	250	days/year — 250 for non-residential; 350 for residential
Irs	50	mg/day
Ira	20	m3/day
RfDi	0.057142857	mg/kg-day
RfDo	0.05	mg/kg-day
Sfi	0	(mg/kg-day)-1
Sfo	0	(mg/kg-day)-1
PEF	4.63E+09	m3/kg
Irw	1	L/day
K	0.5	L/m3

*values were taken from Table I of Appendix III (391-3-19)

LS length of side of contaminated area (m) = 45
V wind speed in mixing zone (m/s) = 2.25
DH diffusion height (m) = 2
A area of contamination (cm^2) = 2.03 x 10^7 (=0.5 acre)
[PI] pi = 3.14

LS	45	m	
V	2.25	m/s	
DH	2	m	
A	2.03E7	cm2	0.5 acres
π	3.14	unitless	

$$\alpha = \frac{(D_{ei} * E)}{E + (\rho)(1 - E)/K_{as}}$$

α 0.000408909 cm/s
*values were taken from Table I of Appendix III (391-3-19)

T exposure interval (s) = 7.9 x 10^8 (=25 yr)
[RHO]s density of soil solids (g/cm^3) = 2.65
OC soil organic carbon content fraction (unitless) = 0.02
D_{ei} effective diffusivity (cm^2/s) = $D_i \times E^{0.33}$
D_i molecular diffusivity (cm^2/s) (chemical-specific)
E total soil porosity (unitless) = 0.35
K_{as} soil/air partition coefficient (g soil/cm^3 air) = (H/K_d) x 41
H Henry's law constant (atm-m^3/mol) (chemical-specific)
K_d soil-water partition coefficient (cm^3/g) = K_{oc} x OC ((or chemical specific)
K_{oc} organic carbon partition coefficient (cm^3/g) (chemical-specific)

T	7.90E+08	s	=25 years
ρ	2.65	g/cm3	
fOC	0.002	g/g	
Dei	6.08E-02	cm2/s	**Lists 0.02 in RAGS. However, under "Common Mistakes",
Di	0.09	cm2/s	mentions the mishap of using 0.02 instead of 0.002. EPA uses 0.002.
E	0.35	unitless	
Kas	0.03	g soil/cm3 air	=(H/KD)*41
HLC	0.03	atm-m3/mol	
Kd	0.06	cm3/g	
Koc	32.00	cm3/g	

Collect chemical-specific parameter values from EPA's Chemical Specific Paramters Table:
↑ U.S. EPA (May 2016) Regional Screening Levels (RSLs) - Generic Tables (May 2016): Chemical Specific Parameters. Accessible online at:

NOTE: US EPA Region 4 has approved the use of the Regional Screening Level Tables. (http://www.epa.gov/risk/risk-based-screening-table-generic-tables).
*values were taken from Table I of Appendix III (391-3-19)

Arsenic

Equation 6

$$C\ (mg/kg) = \frac{(TR)(BW)(AT)(365\ days/year)}{(EF)(ED)[(SFo)(10\text{-}6\ kg/mg)(IRs) + (SFi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration for which the upper bound excess cancer risk is less than or equal to 10^-5 (10^-4 for class C carcinogens) from soil ingestion and inhalation of volatiles and particulates using EQ 6 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	#DIV/0!	mg/kg	EQUATION 6
C=	38	mg/kg	EQUATION 6 NON-VOLATILE CHEMICAL

Equation 7

$$C\ (mg/kg) = \frac{(THI)(BW)(AT)(365\ days/year)}{(EF)(ED)[(1/RfDo)(10\text{-}6\ kg/mg)(IRs) + (1/RfDi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration unlikely to cause non-cancer toxic effects from soil ingestion and inhalation of volaitles and particulates using EQ 7 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	#DIV/0!	mg/kg	EQUATION 7
C=	1,707	mg/kg	EQUATION 7 NON-VOLATILE CHEMICAL

In soil, if the regulated substance is not volatile, then the inhalation pathway due to volatiles is incomplete and the (1/VF) term can be removed from the RAGS equation. USE ALTERNATIVE NON-VOLATILE EQ 6 & EQ 7 FOR NON-VOLATILE CHEMICALS (ex. Arsenic)

C – Concentration in soil (mg/kg)
THI – Target Hazard Index
TR– Target Excess Risk
BW – Body Weight (kg)
ED – Exposure Duration (years)
AT – Averaging Time (years)
VF – Soil to Air Volatilization Factor (m3/kg)
EF – Exposure Frequency (days/year)
IRs – Ingestion rate of soil (mg/day)
IRa – Ingestion rate of air (m3/day)
RfDi – Inhalation reference dose (mg/kg-day)
RfDo – Oral reference dose (mg/kg-day)
SFi – Inhalation cancer slope factor (mg/kg-day)-1
SFo – Oral cancer slope factor (mg/kg-day)-1
PEF – Particulate Emission Factor (m3/kg)
Daily water ingestion rate (L/day)
Water-to air volatilization factor (L/m3)

	CALCULATED	
	CHEMICAL SPECIFIC TABLE	
THI	1	
TR	1.00E-05	10^-5 for Class A/B carcinogens; 10^-4 for Class C carcinogens
BW	70	kg
ED	25	years — 25 for non-residential; 30 for residential
AT	70	years — **AT=ED, if non-cancer risk**
VF	#DIV/0!	m3/kg
EF	250	days/year — 250 for non-residential; 350 for residential
Irs	50	mg/day
Ira	20	m3/day
RfDi	4.28571E-06	mg/kg-day
RfDo	0.0003	mg/kg-day
Sfi	15.05	(mg/kg-day)-1
Sfo	1.5	(mg/kg-day)-1
PEF	4.63E+09	m3/kg
Irw	1	L/day
K	0.5	L/m3

*values were taken from Table I of Appendix III (391-3-19)

$$VF = \frac{LS * V * DH}{A} * \frac{(\pi * \alpha * T)^{1/2}}{(2 * D_{EI} * E * K_{as} * 10^{-3}\ Kg/g)}$$

WHERE:

LS length of side of contaminated area (m) = 45
V wind speed in mixing zone (m/s) = 2.25
DH diffusion height (m) = 2
A area of contamination (cm^2) = 2.03 x 10^7 (=0.5 acre)
[PI] pi = 3.14

LS	45	m	
V	2.25	m/s	
DH	2	m	
A	2.03E7	cm2	0.5 acres
π	3.14	unitless	

$$\alpha = \frac{(D_{ei} * E)}{E + (\rho)(1 - E)/K_{as}}$$

α #DIV/0! cm/s
*values were taken from Table I of Appendix III (391-3-19)

T exposure interval (s) = 7.9 x 10^8 (=25 yr)
[RHO]s density of soil solids (g/cm^3) = 2.65
OC soil organic carbon content fraction (unitless) = 0.02
D_{ei} effective diffusivity (cm^2/s) = $D_i \times E^{0.33}$
D_i molecular diffusivity (cm^2/s) (chemical-specific)
E total soil porosity (unitless) = 0.35
K_{as} soil/air partition coefficient (g soil/cm^3 air) = (H/K_d) x 41
H Henry's law constant (atm-m^3/mol) (chemical-specific)
K_d soil-water partition coefficient (cm^3/g) = K_{oc} x OC ((or chemical specific)
K_{oc} organic carbon partition coefficient (cm^3/g) (chemical-specific)

T	7.90E+08	s	=25 years
ρ	2.65	g/cm3	
fOC	0.002	g/g	
Dei	0.00E+00	cm2/s	**Lists 0.02 in RAGS. However, under "Common Mistakes",
Di	0.00	cm2/s	mentions the mishap of using 0.02 instead of 0.002. EPA uses 0.002.
E	0.35	unitless	
Kas	#DIV/0!	g soil/cm3 air	=(H/KD)*41
HLC	0.00	atm-m3/mol	
Kd	29.00	cm3/g	
Koc	0.00	cm3/g	

Collect chemical-specific parameter values from EPA's Chemical Specific Paramters Table:
↑ U.S. EPA (May 2016) Regional Screening Levels (RSLs) - Generic Tables (May 2016): Chemical Specific Parameters. Accessible online at:

NOTE: US EPA Region 4 has approved the use of the Regional Screening Level Tables. (http://www.epa.gov/risk/risk-based-screening-table-generic-tables).
*values were taken from Table I of Appendix III (391-3-19)

Benzene

Equation 6

$$C\ (mg/kg) = \frac{(TR)(BW)(AT)(365\ days/year)}{(EF)(ED)[(SFo)(10\text{-}6\ kg/mg)(IRs) + (SFi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration for which the upper bound excess cancer risk is less than or equal to 10^-5 (10^-4 for class C carcinogens) from soil ingestion and inhalation of volatiles and particulates using EQ 6 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	2.09E+01	mg/kg	EQUATION 6
C=	1040.537197	mg/kg	EQUATION 6 NON-VOLATILE CHEMICAL

Equation 7

$$C\ (mg/kg) = \frac{(THI)(BW)(AT)(365\ days/year)}{(EF)(ED)[(1/RfDo)(10\text{-}6\ kg/mg)(IRs) + (1/RfDi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration unlikely to cause non-cancer toxic effects from soil ingestion and inhalation of volaitles and particulates using EQ 7 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	8.96E+02	mg/kg	EQUATION 7
C=	4.90E+04	mg/kg	EQUATION 7 NON-VOLATILE CHEMICAL

In soil, if the regulated substance is not volatile, then the inhalation pathway due to volatiles is incomplete and the (1/VF) term can be removed from the RAGS equation. USE ALTERNATIVE NON-VOLATILE EQ 6 & EQ 7 FOR NON-VOLATILE CHEMICALS (ex. Arsenic)

C – Concentration in soil (mg/kg)
THI – Target Hazard Index
TR– Target Excess Risk
BW – Body Weight (kg)
ED – Exposure Duration (years)
AT – Averaging Time (years)
VF – Soil to Air Volatilization Factor (m3/kg)
EF – Exposure Frequency (days/year)
IRs – Ingestion rate of soil (mg/day)
IRa – Ingestion rate of air (m3/day)
RfDi – Inhalation reference dose (mg/kg-day)
RfDo – Oral reference dose (mg/kg-day)
SFi – Inhalation cancer slope factor (mg/kg-day)-1
SFo – Oral cancer slope factor (mg/kg-day)-1
PEF – Particulate Emission Factor (m3/kg)
Daily water ingestion rate (L/day)
Water-to air volatilization factor (L/m3)

$$VF = \frac{LS * V * DH}{A} * \frac{(\pi * \alpha * T)^{1/2}}{(2 * D_{EI} * E * K_{as} * 10^{-3}\ Kg/g)}$$

WHERE:

	CALCULATED	
	CHEMICAL SPECIFIC TABLE	
THI	1	
TR	1.00E-05	10^-5 for Class A/B carcinogens; 10^-4 for Class C carcinogens
BW	70	kg
ED	25	years — 25 for non-residential; 30 for residential
AT	7.00E+01	years — **AT=ED, if non-cancer risk**
VF	4060.79	m3/kg
EF	250	days/year — 250 for non-residential; 350 for residential
Irs	50	mg/day
Ira	20	m3/day
RfDi	0.015714286	mg/kg-day
RfDo	0.00857	mg/kg-day
Sfi	0.0273	(mg/kg-day)-1
Sfo	0.055	(mg/kg-day)-1
PEF	4.63E+09	m3/kg
Irw	1	L/day
K	0.5	L/m3

*values were taken from Table I of Appendix III (391-3-19)

LS length of side of contaminated area (m) = 45
V wind speed in mixing zone (m/s) = 2.25
DH diffusion height (m) = 2
A area of contamination (cm^2) = 2.03 x 10^7 (=0.5 acre)
[PI] pi = 3.14

LS	45	m	
V	2.25	m/s	
DH	2	m	
A	2.03E7	cm2	0.5 acres
π	3.14	unitless	

$$\alpha = \frac{(D_{ei} * E)}{E + (\rho)(1 - E)/K_{as}}$$

α 0.001213649 cm/s
*values were taken from Table I of Appendix III (391-3-19)

T exposure interval (s) = 7.9 x 10^8 (=25 yr)
[RHO]s density of soil solids (g/cm^3) = 2.65
OC soil organic carbon content fraction (unitless) = 0.02
D_{ei} effective diffusivity (cm^2/s) = $D_i \times E^{0.33}$
D_i molecular diffusivity (cm^2/s) (chemical-specific)
E total soil porosity (unitless) = 0.35
K_{as} soil/air partition coefficient (g soil/cm^3 air) = (H/K_d) x 41
H Henry's law constant (atm-m^3/mol) (chemical-specific)
K_d soil-water partition coefficient (cm^3/g) = K_{oc} x OC ((or chemical specific)
K_{oc} organic carbon partition coefficient (cm^3/g) (chemical-specific)

T	7.90E+08	s	=25 years
ρ	2.65	g/cm3	
fOC	0.002	g/g	
Dei	6.36E-02	cm2/s	**Lists 0.02 in RAGS. However, under "Common Mistakes",
Di	0.09	cm2/s	mentions the mishap of using 0.02 instead of 0.002. EPA uses 0.002.
E	0.35	unitless	
Kas	0.10	g soil/cm3 air	=(H/KD)*41
HLC	0.01	atm-m3/mol	
Kd	0.00	cm3/g	
Koc	2.40	cm3/g	

Collect chemical-specific parameter values from EPA's Chemical Specific Paramters Table:
↑ U.S. EPA (May 2016) Regional Screening Levels (RSLs) - Generic Tables (May 2016): Chemical Specific Parameters. Accessible online at:

NOTE: US EPA Region 4 has approved the use of the Regional Screening Level Tables. (http://www.epa.gov/risk/risk-based-screening-table-generic-tables).

*values were taken from Table I of Appendix III (391-3-19)

cis-1,2 Dichloroethylene

Equation 6

$$C\ (mg/kg) = \frac{(TR)(BW)(AT)(365\ days/year)}{(EF)(ED)[(SFo)(10\text{-}6\ kg/mg)(IRs) + (SFi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration for which the upper bound excess cancer risk is less than or equal to 10^-5 (10^-4 for class C carcinogens) from soil ingestion and inhalation of volatiles and particulates using EQ 6 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	#DIV/0!	mg/kg	EQUATION 6

C=	#DIV/0!	mg/kg	EQUATION 6 NON-VOLATILE CHEMICAL

Equation 7

$$C\ (mg/kg) = \frac{(THI)(BW)(AT)(365\ days/year)}{(EF)(ED)[(1/RfDo)(10\text{-}6\ kg/mg)(IRs) + (1/RfDi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration unlikely to cause non-cancer toxic effects from soil ingestion and inhalation of volaitles and particulates using EQ 7 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	#DIV/0!	mg/kg	EQUATION 7

C=	#DIV/0!	mg/kg	EQUATION 7 NON-VOLATILE CHEMICAL

In soil, if the regulated substance is not volatile, then the inhalation pathway due to volatiles is incomplete and the (1/VF) term can be removed from the RAGS equation. USE ALTERNATIVE NON-VOLATILE EQ 6 & EQ 7 FOR NON-VOLATILE CHEMICALS (ex. Arsenic)

C – Concentration in soil (mg/kg)
THI – Target Hazard Index
TR– Target Excess Risk
BW – Body Weight (kg)
ED – Exposure Duration (years)
AT – Averaging Time (years)
VF – Soil to Air Volatilization Factor (m3/kg)
EF – Exposure Frequency (days/year)
IRs – Ingestion rate of soil (mg/day)
IRa – Ingestion rate of air (m3/day)
RfDi – Inhalation reference dose (mg/kg-day)
RfDo – Oral reference dose (mg/kg-day)
SFi – Inhalation cancer slope factor (mg/kg-day)-1
SFo – Oral cancer slope factor (mg/kg-day)-1
PEF – Particulate Emission Factor (m3/kg)
Daily water ingestion rate (L/day)
Water-to air volatilization factor (L/m3)

$$VF = \frac{LS * V * DH}{A} * \frac{(\pi * \alpha * T)^{1/2}}{(2 * D_{EI} * E * K_{as} * 10^{-3}\ Kg/g)}$$

WHERE:

	CALCULATED
	CHEMICAL SPECIFIC TABLE

THI	1		
TR	1.00E-04		10^-5 for Class A/B carcinogens; 10^-4 for Class C carcinogens
BW	70	kg	
ED	25	years	25 for non-residential; 30 for residential
AT	7.00E+01	years	**AT=ED, if non-cancer risk**
VF	19774.79	m3/kg	
EF	250	days/year	250 for non-residential; 350 for residential
Irs	50	mg/day	
Ira	20	m3/day	
RfDi	0	mg/kg-day	
RfDo	0.002	mg/kg-day	
Sfi	0	(mg/kg-day)-1	
Sfo	0	(mg/kg-day)-1	
PEF	4.63E+09	m3/kg	
Irw	1	L/day	
K	0.5	L/m3	

*values were taken from Table I of Appendix III (391-3-19)

LS length of side of contaminated area (m) = 45
V wind speed in mixing zone (m/s) = 2.25
DH diffusion height (m) = 2
A area of contamination (cm^2) = 2.03 x 10^7 (=0.5 acre)
[PI] pi = 3.14

LS	45	m	
V	2.25	m/s	
DH	2	m	
A	2.03E7	cm2	0.5 acres
π	3.14	unitless	

$$\alpha = \frac{(D_{ei} * E)}{E + (\rho)(1 - E)/K_{as}}$$

α 5.30971E-05 cm/s
*values were taken from Table I of Appendix III (391-3-19)

T exposure interval (s) = 7.9 x 10^8 (=25 yr)
[RHO]s density of soil solids (g/cm^3) = 2.65
OC soil organic carbon content fraction (unitless) = 0.02
D_{ei} effective diffusivity (cm^2/s) = $D_i \times E^{0.33}$
D_i molecular diffusivity (cm^2/s) (chemical-specific)
E total soil porosity (unitless) = 0.35
K_{as} soil/air partition coefficient (g soil/cm^3 air) = (H/K_d) x 41
H Henry's law constant (atm-m^3/mol) (chemical-specific)
K_d soil-water partition coefficient (cm^3/g) = K_{oc} x OC ((or chemical specific)
K_{oc} organic carbon partition coefficient (cm^3/g) (chemical-specific)

T	7.90E+08	s	=25 years
ρ	2.65	g/cm3	
fOC	0.002	g/g	
Dei	6.22E-02	cm2/s	**Lists 0.02 in RAGS. However, under "Common Mistakes",
Di	0.09	cm2/s	mentions the mishap of using 0.02 instead of 0.002. EPA uses 0.002.
E	0.35	unitless	
Kas	0.00	g soil/cm3 air	=(H/KD)*41
HLC	0.00	atm-m3/mol	
Kd	0.08	cm3/g	
Koc	40.00	cm3/g	

Collect chemical-specific parameter values from EPA's Chemical Specific Paramters Table:
↑ U.S. EPA (May 2016) Regional Screening Levels (RSLs) - Generic Tables (May 2016): Chemical Specific Parameters. Accessible online at:

NOTE: US EPA Region 4 has approved the use of the Regional Screening Level Tables. (http://www.epa.gov/risk/risk-based-screening-table-generic-tables).
*values were taken from Table I of Appendix III (391-3-19)

Ethylbenzene

Equation 6

$$C\ (mg/kg) = \frac{(TR)(BW)(AT)(365\ days/year)}{(EF)(ED)[(SFo)(10\text{-}6\ kg/mg)(IRs) + (SFi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration for which the upper bound excess cancer risk is less than or equal to 10^-5 (10^-4 for class C carcinogens) from soil ingestion and inhalation of volatiles and particulates using EQ 6 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	2.71E+03	mg/kg	EQUATION 6
C=	18580.54129	mg/kg	EQUATION 6 NON-VOLATILE CHEMICAL

Equation 7

$$C\ (mg/kg) = \frac{(THI)(BW)(AT)(365\ days/year)}{(EF)(ED)[(1/RfDo)(10\text{-}6\ kg/mg)(IRs) + (1/RfDi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration unlikely to cause non-cancer toxic effects from soil ingestion and inhalation of volaitles and particulates using EQ 7 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	5.72E+04	mg/kg	EQUATION 7
C=	2.04E+05	mg/kg	EQUATION 7 NON-VOLATILE CHEMICAL

In soil, if the regulated substance is not volatile, then the inhalation pathway due to volatiles is incomplete and the (1/VF) term can be removed from the RAGS equation. USE ALTERNATIVE NON-VOLATILE EQ 6 & EQ 7 FOR NON-VOLATILE CHEMICALS (ex. Arsenic)

C – Concentration in soil (mg/kg)
THI – Target Hazard Index
TR– Target Excess Risk
BW – Body Weight (kg)
ED – Exposure Duration (years)
AT – Averaging Time (years)
VF – Soil to Air Volatilization Factor (m3/kg)
EF – Exposure Frequency (days/year)
IRs – Ingestion rate of soil (mg/day)
IRa – Ingestion rate of air (m3/day)
RfDi – Inhalation reference dose (mg/kg-day)
RfDo – Oral reference dose (mg/kg-day)
SFi – Inhalation cancer slope factor (mg/kg-day)-1
SFo – Oral cancer slope factor (mg/kg-day)-1
PEF – Particulate Emission Factor (m3/kg)
Daily water ingestion rate (L/day)
Water-to air volatilization factor (L/m3)

$$VF = \frac{LS * V * DH}{A} * \frac{(\pi * \alpha * T)^{1/2}}{(2 * D_{EI} * E * K_{as} * 10^{-3}\ Kg/g)}$$

WHERE:

	CALCULATED	
	CHEMICAL SPECIFIC TABLE	
THI	1	
TR	1.00E-04	10^-5 for Class A/B carcinogens; 10^-4 for Class C carcinogens
BW	70	kg
ED	25	years — 25 for non-residential; 30 for residential
AT	2.50E+01	years — **AT=ED, if non-cancer risk**
VF	54375.98	m3/kg
EF	250	days/year — 250 for non-residential; 350 for residential
Irs	50	mg/day
Ira	20	m3/day
RfDi	0.285714286	mg/kg-day
RfDo	0.1	mg/kg-day
Sfi	0.00875	(mg/kg-day)-1
Sfo	0.011	(mg/kg-day)-1
PEF	4.63E+09	m3/kg
Irw	1	L/day
K	0.5	L/m3

*values were taken from Table I of Appendix III (391-3-19)

LS length of side of contaminated area (m) = 45
V wind speed in mixing zone (m/s) = 2.25
DH diffusion height (m) = 2
A area of contamination (cm^2) = 2.03 x 10^7 (=0.5 acre)
[PI] pi = 3.14

LS	45	m	
V	2.25	m/s	
DH	2	m	
A	2.03E7	cm2	0.5 acres
π	3.14	unitless	

$$\alpha = \frac{(D_{ei} * E)}{E + (\rho)(1 - E)/K_{as}}$$

α 7.03226E-06 cm/s
*values were taken from Table I of Appendix III (391-3-19)

T exposure interval (s) = 7.9 x 10^8 (=25 yr)
[RHO]s density of soil solids (g/cm^3) = 2.65
OC soil organic carbon content fraction (unitless) = 0.02
D_{ei} effective diffusivity (cm^2/s) = $D_i x E^{0.33}$
D_i molecular diffusivity (cm^2/s) (chemical-specific)
E total soil porosity (unitless) = 0.35
K_{as} soil/air partition coefficient (g soil/cm^3 air) = (H/K_d) *x* 41
H Henry's law constant (atm-m^3/mol) (chemical-specific)
K_d soil-water partition coefficient (cm^3/g) = K_{oc} x OC ((or chemical specific)
K_{oc} organic carbon partition coefficient (cm^3/g) (chemical-specific)

T	7.90E+08	s	=25 years
ρ	2.65	g/cm3	
fOC	0.002	g/g	
Dei	4.81E-02	cm2/s	**Lists 0.02 in RAGS. However, under "Common Mistakes",
Di	0.07	cm2/s	mentions the mishap of using 0.02 instead of 0.002. EPA uses 0.002.
E	0.35	unitless	
Kas	0.00	g soil/cm3 air	=(H/KD)*41
HLC	0.01	atm-m3/mol	
Kd	0.90	cm3/g	
Koc	450.00	cm3/g	

Collect chemical-specific parameter values from EPA's Chemical Specific Paramters Table:
↑ U.S. EPA (May 2016) Regional Screening Levels (RSLs) - Generic Tables (May 2016): Chemical Specific Parameters. Accessible online at:

NOTE: US EPA Region 4 has approved the use of the Regional Screening Level Tables. (http://www.epa.gov/risk/risk-based-screening-table-generic-tables).
*values were taken from Table I of Appendix III (391-3-19)

m,p-Xylene

Equation 6

$$C\ (mg/kg) = \frac{(TR)(BW)(AT)(365\ days/year)}{(EF)(ED)[(SFo)(10\text{-}6\ kg/mg)(IRs) + (SFi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration for which the upper bound excess cancer risk is less than or equal to 10^-5 (10^-4 for class C carcinogens) from soil ingestion and inhalation of volatiles and particulates using EQ 6 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	#DIV/0!	mg/kg	EQUATION 6

C=	#DIV/0!	mg/kg	EQUATION 6 NON-VOLATILE CHEMICAL

Equation 7

$$C\ (mg/kg) = \frac{(THI)(BW)(AT)(365\ days/year)}{(EF)(ED)[(1/RfDo)(10\text{-}6\ kg/mg)(IRs) + (1/RfDi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration unlikely to cause non-cancer toxic effects from soil ingestion and inhalation of volaitles and particulates using EQ 7 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	21,447	mg/kg	EQUATION 7

C=	1,143,948	mg/kg	EQUATION 7 NON-VOLATILE CHEMICAL

In soil, if the regulated substance is not volatile, then the inhalation pathway due to volatiles is incomplete and the (1/VF) term can be removed from the RAGS equation. USE ALTERNATIVE NON-VOLATILE EQ 6 & EQ 7 FOR NON-VOLATILE CHEMICALS (ex. Arsenic)

C – Concentration in soil (mg/kg)
THI – Target Hazard Index
TR– Target Excess Risk
BW – Body Weight (kg)
ED – Exposure Duration (years)
AT – Averaging Time (years)
VF – Soil to Air Volatilization Factor (m3/kg)
EF – Exposure Frequency (days/year)
IRs – Ingestion rate of soil (mg/day)
IRa – Ingestion rate of air (m3/day)
RfDi – Inhalation reference dose (mg/kg-day)
RfDo – Oral reference dose (mg/kg-day)
SFi – Inhalation cancer slope factor (mg/kg-day)-1
SFo – Oral cancer slope factor (mg/kg-day)-1
PEF – Particulate Emission Factor (m3/kg)
Daily water ingestion rate (L/day)
Water-to air volatilization factor (L/m3)

$$VF = \frac{LS * V * DH}{A} * \frac{(\pi * \alpha * T)^{1/2}}{(2 * D_{EI} * E * K_{as} * 10^{-3}\ Kg/g)}$$

WHERE:

	CALCULATED
	CHEMICAL SPECIFIC TABLE

THI	1		
TR	1.00E-04		10^-5 for Class A/B carcinogens; 10^-4 for Class C carcinogens
BW	70	kg	
ED	25	years	25 for non-residential; 30 for residential
AT	70	years	**AT=ED, if non-cancer risk**
VF	53466.35	m3/kg	
EF	250	days/year	250 for non-residential; 350 for residential
Irs	50	mg/day	
Ira	20	m3/day	
RfDi	0.028571429	mg/kg-day	
RfDo	0.2	mg/kg-day	
Sfi	0	(mg/kg-day)-1	
Sfo	0	(mg/kg-day)-1	
PEF	4.63E+09	m3/kg	
Irw	1	L/day	
K	0.5	L/m3	

*values were taken from Table I of Appendix III (391-3-19)

LS length of side of contaminated area (m) = 45
V wind speed in mixing zone (m/s) = 2.25
DH diffusion height (m) = 2
A area of contamination (cm^2) = 2.03 x 10^7 (=0.5 acre)
[PI] pi = 3.14

LS	45	m	
V	2.25	m/s	
DH	2	m	
A	2.03E7	cm2	0.5 acres
π	3.14	unitless	

$$\alpha = \frac{(D_{ei} * E)}{E + (\rho)(1 - E)/K_{as}}$$

α 7.27351E-06 cm/s
*values were taken from Table I of Appendix III (391-3-19)

T exposure interval (s) = 7.9 x 10^8 (=25 yr)
[RHO]s density of soil solids (g/cm^3) = 2.65
OC soil organic carbon content fraction (unitless) = 0.02
D_{ei} effective diffusivity (cm^2/s) = $D_i x E^{0.33}$
D_i molecular diffusivity (cm^2/s) (chemical-specific)
E total soil porosity (unitless) = 0.35
K_{as} soil/air partition coefficient (g soil/cm^3 air) = (H/K_d) *x* 41
H Henry's law constant (atm-m^3/mol) (chemical-specific)
K_d soil-water partition coefficient (cm^3/g) = K_{oc} x OC ((or chemical specific)
K_{oc} organic carbon partition coefficient (cm^3/g) (chemical-specific)

T	7.90E+08	s	=25 years
ρ	2.65	g/cm3	
fOC	0.002	g/g	
Dei	4.81E-02	cm2/s	**Lists 0.02 in RAGS. However, under "Common Mistakes",
Di	0.07	cm2/s	mentions the mishap of using 0.02 instead of 0.002. EPA uses 0.002.
E	0.35	unitless	
Kas	0.00	g soil/cm3 air	=(H/KD)*41
HLC	0.01	atm-m3/mol	
Kd	0.76	cm3/g	
Koc	380.00	cm3/g	

Collect chemical-specific parameter values from EPA's Chemical Specific Paramters Table:
↑ U.S. EPA (May 2016) Regional Screening Levels (RSLs) - Generic Tables (May 2016): Chemical Specific Parameters. Accessible online at:

NOTE: US EPA Region 4 has approved the use of the Regional Screening Level Tables. (http://www.epa.gov/risk/risk-based-screening-table-generic-tables).
*values were taken from Table I of Appendix III (391-3-19)

Tetrachloroethylene

Equation 6

$$C\ (mg/kg) = \frac{(TR)(BW)(AT)(365\ days/year)}{(EF)(ED)[(SFo)(10\text{-}6\ kg/mg)(IRs) + (SFi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration for which the upper bound excess cancer risk is less than or equal to 10^-5 (10^-4 for class C carcinogens) from soil ingestion and inhalation of volatiles and particulates using EQ 6 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	2,729	mg/kg	EQUATION 6
C=	27,252	mg/kg	EQUATION 6 NON-VOLATILE CHEMICAL

Equation 7

$$C\ (mg/kg) = \frac{(THI)(BW)(AT)(365\ days/year)}{(EF)(ED)[(1/RfDo)(10\text{-}6\ kg/mg)(IRs) + (1/RfDi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration unlikely to cause non-cancer toxic effects from soil ingestion and inhalation of volaitles and particulates using EQ 7 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	2,889	mg/kg	EQUATION 7
C=	34,338	mg/kg	EQUATION 7 NON-VOLATILE CHEMICAL

In soil, if the regulated substance is not volatile, then the inhalation pathway due to volatiles is incomplete and the (1/VF) term can be removed from the RAGS equation. USE ALTERNATIVE NON-VOLATILE EQ 6 & EQ 7 FOR NON-VOLATILE CHEMICALS (ex. Arsenic)

C – Concentration in soil (mg/kg)
THI – Target Hazard Index
TR– Target Excess Risk
BW – Body Weight (kg)
ED – Exposure Duration (years)
AT – Averaging Time (years)
VF – Soil to Air Volatilization Factor (m3/kg)
EF – Exposure Frequency (days/year)
IRs – Ingestion rate of soil (mg/day)
IRa – Ingestion rate of air (m3/day)
RfDi – Inhalation reference dose (mg/kg-day)
RfDo – Oral reference dose (mg/kg-day)
SFi – Inhalation cancer slope factor (mg/kg-day)-1
SFo – Oral cancer slope factor (mg/kg-day)-1
PEF – Particulate Emission Factor (m3/kg)
Daily water ingestion rate (L/day)
Water-to air volatilization factor (L/m3)

$$VF = \frac{LS * V * DH}{A} * \frac{(\pi * \alpha * T)^{1/2}}{(2 * D_{EI} * E * K_{as} * 10^{-3}\ Kg/g)}$$

WHERE:

	CALCULATED	
	CHEMICAL SPECIFIC TABLE	
THI	1	
TR	1.00E-05	10^-5 for Class A/B carcinogens; 10^-4 for Class C carcinogens
BW	70	kg
ED	25	years — 25 for non-residential; 30 for residential
AT	70	years — **AT=ED, if non-cancer risk**
VF	19288.51	m3/kg
EF	250	days/year — 250 for non-residential; 350 for residential
Irs	50	mg/day
Ira	20	m3/day
RfDi	0.011428571	mg/kg-day
RfDo	0.006	mg/kg-day
Sfi	0.00091	(mg/kg-day)-1
Sfo	0.0021	(mg/kg-day)-1
PEF	4.63E+09	m3/kg
Irw	1	L/day
K	0.5	L/m3

*values were taken from Table I of Appendix III (391-3-19)

LS length of side of contaminated area (m) = 45
V wind speed in mixing zone (m/s) = 2.25
DH diffusion height (m) = 2
A area of contamination (cm^2) = 2.03 x 10^7 (=0.5 acre)
[PI] pi = 3.14

LS	45	m	
V	2.25	m/s	
DH	2	m	
A	2.03E7	cm2	0.5 acres
π	3.14	unitless	

$$\alpha = \frac{(D_{ei} * E)}{E + (\rho)(1 - E)/K_{as}}$$

α 5.57274E-05 cm/s
*values were taken from Table I of Appendix III (391-3-19)

T exposure interval (s) = 7.9 x 10^8 (=25 yr)
[RHO]s density of soil solids (g/cm^3) = 2.65
OC soil organic carbon content fraction (unitless) = 0.02
D_{ei} effective diffusivity (cm^2/s) = $D_i \times E^{0.33}$
D_i molecular diffusivity (cm^2/s) (chemical-specific)
E total soil porosity (unitless) = 0.35
K_{as} soil/air partition coefficient (g soil/cm^3 air) = (H/K_d) x 41
H Henry's law constant (atm-m^3/mol) (chemical-specific)
K_d soil-water partition coefficient (cm^3/g) = K_{oc} x OC ((or chemical specific)
K_{oc} organic carbon partition coefficient (cm^3/g) (chemical-specific)

T	7.90E+08	s	=25 years
ρ	2.65	g/cm3	
fOC	0.002	g/g	
Dei	3.54E-02	cm2/s	**Lists 0.02 in RAGS. However, under "Common Mistakes",
Di	0.05	cm2/s	mentions the mishap of using 0.02 instead of 0.002. EPA uses 0.002.
E	0.35	unitless	
Kas	0.01	g soil/cm3 air	=(H/KD)*41
HLC	0.02	atm-m3/mol	
Kd	0.19	cm3/g	
Koc	95.00	cm3/g	

Collect chemical-specific parameter values from EPA's Chemical Specific Paramters Table:
↑ U.S. EPA (May 2016) Regional Screening Levels (RSLs) - Generic Tables (May 2016): Chemical Specific Parameters. Accessible online at:

NOTE: US EPA Region 4 has approved the use of the Regional Screening Level Tables. (http://www.epa.gov/risk/risk-based-screening-table-generic-tables).
*values were taken from Table I of Appendix III (391-3-19)

Toluene

Equation 6

$$C\ (mg/kg) = \frac{(TR)(BW)(AT)(365\ days/year)}{(EF)(ED)[(SFo)(10\text{-}6\ kg/mg)(IRs) + (SFi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration for which the upper bound excess cancer risk is less than or equal to 10^-5 (10^-4 for class C carcinogens) from soil ingestion and inhalation of volatiles and particulates using EQ 6 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	#DIV/0!	mg/kg	EQUATION 6
C=	#DIV/0!	mg/kg	EQUATION 6 NON-VOLATILE CHEMICAL

Equation 7

$$C\ (mg/kg) = \frac{(THI)(BW)(AT)(365\ days/year)}{(EF)(ED)[(1/RfDo)(10\text{-}6\ kg/mg)(IRs) + (1/RfDi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration unlikely to cause non-cancer toxic effects from soil ingestion and inhalation of volaitles and particulates using EQ 7 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	292,728	mg/kg	EQUATION 7
C=	457,854	mg/kg	EQUATION 7 NON-VOLATILE CHEMICAL

In soil, if the regulated substance is not volatile, then the inhalation pathway due to volatiles is incomplete and the (1/VF) term can be removed from the RAGS equation. USE ALTERNATIVE NON-VOLATILE EQ 6 & EQ 7 FOR NON-VOLATILE CHEMICALS (ex. Arsenic)

C – Concentration in soil (mg/kg)
THI – Target Hazard Index
TR– Target Excess Risk
BW – Body Weight (kg)
ED – Exposure Duration (years)
AT – Averaging Time (years)
VF – Soil to Air Volatilization Factor (m3/kg)
EF – Exposure Frequency (days/year)
IRs – Ingestion rate of soil (mg/day)
IRa – Ingestion rate of air (m3/day)
RfDi – Inhalation reference dose (mg/kg-day)
RfDo – Oral reference dose (mg/kg-day)
SFi – Inhalation cancer slope factor (mg/kg-day)-1
SFo – Oral cancer slope factor (mg/kg-day)-1
PEF – Particulate Emission Factor (m3/kg)
Daily water ingestion rate (L/day)
Water-to air volatilization factor (L/m3)

$$VF = \frac{LS * V * DH}{A} * \frac{(\pi * \alpha * T)^{1/2}}{(2 * D_{EI} * E * K_{as} * 10^{-3}\ Kg/g)}$$

WHERE:

	CALCULATED	
	CHEMICAL SPECIFIC TABLE	
THI	1	
TR	1.00E-04	10^-5 for Class A/B carcinogens; 10^-4 for Class C carcinogens
BW	70	kg
ED	25	years — 25 for non-residential; 30 for residential
AT	70	years — **AT=ED, if non-cancer risk**
VF	39709.40	m3/kg
EF	250	days/year — 250 for non-residential; 350 for residential
Irs	50	mg/day
Ira	20	m3/day
RfDi	1.428571429	mg/kg-day
RfDo	0.08	mg/kg-day
Sfi	0	(mg/kg-day)-1
Sfo	0	(mg/kg-day)-1
PEF	4.63E+09	m3/kg
Irw	1	L/day
K	0.5	L/m3

*values were taken from Table I of Appendix III (391-3-19)

LS length of side of contaminated area (m) = 45
V wind speed in mixing zone (m/s) = 2.25
DH diffusion height (m) = 2
A area of contamination (cm^2) = 2.03 x 10^7 (=0.5 acre)
[PI] pi = 3.14

LS	45	m	
V	2.25	m/s	
DH	2	m	
A	2.03E7	cm2	0.5 acres
π	3.14	unitless	

$$\alpha = \frac{(D_{ei} * E)}{E + (\rho)(1 - E)/K_{as}}$$

α 1.31838E-05 cm/s
*values were taken from Table I of Appendix III (391-3-19)

T exposure interval (s) = 7.9 x 10^8 (=25 yr)
[RHO]s density of soil solids (g/cm^3) = 2.65
OC soil organic carbon content fraction (unitless) = 0.02
D_{ei} effective diffusivity (cm^2/s) = $D_i x E^{0.33}$
D_i molecular diffusivity (cm^2/s) (chemical-specific)
E total soil porosity (unitless) = 0.35
K_{as} soil/air partition coefficient (g soil/cm^3 air) = (H/K_d) *x* 41
H Henry's law constant (atm-m^3/mol) (chemical-specific)
K_d soil-water partition coefficient (cm^3/g) = K_{oc} x OC ((or chemical specific)
K_{oc} organic carbon partition coefficient (cm^3/g) (chemical-specific)

T	7.90E+08	s	=25 years
ρ	2.65	g/cm3	
fOC	0.002	g/g	
Dei	5.52E-02	cm2/s	**Lists 0.02 in RAGS. However, under "Common Mistakes",
Di	0.08	cm2/s	mentions the mishap of using 0.02 instead of 0.002. EPA uses 0.002.
E	0.35	unitless	
Kas	0.00	g soil/cm3 air	=(H/KD)*41
HLC	0.01	atm-m3/mol	
Kd	0.46	cm3/g	
Koc	230.00	cm3/g	

Collect chemical-specific parameter values from EPA's Chemical Specific Paramters Table:
↑ U.S. EPA (May 2016) Regional Screening Levels (RSLs) - Generic Tables (May 2016): Chemical Specific Parameters. Accessible online at:

NOTE: US EPA Region 4 has approved the use of the Regional Screening Level Tables. (http://www.epa.gov/risk/risk-based-screening-table-generic-tables).
*values were taken from Table I of Appendix III (391-3-19)

Trichloroethylene

Equation 6

$$C\ (mg/kg) = \frac{(TR)(BW)(AT)(365\ days/year)}{(EF)(ED)[(SFo)(10\text{-}6\ kg/mg)(IRs) + (SFi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration for which the upper bound excess cancer risk is less than or equal to 10^-5 (10^-4 for class C carcinogens) from soil ingestion and inhalation of volatiles and particulates using EQ 6 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	155	mg/kg	EQUATION 6
C=	1,244	mg/kg	EQUATION 6 NON-VOLATILE CHEMICAL

Equation 7

$$C\ (mg/kg) = \frac{(THI)(BW)(AT)(365\ days/year)}{(EF)(ED)[(1/RfDo)(10\text{-}6\ kg/mg)(IRs) + (1/RfDi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration unlikely to cause non-cancer toxic effects from soil ingestion and inhalation of volaitles and particulates using EQ 7 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	138	mg/kg	EQUATION 7
C=	2,861	mg/kg	EQUATION 7 NON-VOLATILE CHEMICAL

In soil, if the regulated substance is not volatile, then the inhalation pathway due to volatiles is incomplete and the (1/VF) term can be removed from the RAGS equation. USE ALTERNATIVE NON-VOLATILE EQ 6 & EQ 7 FOR NON-VOLATILE CHEMICALS (ex. Arsenic)

C – Concentration in soil (mg/kg)
THI – Target Hazard Index
TR– Target Excess Risk
BW – Body Weight (kg)
ED – Exposure Duration (years)
AT – Averaging Time (years)
VF – Soil to Air Volatilization Factor (m3/kg)
EF – Exposure Frequency (days/year)
IRs – Ingestion rate of soil (mg/day)
IRa – Ingestion rate of air (m3/day)
RfDi – Inhalation reference dose (mg/kg-day)
RfDo – Oral reference dose (mg/kg-day)
SFi – Inhalation cancer slope factor (mg/kg-day)-1
SFo – Oral cancer slope factor (mg/kg-day)-1
PEF – Particulate Emission Factor (m3/kg)
Daily water ingestion rate (L/day)
Water-to air volatilization factor (L/m3)

	CALCULATED	
	CHEMICAL SPECIFIC TABLE	
THI	1	
TR	1.00E-05	10^-5 for Class A/B carcinogens; 10^-4 for Class C carcinogens
BW	70	kg
ED	25	years — 25 for non-residential; 30 for residential
AT	70	years — **AT=ED, if non-cancer risk**
VF	17743.12	m3/kg
EF	250	days/year — 250 for non-residential; 350 for residential
Irs	50	mg/day
Ira	20	m3/day
RfDi	0.000571429	mg/kg-day
RfDo	0.0005	mg/kg-day
Sfi	0.01435	(mg/kg-day)-1
Sfo	0.046	(mg/kg-day)-1
PEF	4.63E+09	m3/kg
Irw	1	L/day
K	0.5	L/m3

*values were taken from Table I of Appendix III (391-3-19)

$$VF = \frac{LS * V * DH}{A} * \frac{(\pi * \alpha * T)^{1/2}}{(2 * D_{EI} * E * K_{as} * 10^{-3}\ Kg/g)}$$

WHERE:

LS length of side of contaminated area (m) = 45
V wind speed in mixing zone (m/s) = 2.25
DH diffusion height (m) = 2
A area of contamination (cm^2) = 2.03 x 10^7 (=0.5 acre)
[PI] pi = 3.14

LS	45	m	
V	2.25	m/s	
DH	2	m	
A	2.03E7	cm2	0.5 acres
π	3.14	unitless	

$$\alpha = \frac{(D_{ei} * E)}{E + (\rho)(1 - E)/K_{as}}$$

α 6.58875E-05 cm/s
*values were taken from Table I of Appendix III (391-3-19)

T exposure interval (s) = 7.9 x 10^8 (=25 yr)
[RHO]s density of soil solids (g/cm^3) = 2.65
OC soil organic carbon content fraction (unitless) = 0.02
D_{ei} effective diffusivity (cm^2/s) = $D_i \times E^{0.33}$
D_i molecular diffusivity (cm^2/s) (chemical-specific)
E total soil porosity (unitless) = 0.35
K_{as} soil/air partition coefficient (g soil/cm^3 air) = (H/K_d) x 41
H Henry's law constant (atm-m^3/mol) (chemical-specific)
K_d soil-water partition coefficient (cm^3/g) = K_{oc} x OC ((or chemical specific)
K_{oc} organic carbon partition coefficient (cm^3/g) (chemical-specific)

T	7.90E+08	s	=25 years
ρ	2.65	g/cm3	
fOC	0.002	g/g	
Dei	4.88E-02	cm2/s	**Lists 0.02 in RAGS. However, under "Common Mistakes",
Di	0.07	cm2/s	mentions the mishap of using 0.02 instead of 0.002. EPA uses 0.002.
E	0.35	unitless	
Kas	0.01	g soil/cm3 air	=(H/KD)*41
HLC	0.01	atm-m3/mol	
Kd	0.12	cm3/g	
Koc	61.00	cm3/g	

Collect chemical-specific parameter values from EPA's Chemical Specific Paramters Table:
↑ U.S. EPA (May 2016) Regional Screening Levels (RSLs) - Generic Tables (May 2016): Chemical Specific Parameters. Accessible online at:

NOTE: US EPA Region 4 has approved the use of the Regional Screening Level Tables. (http://www.epa.gov/risk/risk-based-screening-table-generic-tables).

*values were taken from Table I of Appendix III (391-3-19)

Vinyl Chloride

Equation 6

$$C\ (mg/kg) = \frac{(TR)(BW)(AT)(365\ days/year)}{(EF)(ED)[(SFo)(10\text{-}6\ kg/mg)(IRs) + (SFi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration for which the upper bound excess cancer risk is less than or equal to 10^-5 (10^-4 for class C carcinogens) from soil ingestion and inhalation of volatiles and particulates using EQ 6 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	29	mg/kg	EQUATION 6
C=	79	mg/kg	EQUATION 6 NON-VOLATILE CHEMICAL

Equation 7

$$C\ (mg/kg) = \frac{(THI)(BW)(AT)(365\ days/year)}{(EF)(ED)[(1/RfDo)(10\text{-}6\ kg/mg)(IRs) + (1/RfDi)(IRa)\{(1/VF) + (1/PEF)\}]}$$

This is the concentration unlikely to cause non-cancer toxic effects from soil ingestion and inhalation of volaitles and particulates using EQ 7 of RAGS Part B and non-residential assumptions in Table 3 of Appendix III.

C=	1,825	mg/kg	EQUATION 7
C=	17,169	mg/kg	EQUATION 7 NON-VOLATILE CHEMICAL

In soil, if the regulated substance is not volatile, then the inhalation pathway due to volatiles is incomplete and the (1/VF) term can be removed from the RAGS equation. USE ALTERNATIVE NON-VOLATILE EQ 6 & EQ 7 FOR NON-VOLATILE CHEMICALS (ex. Arsenic)

C – Concentration in soil (mg/kg)
THI – Target Hazard Index
TR– Target Excess Risk
BW – Body Weight (kg)
ED – Exposure Duration (years)
AT – Averaging Time (years)
VF – Soil to Air Volatilization Factor (m3/kg)
EF – Exposure Frequency (days/year)
IRs – Ingestion rate of soil (mg/day)
IRa – Ingestion rate of air (m3/day)
RfDi – Inhalation reference dose (mg/kg-day)
RfDo – Oral reference dose (mg/kg-day)
SFi – Inhalation cancer slope factor (mg/kg-day)-1
SFo – Oral cancer slope factor (mg/kg-day)-1
PEF – Particulate Emission Factor (m3/kg)
Daily water ingestion rate (L/day)
Water-to air volatilization factor (L/m3)

	CALCULATED	
	CHEMICAL SPECIFIC TABLE	
THI	1	
TR	1.00E-05	10^-5 for Class A/B carcinogens; 10^-4 for Class C carcinogens
BW	70	kg
ED	25	years — 25 for non-residential; 30 for residential
AT	70	years — **AT=ED, if non-cancer risk**
VF	4995.12	m3/kg
EF	250	days/year — 250 for non-residential; 350 for residential
Irs	50	mg/day
Ira	20	m3/day
RfDi	0.028571429	mg/kg-day
RfDo	0.003	mg/kg-day
Sfi	0.0154	(mg/kg-day)-1
Sfo	0.72	(mg/kg-day)-1
PEF	4.63E+09	m3/kg
Irw	1	L/day
K	0.5	L/m3

*values were taken from Table I of Appendix III (391-3-19)

$$VF = \frac{LS * V * DH}{A} * \frac{(\pi * \alpha * T)^{1/2}}{(2 * D_{EI} * E * K_{as} * 10^{-3}\ Kg/g)}$$

WHERE:

LS length of side of contaminated area (m) = 45
V wind speed in mixing zone (m/s) = 2.25
DH diffusion height (m) = 2
A area of contamination (cm^2) = 2.03 x 10^7 (=0.5 acre)
[PI] pi = 3.14

LS	45	m	
V	2.25	m/s	
DH	2	m	
A	2.03E7	cm2	0.5 acres
π	3.14	unitless	

$$\alpha = \frac{(D_{ei} * E)}{E + (\rho)(1 - E)/K_{as}}$$

α 0.000816174 cm/s
*values were taken from Table I of Appendix III (391-3-19)

T exposure interval (s) = 7.9 x 10^8 (=25 yr)
[RHO]s density of soil solids (g/cm^3) = 2.65
OC soil organic carbon content fraction (unitless) = 0.02
D_{ei} effective diffusivity (cm^2/s) = $D_i \times E^{0.33}$
D_i molecular diffusivity (cm^2/s) (chemical-specific)
E total soil porosity (unitless) = 0.35
K_{as} soil/air partition coefficient (g soil/cm^3 air) = (H/K_d) x 41
H Henry's law constant (atm-m^3/mol) (chemical-specific)
K_d soil-water partition coefficient (cm^3/g) = K_{oc} x OC ((or chemical specific)
K_{oc} organic carbon partition coefficient (cm^3/g) (chemical-specific)

T	7.90E+08	s	=25 years
ρ	2.65	g/cm3	
fOC	0.002	g/g	
Dei	7.78E-02	cm2/s	**Lists 0.02 in RAGS. However, under "Common Mistakes",
Di	0.11	cm2/s	mentions the mishap of using 0.02 instead of 0.002. EPA uses 0.002.
E	0.35	unitless	
Kas	0.05	g soil/cm3 air	=(H/KD)*41
HLC	0.03	atm-m3/mol	
Kd	0.04	cm3/g	
Koc	22.00	cm3/g	

Collect chemical-specific parameter values from EPA's Chemical Specific Paramters Table:
↑ U.S. EPA (May 2016) Regional Screening Levels (RSLs) - Generic Tables (May 2016): Chemical Specific Parameters. Accessible online at:

NOTE: US EPA Region 4 has approved the use of the Regional Screening Level Tables. (http://www.epa.gov/risk/risk-based-screening-table-generic-tables).
*values were taken from Table I of Appendix III (391-3-19)

APPENDIX D

GROUNDWATER SAMPLING LOG

SITE NAME:	TMR Valdosta	SITE LOCATION:	2000 West Savannah Ave Valdosta GA
WELL NO:	MW-8	SAMPLE ID:	FA 37966-4
DATE:	10-17-16		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	1/4	10 feet to 20 feet	7.65	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (20 feet − 7.65 feet) X 0.04 gallons/foot = 0.49 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
15	15	0820	0836	0.79

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	(ODOR describe)	ORP (Mv)
0830	0.49	0.49	0.045	9.04	7.20	25.26	509	0.41	4.50	none	slight	-167.9
0833	0.15	0.64	↓	9.04	7.20	25.22	505	0.35	5.35	"	"	-166.9
0836	0.15	0.79	↓	9.04	7.20	25.23	504	0.35	3.97	"	"	-166.3

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
R Todd Fulker / GF	R Todd	0837	0842

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
15	HDPE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
66-4	3	CG	40mL	HCl	—	<2	8260	APP	<400

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

pH: ± 0.1 units **Temperature:** ± 10% °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation; optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 10 NTU

GROUNDWATER SAMPLING LOG

SITE NAME:	TMR Valdosta	SITE LOCATION:	2000 West Savannah Ave Valdosta GA
WELL NO:	MW-1R	SAMPLE ID:	FA37966-1
		DATE:	10-17-16

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	10 feet to 20 feet	STATIC DEPTH TO WATER (feet)	9.69	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (20 feet – 9.69 feet) X 0.16 gallons/foot = 1.65 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	15	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	15	PURGING INITIATED AT:	1510	PURGING ENDED AT:	1536	TOTAL VOLUME PURGED (gallons):	2.15

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	(ODOR describe)	ORP (Mv)
1530	1.65	1.65	0.0825	9.95	4.54	26.17	230	0.31	8.48	clear	chemical	53.0
1533	0.25	1.90	"	9.95	4.55	26.12	229	0.31	8.67	"	"	52.7
1536	0.25	2.15	"	9.95	4.55	26.08	228	0.31	8.51	"	"	52.3

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	R Todd Falkner / GF	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1537	SAMPLING ENDED AT:	1542
PUMP OR TUBING DEPTH IN WELL (feet):	15	TUBING MATERIAL CODE:	HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y N (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
66-1	3	CG	40mL	HCl	–	<2	8260	APP	<400
"	1	PE	250mL	HNO3	–	<2	Arsenic	APP	<1000

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

pH: ± 0.1 units **Temperature:** ± 10% °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation; optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 10 NTU

GROUNDWATER SAMPLING LOG

SITE NAME: TMR Valdosta	SITE LOCATION: 2000 West Savannah Ave Valdosta GA		
WELL NO: MW-1DD	SAMPLE ID: FA37986-2	DATE: 10-17-16	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 70 feet to 75 feet	STATIC DEPTH TO WATER (feet): 36.95	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (75 feet − 36.95 feet) X 0.16 gallons/foot = 6.09 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 72.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 72.5	PURGING INITIATED AT: 1445	PURGING ENDED AT: 1551	TOTAL VOLUME PURGED (gallons): 6.69

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or ~~µS/cm~~	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	(ODOR describe)	ORP (Mv)
1545	6.04	6.04	0.1015	50.50	5.25	24.31	78	5.98	4.83	none	none	62.2
1548	0.30	6.39	↓	52.53	5.21	24.33	76	6.04	3.83	"	"	67.6
1551	0.30	6.69		50.55	5.24	24.37	76	5.94	3.65	"	"	65.5

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Dan Dennis/Todd Fullmer/GF	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1552	SAMPLING ENDED AT: 1600
PUMP OR TUBING DEPTH IN WELL (feet): 72.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING Y ~~N (replaced)~~	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
66-2	3	CG	40ml	HCL	—	<2	8260	AESP	<400
↓	1	PE	250ml	HNO3	—	<2	As	AESP	<1000

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

pH: ± 0.1 units **Temperature:** ± 10% °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation; optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 10 NTU

GROUNDWATER SAMPLING LOG

SITE NAME: TVA Valdosta	SITE LOCATION: 2010 West Savannah Ave Valdosta GA		
WELL NO: MW-1D	SAMPLE ID: FA37964-3	DATE: 10-17-16	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 35 feet to 40 feet	STATIC DEPTH TO WATER (feet): 9.60	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (40 feet − 9.60 feet) X 0.16 gallons/foot = 4.86 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 37.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 37.5	PURGING INITIATED AT: 1605	PURGING ENDED AT: 1701	TOTAL VOLUME PURGED (gallons): 5.44

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	(ODOR describe)	ORP (Mv)
1655	4.86	4.86	0.0972	10.75	3.80	24.55	97	7.28	6.80	Clear	None	230.0
1658	0.29	5.15	↓	10.75	3.81	24.53	96	7.27	6.71	"	"	230.4
1701	0.29	5.44	↓	10.75	3.82	24.49	97	7.26	6.81	"	"	230.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: R Todd Felker (GF)	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1702	SAMPLING ENDED AT: 1707
PUMP OR TUBING DEPTH IN WELL (feet): 3.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
603	3	CG	40mL	HCL	—	<2	8260	ESP	<400
↓	1	PE	250mL	HNO3	—	<2	Arsenic	ESP	<1000

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

pH: ± 0.1 units **Temperature:** ± 10% °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation; optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 10 NTU

GROUNDWATER SAMPLING LOG

SITE NAME: TMR Valdosta	SITE LOCATION: 2000 West Savannah Ave Valdosta GA		
WELL NO: MW-2R	SAMPLE ID: FA 37966-5	DATE: 10-18-16	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet	STATIC DEPTH TO WATER (feet): 9.47	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (20 feet – 9.47 feet) X 0.16 gallons/foot = 1.68 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 15	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15	PURGING INITIATED AT: 0820	PURGING ENDED AT: 0859	TOTAL VOLUME PURGED (gallons): 1.98

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	(ODOR describe)	ORP (Mv)
0853	1.68	1.68	0.0809	9.56	3.95	24.83	513	0.21	7.95	Clear	None	143.5
0856	0.15	1.83	↓	9.56	3.94	24.83	511	0.20	7.32	"	"	142.9
0859	0.15	1.98		9.56	3.93	24.82	510	0.20	6.99	"	"	141.9

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: R. Todd Falkner (GF)	SAMPLER(S) SIGNATURE(S): R Todd Falkner	SAMPLING INITIATED AT: 902	SAMPLING ENDED AT: 0908
PUMP OR TUBING DEPTH IN WELL (feet): 15	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
66975	3	CG	40ML	HCl	–	<2	8260	APP	<400
↓	1	PE	250ML	HNO3	–	<2	Arsenic	↓	<400

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

pH: ± 0.1 units **Temperature:** ± 10% °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation; optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 10 NTU

GROUNDWATER SAMPLING LOG

SITE NAME:	TMR Valdosta	SITE LOCATION:	2000 West Savannah Ave Valdosta GA
WELL NO:	MW-15	SAMPLE ID:	FA37966-6
DATE:	10-18-16		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	10 feet to 20 feet	STATIC DEPTH TO WATER (feet):	9.45	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (20 feet – 9.45 feet) X 0.16 gallons/foot = 1.69 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	15	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	15	PURGING INITIATED AT:	0825	PURGING ENDED AT:	0906	TOTAL VOLUME PURGED (gallons):	1.97

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (S/cm)	DISSOLVED OXYGEN (circle units) (mg/l) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	(ODOR describe)	ORP (Mv)
0900	1.69	1.69	0.0482	9.59	5.12	24.35	38	5.09	6.51	none	none	177.0
0903	0.14	1.83	↓	9.60	5.10	24.37	38	5.09	6.50	"	"	178.8
0906	0.14	1.97		9.60	5.10	24.36	38	5.10	6.38	"	"	178.9

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Dan Dennis/Todd Falkner/GF	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	0907	SAMPLING ENDED AT:	0913
PUMP OR TUBING DEPTH IN WELL (feet):	15	TUBING MATERIAL CODE:	HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ___ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y (N) (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
66	3	CG	40ml	HCl	—	<2	8260	APP	<400
↓	1	PE	250ml	HNO3	—	<2	As	APP	<1000

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

pH: ± 0.1 units **Temperature:** ± 10% °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation; optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 10 NTU

GROUNDWATER SAMPLING LOG

SITE NAME:	TMR Valdosta	SITE LOCATION:	2000 West Savannah Ave Valdosta GA
WELL NO:	MW-3	SAMPLE ID:	FA37966-7
DATE:	10-18-16		

PURGING DATA

WELL DIAMETER (inches):	1	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	10 feet to 20 feet	STATIC DEPTH TO WATER (feet):	9.95	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (20 feet − 9.95 feet) X 0.04 gallons/foot = 0.40 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	15	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	17	PURGING INITIATED AT:	0936	PURGING ENDED AT:	0949	TOTAL VOLUME PURGED (gallons):	0.74

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	(ODOR describe)	ORP (Mv)
0949	0.40	0.40	0.057	16.25	6.01	26.53	73	1.30	9.87	Clear	None	106.7
0946	0.17	0.57	↓	16.43	6.02	26.55	72	1.29	9.79	"	"	102.8
0949	0.17	0.74	↓	16.62	6.04	26.58	70	1.25	9.83	"	"	98.4

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Dan Dennis / GF	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	0950	SAMPLING ENDED AT:	0957
PUMP OR TUBING DEPTH IN WELL (feet):	17	TUBING MATERIAL CODE:	HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
67	3	CG	40mL	HCl	—	<2	5260	APP	<400
↓	1	PE	250mL	HNO3	—	<2	Arsenic	↓	<100

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

pH: ± 0.1 units **Temperature:** ± 10% °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation; optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 10 NTU

GROUNDWATER SAMPLING LOG

SITE NAME: TMR Valdosta	SITE LOCATION: 2000 West Savannah Ave Valdosta GA		
WELL NO: MW-14	SAMPLE ID: FA 37966-8	DATE: 10-18-16	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet	STATIC DEPTH TO WATER (feet): 10.56	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (20 feet - 10.56 feet) X 0.16 gallons/foot = 1.51 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 15	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15	PURGING INITIATED AT: 0940	PURGING ENDED AT: 1006	TOTAL VOLUME PURGED (gallons): 1.97

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (mS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	(ODOR describe)	ORP (Mv)
1000	1.51	1.51	0.0755	10.67	4.94	26.31	68	4.50	2.13	Clear	none	93.6
1003	0.23	1.74	↓	10.67	4.94	26.30	69	4.51	2.04	1.	11	93.8
1006	0.23	1.97	↓	10.67	4.94	26.29	70	4.52	1.99	1.	11	94.1

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: R Todd Fulkner (GF)	SAMPLER(S) SIGNATURE(S): R Todd F	SAMPLING INITIATED AT: 1007	SAMPLING ENDED AT: 1011
PUMP OR TUBING DEPTH IN WELL (feet): 15	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
66-8	3	CG	40ML	HCL	-	<2	8260	APP	<400
↓	1	PE	250ML	HNO3	-	<2	Arsenic	↓	<1000

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

pH: ± 0.1 units Temperature: ± 10% °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation; optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 10 NTU

GROUNDWATER SAMPLING LOG

SITE NAME: TMA Valdosta	SITE LOCATION: 2000 West Savannah Ave Valdosta GA		
WELL NO: MW-16	SAMPLE ID: FA 37966-9	DATE: 10-18-16	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet	STATIC DEPTH TO WATER (feet): 8.22	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (20 feet − 8.22 feet) X 0.16 gallons/foot = 1.88 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
15	15	1050	1126	2.26

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	(ODOR describe)	ORP (Mv)
1120	1.89	1.89	0.0626	8.49	4.56	25.46	397	0.15	2.90	none	none	16.8
1123	0.19	2.07	↓	8.49	4.54	25.43	402	0.13	2.85	"	"	16.2
1126	0.19	2.26		8.49	4.54	25.43	401	0.13	2.73	"	"	16.2

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0 0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Dan Dennis/Todd Falkner/GHD		1127	1133

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
15	HDPE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
6-9	3	CG	40mL	HCl	—	<2	8260	APP	<400
	~~1~~	~~PE~~	~~250mL~~	~~HNO3~~		~~<2~~			
			DRO						

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

pH: ± 0.1 units **Temperature:** ± 10% °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation; optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 10 NTU

GROUNDWATER SAMPLING LOG

SITE NAME: TMK Valdosta	SITE LOCATION: 2000 West Savannah Ave Valdosta GA
WELL NO: MW-11	SAMPLE ID: FA3796-10
	DATE: 10-18-16

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet	STATIC DEPTH TO WATER (feet): —	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (20 feet – — feet) X 0.04 gallons/foot = — gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 15	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15	PURGING INITIATED AT: 1200	PURGING ENDED AT: 1228	TOTAL VOLUME PURGED (gallons): 1.28

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	(ODOR describe)	ORP (Mv)
1222	1.00	1.00	0.0454S	–	4.07	24.03	57	2.30	4.83	clear	None	42.4
1225	0.14	1.14	↓	–	4.08	23.99	57	2.30	3.81	"	"	42.7
1228	0.14	1.28		–	4.07	23.04	57	3.29	3.20	"	"	47.0

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: R Todd Fraser / GF	SAMPLER(S) SIGNATURE(S): R Todd	SAMPLING INITIATED AT: 1229	SAMPLING ENDED AT: 1234
PUMP OR TUBING DEPTH IN WELL (feet): 15	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
6-10	3	CG	40mL	HCL	—	<2	8260	APP	<400

REMARKS: Cannot triple DTW as well casing is bent

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

pH: ± 0.1 units **Temperature:** ± 10% °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation; optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 10 NTU

FIELD INSTRUMENT CALIBRATION RECORDS INSTRUMENT

(MAKER/MODEL#) YSI 556 MPS — INSTRUMENT # 03L0628AE 20150919

HF Scientific Turb. meter MicroTPW

PARAMETER: *[check only one]*

☐ TEMPERATURE ☑ CONDUCTIVITY ☐ SALINITY ☑ pH ☐ ORP

☑ TURBIDITY ☐ RESIDUAL Cl ☑ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A pH 10 lot 16CC011 exp Nov 18 pH 7 lot 16CC10 exp Nov 18 pH 4 lot 16CB46 exp Feb 19

Standard B Cond 1000 uS/cm lot 16CC1100 exp March 19

Standard C turb 1000 lot 5C905 exp Sep 2019 turb 0.2 lot 5C901 exp Sep 2019

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
18/10/16	0730	DO	DI H2O	100.3/100.0		YES	Cont	RTF
		pH	10	10.11/10.00				
		pH	7	7.04/7.00				
		pH	4	4.01/4.00				
		Cond	1000	1013/1000				
		turb	1000	1011/1000				
↓	↓	turb	0.02	0.07/0.02		↓	↓	↓
18/10/16	1245	DO	DI H2O	100.2/100.0		YES	Cont/Final	RTF
		pH	10	10.05/10.00				
		pH	7	7.03/7.00				
		pH	4	4.01/4.00				
		Cond	1000	1012/1000				
		turb	1000	1008/1000				
↓	↓	turb	0.02	0.07/0.02		↓	↓	↓

FIELD INSTRUMENT CALIBRATION RECORDS INSTRUMENT

(MAKER/MODEL#) YSI ProPlus — INSTRUMENT # 10E100344

Lamotte Turbidity meter 2020we — 219-4110

PARAMETER: *[check only one]*

☐ TEMPERATURE ☑ CONDUCTIVITY ☐ SALINITY ☑ pH ☐ ORP

☑ TURBIDITY ☐ RESIDUAL Cl ☑ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A pH 10 lot SGK419 exp Nov 17 pH 7 lot SGK328 exp Nov 17 pH 4 lot SGK141 exp Nov 17

Standard B Cond 1000 us/cm lot SGK588 exp Nov 16

Standard C 10 NTU and 0 NTU provided by US Environmental Tampa FL

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
16/10/18	0730	DO	DI H2O	100.2/100.0		Yes	Cont	DRD
		pH	10	10.09/10.00				
		pH	7	7.08/7.00				
		pH	4	4.05/4.00				
		cond	1000	1013/1000				
		turb	10	10.08/10.00				
↓	↓	turb	0	0.0/0.0		↓	↓	↓
16/10/18	1245	DO	DI H2O	100.0/100.0		Yes	Cont/Final	DRD
		pH	10	10.07/10.00				
		pH	7	7.05/7.00				
		pH	4	4.02/4.00				
		cond	1000	1011/1000				
		turb	10	10.09/10.00				
↓	↓	turb	0	0.0/0.0		↓	↓	↓

FIELD INSTRUMENT CALIBRATION RECORDS INSTRUMENT

(MAKER/MODEL#) YSI 556 MPS / HF Scientific Turb. meter MicroTPW

INSTRUMENT # 03L0628AE 20150919

PARAMETER: *[check only one]*

☐ TEMPERATURE ☑ CONDUCTIVITY ☐ SALINITY ☑ pH ☐ ORP

☑ TURBIDITY ☐ RESIDUAL Cl ☑ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A pH 10 lot 6GC061 exp Nov 18 pH 7 lot 6GC010 exp Nov 18 pH 4 lot 6GD646 exp Feb 18

Standard B Cond 1000 uS/cm lot 6GC1100 exp Nov 17

Standard C turb 1000 lot 5C905 exp Sep 2017 turb 0.2 lot 5C901 exp Sep 2017

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
16/10/17	0700	DO	DI H2O	100.6/100.0		Yes	Init	RTF
		pH	10	9.91/10.00				
		pH	7	6.93/7.00				
		pH	4	3.96/4.00				
		Cond	1000	1024/1000				
		turb	1000	1014/1000				
↓	↓	turb	0.02	0.03/0.02		↓	↓	↓
16/10/17	1515	DO	DI H2O	100.4/100.0		Yes	cont	RTF
		pH	10	9.97/10.00				
		pH	7	6.98/7.00				
		pH	4	4.00/4.00				
		Cond	1000	1016/1000				
		turb	1000	1010/1000				
↓	↓	turb	0.02	0.03/0.02		↓	↓	↓

FIELD INSTRUMENT CALIBRATION RECORDS INSTRUMENT

(MAKER/MODEL#) YSI ProPlus — **INSTRUMENT #** 10E100344 219-4110

PARAMETER: *[check only one]* Laquatte Turbidity meter 2020we

☐ TEMPERATURE ☑ CONDUCTIVITY ☐ SALINITY ☑ pH ☐ ORP
☑ TURBIDITY ☐ RESIDUAL Cl ☑ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A pH 10 lot 5GK419 exp Nov 17 pH 7 lot 5GK328 exp Nov 17 pH 4 lot 5GK141 exp Nov 17

Standard B cond 1000 us/cm lot 5GK588 exp Nov 16

Standard C 10 NTU and 0 NTU provided by US Environmental Tampa FL

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
16/10/17	0700	DO	DI H2O	100.3/100.0		Yes	Init	DRD
		pH	10	10.11/10.00				
		pH	7	7.08/7.00				
		pH	4	4.04/4.00				
		cond	1000	1020/1000				
		turb	10	10.09/10.00				
↓	↓	turb	0	0.0/0.0		↓	↓	↓
16/10/17	1515	DO	DI H2O	100.1/100.0		Yes	cont	DRD
		pH	10	10.08/10.00				
		pH	7	7.05/7.00				
		pH	4	4.02/4.00				
		cond	1000	1014/1000				
		turb	10	10.07/10.00				
↓	↓	turb	0	0.0/0.0		↓	↓	↓

GW Elevation data collected on 10/17/16

Table 1:
Monitoring Well and Groundwater Elevation Data

Trademark Metals Recycling, 2000 West Savannah, Valdosta, GA

WELL ID	MW-1R			MW-2R			MW-3			MW-4		
AQUIFER	Upper Surficial			Upper Surficial			Upper Surficial			Upper Surficial		
DIAMETER (inches)	2.0			2.0			1.0			1.0		
WELL DEPTH (feet BLS)	20			20			20			20		
SCREEN (feet BTOC)	10			10			10			10		
TOC ELEVATION (feet MSL)	199.77			199.31			198.79			200.21		
DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP
07/21/14	-	-	-	-	-	-	191.53	7.26	0.00	191.53	8.68	0.00
08/11/14	189.62	10.15	0.00	189.56	9.75	0.00	189.86	8.93	0.00	189.84	10.37	0.00
11/11/14	188.39	11.38	0.00	188.31	11.00	0.00	188.89	9.90	0.00	188.66	11.55	0.00
04/14/15	194.52	5.25	0.00	194.44	4.87	0.00	195.11	3.68	0.00	194.92	5.29	0.00
10/19/15	194.10	5.67	0.00	193.89	5.42	0.00	195.15	3.64	0.00	194.26	5.95	0.00
04/05/16	196.76	3.01	0.00	196.74	2.57	0.00	196.51	2.28	0.00	196.85	3.36	0.00
07/27/16	192.21	7.56	0.00	192.17	7.14	0.00	193.00	5.79	0.00	192.42	7.79	0.00
10-17-16		9.69			9.47			9.95			8.24	

WELL ID	MW-5			MW-5D			MW-6			MW-8		
AQUIFER	Upper Surficial			Intermediate Surficial			Upper Surficial			Upper Surficial		
DIAMETER (inches)	1.0			2.0			1.0			1.0		
WELL DEPTH (feet BLS)	20			40			20			20		
SCREEN (feet BTOC)	10			5.0			10			10		
TOC ELEVATION (feet MSL)	197.10			197.22			196.79			198.42		
DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP
07/21/14	191.92	5.18	0.00	-	-	-	191.32	5.47	0.00	191.75	6.67	0.00
08/11/14	190.62	6.48	0.00	188.39	8.83	0.00	190.09	6.70	0.00	190.19	8.23	0.00
11/11/14	189.75	7.35	0.00	187.23	9.99	0.00	188.92	7.87	0.00	189.10	9.32	0.00
04/14/15	194.73	2.37	0.00	192.45	4.77	0.00	194.91	1.88	0.00	194.12	4.30	0.00
10/19/15	194.62	2.48	0.00	191.71	5.51	0.00	193.80	2.99	0.00	193.85	4.57	0.00
04/05/16	196.38	0.72	0.00	194.87	2.35	0.00	Not Available			196.58	1.84	0.00
07/27/16	193.01	4.09	0.00	190.04	7.18	0.00	192.10	4.69	0.00	192.01	6.41	0.00
10-17-16		6.19			8.74			6.41			7.65	

WELL ID	MW-10			MW-11			MW-12			MW-13		
AQUIFER	Upper Surficial			Upper Surficial			Upper Surficial			Upper Surficial		
DIAMETER (inches)	1.0			1.0			1.0			2.0		
WELL DEPTH (feet BLS)	20			20			20			20		
SCREEN (feet BTOC)	10			10			10			10		
TOC ELEVATION (feet MSL)	200.16			197.00			197.67			197.36		
DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP
07/21/14	191.65	8.51	0.00	-	-	-	-	-	-	-	-	-
08/11/14	189.95	10.21	0.00	-	-	-	190.41	7.26	0.00	190.53	6.83	0.00
11/11/14	188.78	11.38	0.00	188.91	8.09	0.00	189.49	8.18	0.00	189.61	7.75	0.00
04/14/15	194.96	5.20	0.00	194.52	2.48	0.00	195.35	2.32	0.00	194.94	2.42	0.00
10/19/15	192.90	7.26	0.00	193.89	3.11	0.00	194.42	3.25	0.00	194.71	2.65	0.00
04/05/16	196.92	3.24	0.00	196.22	0.78	0.00	196.57	1.10	0.00	196.49	0.87	0.00
07/27/16	192.73	7.43	0.00	Not Available			192.66	5.01	0.00	192.52	4.84	0.00
10-17-16		9.44		"	"	"		6.28			6.35	

DTW measurements collected on 10-17-16 started at 0705 ended at 0745

MW-11 - (Pipe) (casing is bent) cannot get water level indicator to fit down well

Table 1:
Monitoring Well and Groundwater Elevation Data

Trademark Metals Recycling, 2000 West Savannah, Valdosta, GA

WELL ID	MW-14			MW-15			MW-1D			MW-1DD		
AQUIFER	Upper Surficial			Upper Surficial			Intermediate Surficial			Lower Surficial		
DIAMETER (inches)	2.0			2.0			2.0			2.0		
WELL DEPTH (feet BLS)	20			20			40			75		
SCREEN (feet BTOC)	10			10			5			5		
TOC ELEVATION (feet MSL)	200.51			199.19			199.94			199.85		
DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP
07/21/14	-	-	-	-	-	-	-	-	-	-	-	-
08/11/14	-	-	-	-	-	-	-	-	-	-	-	-
11/11/14	188.35	12.16	0.00	188.16	11.03	0.00	187.80	12.14	0.00	161.68	38.17	0.00
04/14/15	194.44	6.07	0.00	194.52	4.67	0.00	193.51	6.43	0.00	166.21	33.64	0.00
10/19/15	193.93	6.58	0.00	194.32	4.87	0.00	192.68	7.26	0.00	164.45	35.40	0.00
04/05/16	196.72	3.79	0.00	196.81	2.38	0.00	195.83	4.11	0.00	166.84	33.01	0.00
07/27/16	192.31	8.20	0.00	191.91	7.28	0.00	191.08	8.86	0.00	165.19	34.66	0.00
10-17-16		10.56			9.45			9.60			36.95	

WELL ID	MW-16		
AQUIFER	Upper Surficial		
DIAMETER (inches)	2.0		
WELL DEPTH (feet BLS)	20		
SCREEN (feet BTOC)	10		
TOC ELEVATION (feet MSL)	198.22		
DATE	ELEV	DTW	FP
07/21/14	Not Available		
08/11/14	Not Available		
11/11/14	Not Available		
04/14/15	Not Available		
10/19/15	Not Available		
04/05/16	Not Available		
07/27/16	191.57	6.65	0.00
10-17-16		8.22	

Notes:
BLS = below land surface
DTW = Depth to Water
ELE = Elevation
FP = Free Product
MSL = Mean Sea Level

APPENDIX E

e-Hardcopy 2.0
Automated Report

Technical Report for

Gannett Fleming

Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

57524

SGS Accutest Job Number: FA37966

Sampling Dates: 10/17/16 - 10/18/16

Report to:

Gannett Fleming
West Lake Corporate Center 9119 Corporate Lake Dr, Suite 150
Tampa, FL 33634-6323
agetchell@gfnet.com; tfalkner@gfnet.com

ATTN: Aaron Getchell

Total number of pages in report: **84**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001) DoD ELAP (L-A-B L2229), CA (2937), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

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Sample Summary

Gannett Fleming

Job No: FA37966

Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA
Project No: 57524

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA37966-1	10/17/16	15:37	RFDD	10/21/16	AQ	Ground Water	MW-1R
FA37966-2	10/17/16	15:52	RFDD	10/21/16	AQ	Ground Water	MW-1DD
FA37966-3	10/17/16	17:02	RFDD	10/21/16	AQ	Ground Water	MW-1D
FA37966-4	10/17/16	08:37	RFDD	10/21/16	AQ	Ground Water	MW-8
FA37966-5	10/18/16	09:00	RFDD	10/21/16	AQ	Ground Water	MW-2R
FA37966-6	10/18/16	09:07	RFDD	10/21/16	AQ	Ground Water	MW-15
FA37966-7	10/18/16	09:50	RFDD	10/21/16	AQ	Ground Water	MW-3
FA37966-8	10/18/16	10:07	RFDD	10/21/16	AQ	Ground Water	MW-14
FA37966-9	10/18/16	11:27	RFDD	10/21/16	AQ	Ground Water	MW-16
FA37966-10	10/18/16	12:29	RFDD	10/21/16	AQ	Ground Water	MW-11

Summary of Hits

Job Number: FA37966
Account: Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA
Collected: 10/17/16 thru 10/18/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA37966-1	**MW-1R**					
cis-1,2-Dichloroethylene		544	20	6.2	ug/l	SW846 8260B
Ethylbenzene		6.8 J	20	5.0	ug/l	SW846 8260B
Tetrachloroethylene		428	20	6.1	ug/l	SW846 8260B
Trichloroethylene		1830	25	6.8	ug/l	SW846 8260B
m,p-Xylene		6.3 J	40	6.0	ug/l	SW846 8260B
o-Xylene		8.7 J	20	5.3	ug/l	SW846 8260B
Arsenic		317	10		ug/l	SW846 6010C
FA37966-2	**MW-1DD**					
1,1-Dichloroethane		5.1	1.0	0.26	ug/l	SW846 8260B
1,1-Dichloroethylene		0.72 J	1.0	0.22	ug/l	SW846 8260B
Tetrachloroethylene		7.1	1.0	0.30	ug/l	SW846 8260B
1,1,1-Trichloroethane		4.3	1.0	0.20	ug/l	SW846 8260B
Trichloroethylene		0.55 J	1.0	0.27	ug/l	SW846 8260B
FA37966-3	**MW-1D**					
No hits reported in this sample.						
FA37966-4	**MW-8**					
Benzene		384	5.0	1.0	ug/l	SW846 8260B
Ethylbenzene		84.5	5.0	1.3	ug/l	SW846 8260B
n-Propylbenzene		2.2 J	5.0	1.0	ug/l	SW846 8260B
Toluene		11.6	5.0	1.0	ug/l	SW846 8260B
1,2,4-Trimethylbenzene		16.1	5.0	1.0	ug/l	SW846 8260B
1,3,5-Trimethylbenzene		3.4 J	5.0	1.0	ug/l	SW846 8260B
m,p-Xylene		81.3	10	1.5	ug/l	SW846 8260B
o-Xylene		73.1	5.0	1.3	ug/l	SW846 8260B
FA37966-5	**MW-2R**					
cis-1,2-Dichloroethylene		1.1	1.0	0.31	ug/l	SW846 8260B
Tetrachloroethylene		1.3	1.0	0.30	ug/l	SW846 8260B
FA37966-6	**MW-15**					
No hits reported in this sample.						
FA37966-7	**MW-3**					
No hits reported in this sample.						

Summary of Hits

Job Number: FA37966
Account: Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA
Collected: 10/17/16 thru 10/18/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA37966-8	**MW-14**					
No hits reported in this sample.						
FA37966-9	**MW-16**					
Tetrachloroethylene		3.0	1.0	0.30	ug/l	SW846 8260B
FA37966-10	**MW-11**					
1,1-Dichloroethane		0.77 J	1.0	0.26	ug/l	SW846 8260B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-1R		
Lab Sample ID:	FA37966-1	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M90802.D	20	10/22/16	KM	n/a	n/a	VM3872
Run #2	M90823.D	25	10/24/16	KM	n/a	n/a	VM3873

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	200	ug/l	
71-43-2	Benzene	ND	20	4.1	ug/l	
108-86-1	Bromobenzene	ND	20	8.4	ug/l	
74-97-5	Bromochloromethane	ND	20	8.5	ug/l	
75-27-4	Bromodichloromethane	ND	20	4.8	ug/l	
75-25-2	Bromoform	ND	20	9.3	ug/l	
78-93-3	2-Butanone (MEK)	ND	100	51	ug/l	
104-51-8	n-Butylbenzene	ND	20	8.7	ug/l	
135-98-8	sec-Butylbenzene	ND	20	5.1	ug/l	
98-06-6	tert-Butylbenzene	ND	20	8.0	ug/l	
75-15-0	Carbon Disulfide	ND	40	4.6	ug/l	
56-23-5	Carbon Tetrachloride	ND	20	6.0	ug/l	
108-90-7	Chlorobenzene	ND	20	4.0	ug/l	
75-00-3	Chloroethane	ND	40	13	ug/l	
67-66-3	Chloroform	ND	20	6.0	ug/l	
95-49-8	o-Chlorotoluene	ND	20	4.9	ug/l	
106-43-4	p-Chlorotoluene	ND	20	7.1	ug/l	
124-48-1	Dibromochloromethane	ND	20	5.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	100	16	ug/l	
106-93-4	1,2-Dibromoethane	ND	40	6.6	ug/l	
75-71-8	Dichlorodifluoromethane	ND	40	10	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	20	5.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	20	4.7	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	20	7.8	ug/l	
75-34-3	1,1-Dichloroethane	ND	20	5.1	ug/l	
107-06-2	1,2-Dichloroethane	ND	20	5.7	ug/l	
75-35-4	1,1-Dichloroethylene	ND	20	4.3	ug/l	
156-59-2	cis-1,2-Dichloroethylene	544	20	6.2	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	20	6.6	ug/l	
78-87-5	1,2-Dichloropropane	ND	20	6.9	ug/l	
142-28-9	1,3-Dichloropropane	ND	20	6.3	ug/l	
594-20-7	2,2-Dichloropropane	ND	20	5.5	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1R		
Lab Sample ID:	FA37966-1	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	20	5.8	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	20	5.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	20	4.9	ug/l	
100-41-4	Ethylbenzene	6.8	20	5.0	ug/l	J
87-68-3	Hexachlorobutadiene	ND	40	11	ug/l	
591-78-6	2-Hexanone	ND	200	40	ug/l	
98-82-8	Isopropylbenzene	ND	20	6.6	ug/l	
99-87-6	p-Isopropyltoluene	ND	20	5.6	ug/l	
74-83-9	Methyl Bromide	ND	40	10	ug/l	
74-87-3	Methyl Chloride	ND	40	10	ug/l	
74-95-3	Methylene Bromide	ND	40	7.1	ug/l	
75-09-2	Methylene Chloride	ND	100	40	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	100	28	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	20	4.0	ug/l	
91-20-3	Naphthalene	ND	100	20	ug/l	
103-65-1	n-Propylbenzene	ND	20	4.0	ug/l	
100-42-5	Styrene	ND	20	4.8	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	20	5.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	6.5	ug/l	
127-18-4	Tetrachloroethylene	428	20	6.1	ug/l	
108-88-3	Toluene	ND	20	4.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	40	10	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	40	10	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	20	4.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	20	7.3	ug/l	
79-01-6	Trichloroethylene	1830 [a]	25	6.8	ug/l	
75-69-4	Trichlorofluoromethane	ND	40	10	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	40	13	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	20	4.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	20	4.0	ug/l	
108-05-4	Vinyl Acetate	ND	200	40	ug/l	
75-01-4	Vinyl Chloride	ND	20	6.3	ug/l	
	m,p-Xylene	6.3	40	6.0	ug/l	J
95-47-6	o-Xylene	8.7	20	5.3	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	107%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	104%	79-125%
2037-26-5	Toluene-D8	94%	89%	85-112%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1R		
Lab Sample ID:	FA37966-1	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	87%	90%	83-118%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1R		
Lab Sample ID:	FA37966-1	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
		Percent Solids:	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	317	10	ug/l	1	10/21/16	10/24/16	LM	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA13507
(2) Prep QC Batch: MP31025

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-1DD		
Lab Sample ID:	FA37966-2	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0980445.D	1	10/26/16	DP	n/a	n/a	VJ5470
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.43	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.40	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.24	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	5.1	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	0.72	1.0	0.22	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.27	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1DD		
Lab Sample ID:	FA37966-2	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	1.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.57	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.28	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.36	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	7.1	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.51	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	4.3	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	0.55	1.0	0.27	ug/l	J
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.66	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	104%		85-112%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1DD		
Lab Sample ID:	FA37966-2	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1DD		
Lab Sample ID:	FA37966-2	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
		Percent Solids:	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 10	10	ug/l	1	10/21/16	10/24/16	LM	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA13507
(2) Prep QC Batch: MP31025

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-1D		
Lab Sample ID:	FA37966-3	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M90804.D	1	10/22/16	KM	n/a	n/a	VM3872
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.43	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.40	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.24	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.27	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1D		
Lab Sample ID:	FA37966-3	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	1.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.57	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.28	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.36	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.51	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.66	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	96%		79-125%
2037-26-5	Toluene-D8	88%		85-112%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1D		
Lab Sample ID:	FA37966-3	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1D		
Lab Sample ID:	FA37966-3	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
		Percent Solids:	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 10	10	ug/l	1	10/21/16	10/24/16	LM	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA13507
(2) Prep QC Batch: MP31025

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	FA37966-4	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0980446.D	5	10/26/16	DP	n/a	n/a	VJ5470
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	130	50	ug/l	
71-43-2	Benzene	384	5.0	1.0	ug/l	
108-86-1	Bromobenzene	ND	5.0	2.1	ug/l	
74-97-5	Bromochloromethane	ND	5.0	2.1	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.2	ug/l	
75-25-2	Bromoform	ND	5.0	2.3	ug/l	
78-93-3	2-Butanone (MEK)	ND	25	13	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	2.2	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	1.3	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	10	1.2	ug/l	
56-23-5	Carbon Tetrachloride	ND	5.0	1.5	ug/l	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/l	
75-00-3	Chloroethane	ND	10	3.1	ug/l	
67-66-3	Chloroform	ND	5.0	1.5	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	1.2	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	1.8	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	1.3	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	25	4.1	ug/l	
106-93-4	1,2-Dibromoethane	ND	10	1.7	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.2	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	1.3	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.4	ug/l	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.1	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.6	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.7	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	1.7	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	1.6	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.4	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	FA37966-4	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.2	ug/l	
100-41-4	Ethylbenzene	84.5	5.0	1.3	ug/l	
87-68-3	Hexachlorobutadiene	ND	10	2.9	ug/l	
591-78-6	2-Hexanone	ND	50	10	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	1.6	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	1.4	ug/l	
74-83-9	Methyl Bromide	ND	10	2.5	ug/l	
74-87-3	Methyl Chloride	ND	10	2.5	ug/l	
74-95-3	Methylene Bromide	ND	10	1.8	ug/l	
75-09-2	Methylene Chloride	ND	25	10	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	7.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	25	5.0	ug/l	
103-65-1	n-Propylbenzene	2.2	5.0	1.0	ug/l	J
100-42-5	Styrene	ND	5.0	1.2	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.6	ug/l	
127-18-4	Tetrachloroethylene	ND	5.0	1.5	ug/l	
108-88-3	Toluene	11.6	5.0	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10	2.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.8	ug/l	
79-01-6	Trichloroethylene	ND	5.0	1.4	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	2.5	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10	3.3	ug/l	
95-63-6	1,2,4-Trimethylbenzene	16.1	5.0	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	3.4	5.0	1.0	ug/l	J
108-05-4	Vinyl Acetate	ND	50	10	ug/l	
75-01-4	Vinyl Chloride	ND	5.0	1.6	ug/l	
	m,p-Xylene	81.3	10	1.5	ug/l	
95-47-6	o-Xylene	73.1	5.0	1.3	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	103%		85-112%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	FA37966-4	**Date Sampled:**	10/17/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2R		
Lab Sample ID:	FA37966-5	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M90806.D	1	10/22/16	KM	n/a	n/a	VM3872
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.43	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.40	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.24	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.1	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.27	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2R		
Lab Sample ID:	FA37966-5	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	1.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.57	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.28	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.36	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	1.3	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.51	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.66	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	93%		85-112%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2R		
Lab Sample ID:	FA37966-5	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2R		
Lab Sample ID:	FA37966-5	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
		Percent Solids:	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 10	10	ug/l	1	10/21/16	10/24/16	LM	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA13507
(2) Prep QC Batch: MP31025

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-15		
Lab Sample ID:	FA37966-6	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B117436.D	1	10/24/16	WV	n/a	n/a	VB4728
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.43	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.40	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.24	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.27	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-15		
Lab Sample ID:	FA37966-6	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	1.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.57	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.28	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.36	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.51	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.66	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	97%		85-112%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-15		
Lab Sample ID:	FA37966-6	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-15		
Lab Sample ID:	FA37966-6	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
		Percent Solids:	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 10	10	ug/l	1	10/21/16	10/24/16	LM	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA13507
(2) Prep QC Batch: MP31025

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	FA37966-7	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B117437.D	1	10/24/16	WV	n/a	n/a	VB4728
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.43	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.40	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.24	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.27	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	FA37966-7	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	1.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.57	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.28	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.36	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.51	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.66	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	98%		85-112%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	FA37966-7	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	FA37966-7	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
		Percent Solids:	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 10	10	ug/l	1	10/21/16	10/24/16	LM	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA13507
(2) Prep QC Batch: MP31025

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA37966-8	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B117438.D	1	10/24/16	WV	n/a	n/a	VB4728
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.43	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.40	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.24	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.27	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA37966-8	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	1.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.57	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.28	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.36	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.51	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.66	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	99%		85-112%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA37966-8	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA37966-8	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
		Percent Solids:	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 10	10	ug/l	1	10/21/16	10/24/16	LM	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA13507
(2) Prep QC Batch: MP31025

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-16		
Lab Sample ID:	FA37966-9	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B117439.D	1	10/24/16	WV	n/a	n/a	VB4728
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.43	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.40	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.24	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.27	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16		
Lab Sample ID:	FA37966-9	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	1.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.57	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.28	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.36	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	3.0	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.51	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.66	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	98%		85-112%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16		
Lab Sample ID:	FA37966-9	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	FA37966-10	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B117440.D	1	10/24/16	WV	n/a	n/a	VB4728
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.43	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.40	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.24	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	0.77	1.0	0.26	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.27	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	FA37966-10	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	1.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.57	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.28	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.36	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.51	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.66	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	110%		79-125%
2037-26-5	Toluene-D8	98%		85-112%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	FA37966-10	**Date Sampled:**	10/18/16
Matrix:	AQ - Ground Water	**Date Received:**	10/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA37966

SGS ACCUTEST — SGS Accutest Southeast Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.accutest.com

SGS ACCUTEST JOB # : PAGE 1 OF 1

SGS Accutest Quote # | SKIFF #

Client / Reporting Information

Company Name: Garrett Fleming
Address: 9119 Corporate Lake Dr Suite 150
City: Tampa State: FL Zip: 33634
Project Contact: Aaron Gretchell Email: agretchell@gfnet.com
Phone #: 813 882 4366
Sampler(s) Name(s) (Printed)
Sampler 1: R Todd Fuller Sampler 2: Dan Dennis

Project Information

Project Name: TMR Valdosta
Street: 2000 West Savannah Ave
City: Valdosta State: GA
Project #: 57524.029
Fax #: 813 884 4609
Client Purchase Order #

Analytical Information

SGS Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	8260	Arsenic	LAB USE ONLY
1	MW-1R	10/17/16	1537	RTF DMS	GW	4										X	X	
2	MW-1DD		1552			4										X	X	
3	MW-1D		1702			4										X	X	
4	MW-8		0837			3										X		
5	MW-2R	10/18/16	0900			4										X	X	
6	MW-15		0907			4										X	X	
7	MW-3		0950			4										X	X	
8	MW-14		1007			4										X	X	
9	MW-16		1127			3										X		
10	MW-11		1229			3										X		

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air

Turnaround Time (Business days)

- 10 Day (Business)
- 7 Day
- 5 Day
- 3 Day *RUSH*
- 2 Day *RUSH*
- 1 Day *RUSH*
- Other

Approved By: / Date:

Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [x] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation
1	R Todd Fuller (GF)	10/20/16 1200	2
3	Relinquished By/Affiliation	10/20/16 1610	Received By/Affiliation 4 10-21-16 8:00
5	Relinquished By/Affiliation	Date Time:	Received By/Affiliation 6
7	Relinquished By/Affiliation	Date Time:	Received By/Affiliation 8

Lab Use Only: Cooler Temperature (s) Celsius: 3.5

SGS ACCUTEST - ORLANDO SAMPLE RECEIPT CONFIRMATION

SGS ACCUTEST'S JOB NUMBER: FA37966 CLIENT: Gannett Fleming PROJECT: TMR Valdosta

DATE/TIME RECEIVED: 10-21-16 8:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: FEDEX UPS (ACCUTEST COURIER) DELIVERY OTHER:

AIRBILL NUMBERS:

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TEMPERATURE INFORMATION

IR THERM ID 1 CORR. FACTOR -0.4

OBSERVED TEMPS: 3.9

CORRECTED TEMPS: 3.5 (USED FOR LIMS)

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT LOT#

{APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ?

NUMBER OF LAB FILTERED METALS ?

TEST STRIP LOT#s pH 0-3 230315 pH 10-12 219813A OTHER (specify)

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE 10-21-16 REVIEWER SIGNATURE/DATE 10-21-16

NF 02/16 receipt confirmation 020116.xls

4.1 4

FA37966: Chain of Custody
Page 2 of 2

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GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3872-MB	M90788.D	1	10/22/16	KM	n/a	n/a	VM3872

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1, FA37966-3, FA37966-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.43	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.40	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.24	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.27	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	

Method Blank Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3872-MB	M90788.D	1	10/22/16	KM	n/a	n/a	VM3872

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1, FA37966-3, FA37966-5

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	1.4	2.0	0.57	ug/l	J
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.28	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.36	ug/l	
75-09-2	Methylene Chloride	7.0	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.5	2.0	0.51	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.66	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	79-125%

Method Blank Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3872-MB	M90788.D	1	10/22/16	KM	n/a	n/a	VM3872

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1, FA37966-3, FA37966-5

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	92%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

Method Blank Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3873-MB	M90817.D	1	10/24/16	KM	n/a	n/a	VM3873

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	79-125%
2037-26-5	Toluene-D8	90%	85-112%
460-00-4	4-Bromofluorobenzene	92%	83-118%

Method Blank Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB4728-MB	B117420.D	1	10/24/16	WV	n/a	n/a	VB4728

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-6, FA37966-7, FA37966-8, FA37966-9, FA37966-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.43	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.40	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.24	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.27	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	

Method Blank Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB4728-MB	B117420.D	1	10/24/16	WV	n/a	n/a	VB4728

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-6, FA37966-7, FA37966-8, FA37966-9, FA37966-10

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	2.0	0.57	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.28	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.36	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.51	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.66	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	92%	79-125%

Method Blank Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB4728-MB	B117420.D	1	10/24/16	WV	n/a	n/a	VB4728

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-6, FA37966-7, FA37966-8, FA37966-9, FA37966-10

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

Method Blank Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5470-MB	J0980437.D	1	10/26/16	DP	n/a	n/a	VJ5470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-2, FA37966-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.43	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.40	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.24	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.27	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	

Method Blank Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5470-MB	J0980437.D	1	10/26/16	DP	n/a	n/a	VJ5470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-2, FA37966-4

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	2.0	0.57	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.28	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.36	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.51	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.66	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%

Method Blank Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5470-MB	J0980437.D	1	10/26/16	DP	n/a	n/a	VJ5470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-2, FA37966-4

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	108%	85-112%
460-00-4	4-Bromofluorobenzene	104%	83-118%

Blank Spike Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3872-BS	M90787.D	1	10/22/16	KM	n/a	n/a	VM3872

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1, FA37966-3, FA37966-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	157	126	50-147
71-43-2	Benzene	25	26.4	106	81-122
108-86-1	Bromobenzene	25	26.0	104	80-121
74-97-5	Bromochloromethane	25	28.2	113	76-123
75-27-4	Bromodichloromethane	25	26.7	107	79-123
75-25-2	Bromoform	25	21.8	87	66-123
78-93-3	2-Butanone (MEK)	125	117	94	56-143
104-51-8	n-Butylbenzene	25	25.7	103	79-126
135-98-8	sec-Butylbenzene	25	27.7	111	83-133
98-06-6	tert-Butylbenzene	25	26.0	104	80-133
75-15-0	Carbon Disulfide	25	27.9	112	66-148
56-23-5	Carbon Tetrachloride	25	29.2	117	76-136
108-90-7	Chlorobenzene	25	27.3	109	82-124
75-00-3	Chloroethane	25	23.7	95	62-144
67-66-3	Chloroform	25	24.9	100	80-124
95-49-8	o-Chlorotoluene	25	25.0	100	81-127
106-43-4	p-Chlorotoluene	25	26.9	108	83-130
124-48-1	Dibromochloromethane	25	24.5	98	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.3	89	64-123
106-93-4	1,2-Dibromoethane	25	26.3	105	75-120
75-71-8	Dichlorodifluoromethane	25	37.6	150	42-167
95-50-1	1,2-Dichlorobenzene	25	28.2	113	82-124
541-73-1	1,3-Dichlorobenzene	25	26.8	107	84-125
106-46-7	1,4-Dichlorobenzene	25	24.7	99	78-120
75-34-3	1,1-Dichloroethane	25	25.5	102	81-122
107-06-2	1,2-Dichloroethane	25	25.0	100	75-125
75-35-4	1,1-Dichloroethylene	25	27.4	110	78-137
156-59-2	cis-1,2-Dichloroethylene	25	24.5	98	78-120
156-60-5	trans-1,2-Dichloroethylene	25	29.1	116	76-127
78-87-5	1,2-Dichloropropane	25	23.3	93	76-124
142-28-9	1,3-Dichloropropane	25	23.4	94	80-118
594-20-7	2,2-Dichloropropane	25	26.7	107	74-139
563-58-6	1,1-Dichloropropene	25	24.3	97	79-131
10061-01-5	cis-1,3-Dichloropropene	25	25.7	103	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.6	98	80-120
100-41-4	Ethylbenzene	25	25.2	101	81-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3872-BS	M90787.D	1	10/22/16	KM	n/a	n/a	VM3872

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1, FA37966-3, FA37966-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	31.9	128	75-142
591-78-6	2-Hexanone	125	107	86	61-129
98-82-8	Isopropylbenzene	25	27.3	109	83-132
99-87-6	p-Isopropyltoluene	25	26.6	106	79-130
74-83-9	Methyl Bromide	25	22.4	90	59-143
74-87-3	Methyl Chloride	25	32.5	130	50-159
74-95-3	Methylene Bromide	25	26.3	105	78-119
75-09-2	Methylene Chloride	25	27.3	109	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	104	83	66-122
1634-04-4	Methyl Tert Butyl Ether	25	25.8	103	72-117
91-20-3	Naphthalene	25	29.2	117	63-132
103-65-1	n-Propylbenzene	25	25.8	103	82-133
100-42-5	Styrene	25	26.8	107	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	28.2	113	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	23.4	94	72-120
127-18-4	Tetrachloroethylene	25	30.1	120	76-135
108-88-3	Toluene	25	25.3	101	80-120
87-61-6	1,2,3-Trichlorobenzene	25	30.8	123	68-131
120-82-1	1,2,4-Trichlorobenzene	25	31.5	126	73-129
71-55-6	1,1,1-Trichloroethane	25	27.6	110	75-130
79-00-5	1,1,2-Trichloroethane	25	25.4	102	76-119
79-01-6	Trichloroethylene	25	27.7	111	81-126
75-69-4	Trichlorofluoromethane	25	29.0	116	71-156
96-18-4	1,2,3-Trichloropropane	25	24.2	97	77-120
95-63-6	1,2,4-Trimethylbenzene	25	25.3	101	79-120
108-67-8	1,3,5-Trimethylbenzene	25	24.5	98	79-120
108-05-4	Vinyl Acetate	125	118	94	43-154
75-01-4	Vinyl Chloride	25	30.5	122	69-159
	m,p-Xylene	50	52.8	106	79-126
95-47-6	o-Xylene	25	27.3	109	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	79-125%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3872-BS	M90787.D	1	10/22/16	KM	n/a	n/a	VM3872

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1, FA37966-3, FA37966-5

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	92%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3873-BS	M90816.D	1	10/24/16	KM	n/a	n/a	VM3873

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-01-6	Trichloroethylene	25	26.0	104	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB4728-BS	B117419.D	1	10/24/16	WV	n/a	n/a	VB4728

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-6, FA37966-7, FA37966-8, FA37966-9, FA37966-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	97.3	78	50-147
71-43-2	Benzene	25	23.9	96	81-122
108-86-1	Bromobenzene	25	22.7	91	80-121
74-97-5	Bromochloromethane	25	21.9	88	76-123
75-27-4	Bromodichloromethane	25	22.8	91	79-123
75-25-2	Bromoform	25	22.6	90	66-123
78-93-3	2-Butanone (MEK)	125	106	85	56-143
104-51-8	n-Butylbenzene	25	24.5	98	79-126
135-98-8	sec-Butylbenzene	25	25.4	102	83-133
98-06-6	tert-Butylbenzene	25	23.5	94	80-133
75-15-0	Carbon Disulfide	25	22.9	92	66-148
56-23-5	Carbon Tetrachloride	25	22.6	90	76-136
108-90-7	Chlorobenzene	25	23.6	94	82-124
75-00-3	Chloroethane	25	28.7	115	62-144
67-66-3	Chloroform	25	22.5	90	80-124
95-49-8	o-Chlorotoluene	25	24.3	97	81-127
106-43-4	p-Chlorotoluene	25	24.0	96	83-130
124-48-1	Dibromochloromethane	25	23.0	92	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	21.5	86	64-123
106-93-4	1,2-Dibromoethane	25	23.3	93	75-120
75-71-8	Dichlorodifluoromethane	25	26.9	108	42-167
95-50-1	1,2-Dichlorobenzene	25	23.2	93	82-124
541-73-1	1,3-Dichlorobenzene	25	23.9	96	84-125
106-46-7	1,4-Dichlorobenzene	25	23.6	94	78-120
75-34-3	1,1-Dichloroethane	25	24.6	98	81-122
107-06-2	1,2-Dichloroethane	25	22.5	90	75-125
75-35-4	1,1-Dichloroethylene	25	21.7	87	78-137
156-59-2	cis-1,2-Dichloroethylene	25	23.0	92	78-120
156-60-5	trans-1,2-Dichloroethylene	25	26.4	106	76-127
78-87-5	1,2-Dichloropropane	25	23.0	92	76-124
142-28-9	1,3-Dichloropropane	25	22.6	90	80-118
594-20-7	2,2-Dichloropropane	25	23.7	95	74-139
563-58-6	1,1-Dichloropropene	25	22.7	91	79-131
10061-01-5	cis-1,3-Dichloropropene	25	23.5	94	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.6	98	80-120
100-41-4	Ethylbenzene	25	24.1	96	81-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB4728-BS	B117419.D	1	10/24/16	WV	n/a	n/a	VB4728

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-6, FA37966-7, FA37966-8, FA37966-9, FA37966-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	24.4	98	75-142
591-78-6	2-Hexanone	125	111	89	61-129
98-82-8	Isopropylbenzene	25	24.9	100	83-132
99-87-6	p-Isopropyltoluene	25	25.0	100	79-130
74-83-9	Methyl Bromide	25	27.1	108	59-143
74-87-3	Methyl Chloride	25	25.4	102	50-159
74-95-3	Methylene Bromide	25	22.1	88	78-119
75-09-2	Methylene Chloride	25	24.2	97	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	110	88	66-122
1634-04-4	Methyl Tert Butyl Ether	25	20.5	82	72-117
91-20-3	Naphthalene	25	25.0	100	63-132
103-65-1	n-Propylbenzene	25	25.2	101	82-133
100-42-5	Styrene	25	26.0	104	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	24.8	99	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	22.4	90	72-120
127-18-4	Tetrachloroethylene	25	22.3	89	76-135
108-88-3	Toluene	25	24.3	97	80-120
87-61-6	1,2,3-Trichlorobenzene	25	23.8	95	68-131
120-82-1	1,2,4-Trichlorobenzene	25	23.5	94	73-129
71-55-6	1,1,1-Trichloroethane	25	21.3	85	75-130
79-00-5	1,1,2-Trichloroethane	25	23.4	94	76-119
79-01-6	Trichloroethylene	25	23.7	95	81-126
75-69-4	Trichlorofluoromethane	25	24.6	98	71-156
96-18-4	1,2,3-Trichloropropane	25	22.0	88	77-120
95-63-6	1,2,4-Trimethylbenzene	25	23.9	96	79-120
108-67-8	1,3,5-Trimethylbenzene	25	24.2	97	79-120
108-05-4	Vinyl Acetate	125	116	93	43-154
75-01-4	Vinyl Chloride	25	27.7	111	69-159
	m,p-Xylene	50	48.9	98	79-126
95-47-6	o-Xylene	25	24.2	97	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	92%	79-125%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB4728-BS	B117419.D	1	10/24/16	WV	n/a	n/a	VB4728

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-6, FA37966-7, FA37966-8, FA37966-9, FA37966-10

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5470-BS	J0980438.D	1	10/26/16	DP	n/a	n/a	VJ5470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-2, FA37966-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	110	88	50-147
71-43-2	Benzene	25	26.8	107	81-122
108-86-1	Bromobenzene	25	24.8	99	80-121
74-97-5	Bromochloromethane	25	21.3	85	76-123
75-27-4	Bromodichloromethane	25	22.8	91	79-123
75-25-2	Bromoform	25	23.6	94	66-123
78-93-3	2-Butanone (MEK)	125	118	94	56-143
104-51-8	n-Butylbenzene	25	27.9	112	79-126
135-98-8	sec-Butylbenzene	25	29.1	116	83-133
98-06-6	tert-Butylbenzene	25	27.3	109	80-133
75-15-0	Carbon Disulfide	25	25.4	102	66-148
56-23-5	Carbon Tetrachloride	25	25.5	102	76-136
108-90-7	Chlorobenzene	25	25.7	103	82-124
75-00-3	Chloroethane	25	25.5	102	62-144
67-66-3	Chloroform	25	23.3	93	80-124
95-49-8	o-Chlorotoluene	25	27.1	108	81-127
106-43-4	p-Chlorotoluene	25	26.0	104	83-130
124-48-1	Dibromochloromethane	25	21.7	87	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.7	95	64-123
106-93-4	1,2-Dibromoethane	25	23.2	93	75-120
75-71-8	Dichlorodifluoromethane	25	39.7	159	42-167
95-50-1	1,2-Dichlorobenzene	25	25.0	100	82-124
541-73-1	1,3-Dichlorobenzene	25	26.1	104	84-125
106-46-7	1,4-Dichlorobenzene	25	25.1	100	78-120
75-34-3	1,1-Dichloroethane	25	27.1	108	81-122
107-06-2	1,2-Dichloroethane	25	24.3	97	75-125
75-35-4	1,1-Dichloroethylene	25	28.3	113	78-137
156-59-2	cis-1,2-Dichloroethylene	25	23.1	92	78-120
156-60-5	trans-1,2-Dichloroethylene	25	29.2	117	76-127
78-87-5	1,2-Dichloropropane	25	23.5	94	76-124
142-28-9	1,3-Dichloropropane	25	22.3	89	80-118
594-20-7	2,2-Dichloropropane	25	25.8	103	74-139
563-58-6	1,1-Dichloropropene	25	25.7	103	79-131
10061-01-5	cis-1,3-Dichloropropene	25	23.9	96	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.0	100	80-120
100-41-4	Ethylbenzene	25	26.2	105	81-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5470-BS	J0980438.D	1	10/26/16	DP	n/a	n/a	VJ5470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-2, FA37966-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	27.2	109	75-142
591-78-6	2-Hexanone	125	111	89	61-129
98-82-8	Isopropylbenzene	25	25.5	102	83-132
99-87-6	p-Isopropyltoluene	25	27.7	111	79-130
74-83-9	Methyl Bromide	25	27.1	108	59-143
74-87-3	Methyl Chloride	25	30.2	121	50-159
74-95-3	Methylene Bromide	25	23.5	94	78-119
75-09-2	Methylene Chloride	25	29.5	118	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	114	91	66-122
1634-04-4	Methyl Tert Butyl Ether	25	20.6	82	72-117
91-20-3	Naphthalene	25	26.8	107	63-132
103-65-1	n-Propylbenzene	25	28.6	114	82-133
100-42-5	Styrene	25	23.9	96	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	22.7	91	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	25.8	103	72-120
127-18-4	Tetrachloroethylene	25	26.9	108	76-135
108-88-3	Toluene	25	26.7	107	80-120
87-61-6	1,2,3-Trichlorobenzene	25	24.7	99	68-131
120-82-1	1,2,4-Trichlorobenzene	25	23.6	94	73-129
71-55-6	1,1,1-Trichloroethane	25	24.4	98	75-130
79-00-5	1,1,2-Trichloroethane	25	24.2	97	76-119
79-01-6	Trichloroethylene	25	25.1	100	81-126
75-69-4	Trichlorofluoromethane	25	27.8	111	71-156
96-18-4	1,2,3-Trichloropropane	25	22.7	91	77-120
95-63-6	1,2,4-Trimethylbenzene	25	26.4	106	79-120
108-67-8	1,3,5-Trimethylbenzene	25	25.9	104	79-120
108-05-4	Vinyl Acetate	125	114	91	43-154
75-01-4	Vinyl Chloride	25	30.6	122	69-159
	m,p-Xylene	50	54.3	109	79-126
95-47-6	o-Xylene	25	25.5	102	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5470-BS	J0980438.D	1	10/26/16	DP	n/a	n/a	VJ5470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-2, FA37966-4

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA37966-1MS	M90809.D	20	10/22/16	KM	n/a	n/a	VM3872
FA37966-1MSD	M90810.D	20	10/22/16	KM	n/a	n/a	VM3872
FA37966-1	M90802.D	20	10/22/16	KM	n/a	n/a	VM3872

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1, FA37966-3, FA37966-5

CAS No.	Compound	FA37966-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		2500	2120	85	2500	2100	84	1	50-147/21
71-43-2	Benzene	ND		500	498	100	500	485	97	3	81-122/14
108-86-1	Bromobenzene	ND		500	511	102	500	506	101	1	80-121/14
74-97-5	Bromochloromethane	ND		500	564	113	500	535	107	5	76-123/14
75-27-4	Bromodichloromethane	ND		500	545	109	500	500	100	9	79-123/19
75-25-2	Bromoform	ND		500	420	84	500	419	84	0	66-123/21
78-93-3	2-Butanone (MEK)	ND		2500	2040	82	2500	2100	84	3	56-143/18
104-51-8	n-Butylbenzene	ND		500	446	89	500	446	89	0	79-126/16
135-98-8	sec-Butylbenzene	ND		500	500	100	500	479	96	4	83-133/16
98-06-6	tert-Butylbenzene	ND		500	507	101	500	501	100	1	80-133/16
75-15-0	Carbon Disulfide	ND		500	487	97	500	486	97	0	66-148/23
56-23-5	Carbon Tetrachloride	ND		500	523	105	500	539	108	3	76-136/23
108-90-7	Chlorobenzene	ND		500	531	106	500	550	110	4	82-124/14
75-00-3	Chloroethane	ND		500	480	96	500	373	75	25*	62-144/20
67-66-3	Chloroform	ND		500	522	104	500	477	95	9	80-124/15
95-49-8	o-Chlorotoluene	ND		500	456	91	500	487	97	7	81-127/15
106-43-4	p-Chlorotoluene	ND		500	514	103	500	513	103	0	83-130/15
124-48-1	Dibromochloromethane	ND		500	462	92	500	461	92	0	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	385	77	500	481	96	22*	64-123/18
106-93-4	1,2-Dibromoethane	ND		500	536	107	500	561	112	5	75-120/13
75-71-8	Dichlorodifluoromethane	ND		500	746	149	500	627	125	17	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		500	554	111	500	592	118	7	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		500	558	112	500	513	103	8	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		500	479	96	500	517	103	8	78-120/15
75-34-3	1,1-Dichloroethane	ND		500	547	109	500	494	99	10	81-122/15
107-06-2	1,2-Dichloroethane	ND		500	524	105	500	462	92	13	75-125/14
75-35-4	1,1-Dichloroethylene	ND		500	511	102	500	505	101	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	544		500	1040	99	500	979	87	6	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		500	590	118	500	517	103	13	76-127/17
78-87-5	1,2-Dichloropropane	ND		500	525	105	500	470	94	11	76-124/14
142-28-9	1,3-Dichloropropane	ND		500	424	85	500	472	94	11	80-118/13
594-20-7	2,2-Dichloropropane	ND		500	443	89	500	429	86	3	74-139/17
563-58-6	1,1-Dichloropropene	ND		500	513	103	500	503	101	2	79-131/16
10061-01-5	cis-1,3-Dichloropropene	ND		500	525	105	500	497	99	5	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		500	445	89	500	451	90	1	80-120/22
100-41-4	Ethylbenzene	6.8	J	500	465	92	500	513	101	10	81-121/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA37966-1MS	M90809.D	20	10/22/16	KM	n/a	n/a	VM3872
FA37966-1MSD	M90810.D	20	10/22/16	KM	n/a	n/a	VM3872
FA37966-1	M90802.D	20	10/22/16	KM	n/a	n/a	VM3872

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1, FA37966-3, FA37966-5

CAS No.	Compound	FA37966-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		500	513	103	500	542	108	5	75-142/19
591-78-6	2-Hexanone	ND		2500	1770	71	2500	1980	79	11	61-129/18
98-82-8	Isopropylbenzene	ND		500	523	105	500	532	106	2	83-132/15
99-87-6	p-Isopropyltoluene	ND		500	507	101	500	489	98	4	79-130/16
74-83-9	Methyl Bromide	ND		500	441	88	500	391	78	12	59-143/19
74-87-3	Methyl Chloride	ND		500	617	123	500	528	106	16	50-159/19
74-95-3	Methylene Bromide	ND		500	565	113	500	528	106	7	78-119/14
75-09-2	Methylene Chloride	ND		500	508	102	500	447	89	13	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		2500	2060	82	2500	2100	84	2	66-122/16
1634-04-4	Methyl Tert Butyl Ether	ND		500	497	99	500	473	95	5	72-117/14
91-20-3	Naphthalene	ND		500	541	108	500	530	106	2	63-132/25
103-65-1	n-Propylbenzene	ND		500	537	107	500	541	108	1	82-133/15
100-42-5	Styrene	ND		500	445	89	500	528	106	17	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND		500	554	111	500	559	112	1	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	421	84	500	463	93	10	72-120/14
127-18-4	Tetrachloroethylene	428		500	1010	116	500	929	100	8	76-135/16
108-88-3	Toluene	ND		500	505	101	500	528	106	4	80-120/14
87-61-6	1,2,3-Trichlorobenzene	ND		500	535	107	500	547	109	2	68-131/25
120-82-1	1,2,4-Trichlorobenzene	ND		500	597	119	500	552	110	8	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		500	565	113	500	495	99	13	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		500	528	106	500	482	96	9	76-119/14
79-01-6	Trichloroethylene	2050	E	500	2480	86	500	2250	40* [a]	10	81-126/15
75-69-4	Trichlorofluoromethane	ND		500	569	114	500	483	97	16	71-156/21
96-18-4	1,2,3-Trichloropropane	ND		500	475	95	500	512	102	7	77-120/16
95-63-6	1,2,4-Trimethylbenzene	ND		500	487	97	500	490	98	1	79-120/18
108-67-8	1,3,5-Trimethylbenzene	ND		500	481	96	500	478	96	1	79-120/19
108-05-4	Vinyl Acetate	ND		2500	2590	104	2500	2450	98	6	43-154/14
75-01-4	Vinyl Chloride	ND		500	558	112	500	509	102	9	69-159/18
	m,p-Xylene	6.3	J	1000	1040	103	1000	1030	102	1	79-126/15
95-47-6	o-Xylene	8.7	J	500	517	102	500	545	107	5	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA37966-1	Limits
1868-53-7	Dibromofluoromethane	107%	98%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	92%	100%	79-125%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA37966-1MS	M90809.D	20	10/22/16	KM	n/a	n/a	VM3872
FA37966-1MSD	M90810.D	20	10/22/16	KM	n/a	n/a	VM3872
FA37966-1	M90802.D	20	10/22/16	KM	n/a	n/a	VM3872

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1, FA37966-3, FA37966-5

CAS No.	Surrogate Recoveries	MS	MSD	FA37966-1	Limits
2037-26-5	Toluene-D8	94%	100%	94%	85-112%
460-00-4	4-Bromofluorobenzene	78%* [b]	93%	87%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.
(b) Outside control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA38015-4MS	M90829.D	1	10/24/16	KM	n/a	n/a	VM3873
FA38015-4MSD	M90830.D	1	10/24/16	KM	n/a	n/a	VM3873
FA38015-4	M90828.D	1	10/24/16	KM	n/a	n/a	VM3873

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-1

CAS No.	Compound	FA38015-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-01-6	Trichloroethylene	0.74	J	25	26.8	104	25	27.5	107	3	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA38015-4	Limits
1868-53-7	Dibromofluoromethane	103%	103%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	90%	85%	79-125%
2037-26-5	Toluene-D8	96%	100%	97%	85-112%
460-00-4	4-Bromofluorobenzene	93%	94%	95%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA37790-14MS	B117432.D	1	10/24/16	WV	n/a	n/a	VB4728
FA37790-14MSD	B117433.D	1	10/24/16	WV	n/a	n/a	VB4728
FA37790-14	B117425.D	1	10/24/16	WV	n/a	n/a	VB4728

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-6, FA37966-7, FA37966-8, FA37966-9, FA37966-10

CAS No.	Compound	FA37790-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25	U	125	103	82	125	125	100	19	50-147/21
71-43-2	Benzene	1.0	U	25	24.2	97	25	28.8	115	17*	81-122/14
108-86-1	Bromobenzene	1.0	U	25	22.8	91	25	28.9	116	24*	80-121/14
74-97-5	Bromochloromethane	1.0	U	25	23.4	94	25	29.7	119	24*	76-123/14
75-27-4	Bromodichloromethane	1.0	U	25	25.4	102	25	27.7	111	9	79-123/19
75-25-2	Bromoform	1.0	U	25	20.9	84	25	24.9	100	17	66-123/21
78-93-3	2-Butanone (MEK)	5.0	U	125	104	83	125	131	105	23*	56-143/18
104-51-8	n-Butylbenzene	1.0	U	25	24.0	96	25	29.9	120	22*	79-126/16
135-98-8	sec-Butylbenzene	1.0	U	25	24.7	99	25	31.3	125	24*	83-133/16
98-06-6	tert-Butylbenzene	1.0	U	25	23.9	96	25	30.1	120	23*	80-133/16
75-15-0	Carbon Disulfide	2.0	U	25	18.4	74	25	20.3	81	10	66-148/23
56-23-5	Carbon Tetrachloride	1.0	U	25	26.0	104	25	29.7	119	13	76-136/23
108-90-7	Chlorobenzene	1.0	U	25	23.3	93	25	29.7	119	24*	82-124/14
75-00-3	Chloroethane	2.0	U	25	29.7	119	25	34.5	138	15	62-144/20
67-66-3	Chloroform	1.0	U	25	25.6	102	25	30.8	123	18*	80-124/15
95-49-8	o-Chlorotoluene	1.0	U	25	23.5	94	25	30.1	120	25*	81-127/15
106-43-4	p-Chlorotoluene	1.0	U	25	23.1	92	25	29.3	117	24*	83-130/15
124-48-1	Dibromochloromethane	1.0	U	25	23.6	94	25	27.3	109	15	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	25	22.0	88	25	27.3	109	22*	64-123/18
106-93-4	1,2-Dibromoethane	2.0	U	25	23.8	95	25	30.1	120	23*	75-120/13
75-71-8	Dichlorodifluoromethane	2.0	U	25	31.3	125	25	37.2	149	17	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0	U	25	23.1	92	25	29.6	118	25*	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0	U	25	23.5	94	25	29.6	118	23*	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0	U	25	22.8	91	25	29.1	116	24*	78-120/15
75-34-3	1,1-Dichloroethane	1.0	U	25	25.5	102	25	31.2	125*	20*	81-122/15
107-06-2	1,2-Dichloroethane	1.0	U	25	27.3	109	25	32.7	131*	18*	75-125/14
75-35-4	1,1-Dichloroethylene	1.0	U	25	26.4	106	25	31.4	126	17	78-137/18
156-59-2	cis-1,2-Dichloroethylene	1.0	U	25	23.0	92	25	28.7	115	22*	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0	U	25	27.6	110	25	33.8	135*	20*	76-127/17
78-87-5	1,2-Dichloropropane	1.0	U	25	23.0	92	25	28.3	113	21*	76-124/14
142-28-9	1,3-Dichloropropane	1.0	U	25	21.9	88	25	28.3	113	25*	80-118/13
594-20-7	2,2-Dichloropropane	1.0	U	25	26.9	108	25	32.2	129	18*	74-139/17
563-58-6	1,1-Dichloropropene	1.0	U	25	24.6	98	25	30.1	120	20*	79-131/16
10061-01-5	cis-1,3-Dichloropropene	1.0	U	25	23.9	96	25	26.6	106	11	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0	U	25	25.3	101	25	28.5	114	12	80-120/22
100-41-4	Ethylbenzene	1.0	U	25	24.3	97	25	31.9	128*	27*	81-121/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA37790-14MS	B117432.D	1	10/24/16	WV	n/a	n/a	VB4728
FA37790-14MSD	B117433.D	1	10/24/16	WV	n/a	n/a	VB4728
FA37790-14	B117425.D	1	10/24/16	WV	n/a	n/a	VB4728

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-6, FA37966-7, FA37966-8, FA37966-9, FA37966-10

CAS No.	Compound	FA37790-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	2.0 U		25	23.8	95	25	29.8	119	22*	75-142/19
591-78-6	2-Hexanone	10 U		125	102	82	125	137	110	29*	61-129/18
98-82-8	Isopropylbenzene	1.0 U		25	24.8	99	25	30.8	123	22*	83-132/15
99-87-6	p-Isopropyltoluene	1.0 U		25	24.3	97	25	31.1	124	25*	79-130/16
74-83-9	Methyl Bromide	2.0 U		25	30.6	122	25	36.4	146*	17	59-143/19
74-87-3	Methyl Chloride	2.0 U		25	25.1	100	25	31.6	126	23*	50-159/19
74-95-3	Methylene Bromide	2.0 U		25	24.1	96	25	29.4	118	20*	78-119/14
75-09-2	Methylene Chloride	5.0 U		25	24.9	100	25	31.4	126	23*	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U		125	110	88	125	145	116	27*	66-122/16
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	21.7	87	25	27.2	109	22*	72-117/14
91-20-3	Naphthalene	5.0 U		25	24.1	96	25	32.4	130	29*	63-132/25
103-65-1	n-Propylbenzene	1.0 U		25	24.5	98	25	31.0	124	23*	82-133/15
100-42-5	Styrene	1.0 U		25	24.2	97	25	29.4	118	19	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		25	25.8	103	25	30.6	122	17	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	21.4	86	25	27.5	110	25*	72-120/14
127-18-4	Tetrachloroethylene	1.0 U		25	21.8	87	25	27.2	109	22*	76-135/16
108-88-3	Toluene	1.0 U		25	23.8	95	25	30.2	121*	24*	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0 U		25	22.6	90	25	30.2	121	29*	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0 U		25	23.0	92	25	29.5	118	25*	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0 U		25	25.1	100	25	30.3	121	19*	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0 U		25	22.9	92	25	29.2	117	24*	76-119/14
79-01-6	Trichloroethylene	1.0 U		25	25.8	103	25	31.9	128*	21*	81-126/15
75-69-4	Trichlorofluoromethane	2.0 U		25	31.3	125	25	36.1	144	14	71-156/21
96-18-4	1,2,3-Trichloropropane	2.0 U		25	22.2	89	25	29.2	117	27*	77-120/16
95-63-6	1,2,4-Trimethylbenzene	1.0 U		25	23.9	96	25	29.8	119	22*	79-120/18
108-67-8	1,3,5-Trimethylbenzene	1.0 U		25	23.4	94	25	29.7	119	24*	79-120/19
108-05-4	Vinyl Acetate	10 U		125	122	98	125	154	123	23*	43-154/14
75-01-4	Vinyl Chloride	1.0 U		25	28.3	113	25	34.5	138	20*	69-159/18
	m,p-Xylene	2.0 U		50	50.4	101	50	63.4	127*	23*	79-126/15
95-47-6	o-Xylene	1.0 U		25	24.7	99	25	31.2	125	23*	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA37790-14	Limits
1868-53-7	Dibromofluoromethane	108%	103%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	109%	105%	103%	79-125%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA37790-14MS	B117432.D	1	10/24/16	WV	n/a	n/a	VB4728
FA37790-14MSD	B117433.D	1	10/24/16	WV	n/a	n/a	VB4728
FA37790-14	B117425.D	1	10/24/16	WV	n/a	n/a	VB4728

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-6, FA37966-7, FA37966-8, FA37966-9, FA37966-10

CAS No.	Surrogate Recoveries	MS	MSD	FA37790-14	Limits
2037-26-5	Toluene-D8	100%	101%	99%	85-112%
460-00-4	4-Bromofluorobenzene	98%	98%	99%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA37995-1MS	J0980459.D	250	10/26/16	DP	n/a	n/a	VJ5470
FA37995-1MSD	J0980460.D	250	10/26/16	DP	n/a	n/a	VJ5470
FA37995-1	J0980447.D	250	10/26/16	DP	n/a	n/a	VJ5470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-2, FA37966-4

CAS No.	Compound	FA37995-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		31300	27500	88	31300	28800	92	5	50-147/21
71-43-2	Benzene	ND		6250	6820	109	6250	6670	107	2	81-122/14
108-86-1	Bromobenzene	ND		6250	6380	102	6250	6340	101	1	80-121/14
74-97-5	Bromochloromethane	ND		6250	5220	84	6250	5200	83	0	76-123/14
75-27-4	Bromodichloromethane	ND		6250	6050	97	6250	5680	91	6	79-123/19
75-25-2	Bromoform	ND		6250	5810	93	6250	5690	91	2	66-123/21
78-93-3	2-Butanone (MEK)	ND		31300	29500	94	31300	30600	98	4	56-143/18
104-51-8	n-Butylbenzene	ND		6250	6900	110	6250	6710	107	3	79-126/16
135-98-8	sec-Butylbenzene	ND		6250	7340	117	6250	7200	115	2	83-133/16
98-06-6	tert-Butylbenzene	ND		6250	6980	112	6250	6930	111	1	80-133/16
75-15-0	Carbon Disulfide	ND		6250	6520	104	6250	6520	104	0	66-148/23
56-23-5	Carbon Tetrachloride	ND		6250	6420	103	6250	6480	104	1	76-136/23
108-90-7	Chlorobenzene	ND		6250	6390	102	6250	6180	99	3	82-124/14
75-00-3	Chloroethane	ND		6250	7250	116	6250	7080	113	2	62-144/20
67-66-3	Chloroform	ND		6250	6190	99	6250	6080	97	2	80-124/15
95-49-8	o-Chlorotoluene	ND		6250	7070	113	6250	6810	109	4	81-127/15
106-43-4	p-Chlorotoluene	ND		6250	6740	108	6250	6540	105	3	83-130/15
124-48-1	Dibromochloromethane	ND		6250	5630	90	6250	5690	91	1	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		6250	5880	94	6250	5840	93	1	64-123/18
106-93-4	1,2-Dibromoethane	ND		6250	5660	91	6250	5730	92	1	75-120/13
75-71-8	Dichlorodifluoromethane	ND		6250	10200	163	6250	10400	166	2	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		6250	6490	104	6250	6390	102	2	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		6250	6540	105	6250	6600	106	1	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		6250	6520	104	6250	6390	102	2	78-120/15
75-34-3	1,1-Dichloroethane	ND		6250	6870	110	6250	6760	108	2	81-122/15
107-06-2	1,2-Dichloroethane	ND		6250	6020	96	6250	6090	97	1	75-125/14
75-35-4	1,1-Dichloroethylene	ND		6250	7050	113	6250	7280	116	3	78-137/18
156-59-2	cis-1,2-Dichloroethylene	ND		6250	5820	93	6250	5950	95	2	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		6250	7670	123	6250	7460	119	3	76-127/17
78-87-5	1,2-Dichloropropane	ND		6250	6120	98	6250	5970	96	2	76-124/14
142-28-9	1,3-Dichloropropane	ND		6250	5870	94	6250	5670	91	3	80-118/13
594-20-7	2,2-Dichloropropane	ND		6250	5720	92	6250	5680	91	1	74-139/17
563-58-6	1,1-Dichloropropene	ND		6250	6700	107	6250	6570	105	2	79-131/16
10061-01-5	cis-1,3-Dichloropropene	ND		6250	6080	97	6250	5850	94	4	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		6250	6230	100	6250	6290	101	1	80-120/22
100-41-4	Ethylbenzene	ND		6250	6470	104	6250	6310	101	3	81-121/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA37995-1MS	J0980459.D	250	10/26/16	DP	n/a	n/a	VJ5470
FA37995-1MSD	J0980460.D	250	10/26/16	DP	n/a	n/a	VJ5470
FA37995-1	J0980447.D	250	10/26/16	DP	n/a	n/a	VJ5470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-2, FA37966-4

CAS No.	Compound	FA37995-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		6250	6440	103	6250	6330	101	2	75-142/19
591-78-6	2-Hexanone	ND		31300	27300	87	31300	28500	91	4	61-129/18
98-82-8	Isopropylbenzene	ND		6250	6430	103	6250	6430	103	0	83-132/15
99-87-6	p-Isopropyltoluene	ND		6250	6880	110	6250	6840	109	1	79-130/16
74-83-9	Methyl Bromide	ND		6250	7270	116	6250	7210	115	1	59-143/19
74-87-3	Methyl Chloride	ND		6250	7670	123	6250	7740	124	1	50-159/19
74-95-3	Methylene Bromide	ND		6250	6070	97	6250	6110	98	1	78-119/14
75-09-2	Methylene Chloride	ND		6250	6410	103	6250	6200	99	3	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		31300	27800	89	31300	29100	93	5	66-122/16
1634-04-4	Methyl Tert Butyl Ether	ND		6250	5020	80	6250	5140	82	2	72-117/14
91-20-3	Naphthalene	ND		6250	6840	109	6250	7510	120	9	63-132/25
103-65-1	n-Propylbenzene	ND		6250	7350	118	6250	7190	115	2	82-133/15
100-42-5	Styrene	ND		6250	6040	97	6250	6020	96	0	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND		6250	5850	94	6250	5720	92	2	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		6250	6490	104	6250	6730	108	4	72-120/14
127-18-4	Tetrachloroethylene	ND		6250	6420	103	6250	6450	103	0	76-135/16
108-88-3	Toluene	ND		6250	6450	103	6250	6360	102	1	80-120/14
87-61-6	1,2,3-Trichlorobenzene	ND		6250	6310	101	6250	6610	106	5	68-131/25
120-82-1	1,2,4-Trichlorobenzene	ND		6250	5720	92	6250	6130	98	7	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		6250	6340	101	6250	6170	99	3	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		6250	6280	100	6250	6610	106	5	76-119/14
79-01-6	Trichloroethylene	ND		6250	6620	106	6250	6410	103	3	81-126/15
75-69-4	Trichlorofluoromethane	ND		6250	7590	121	6250	7650	122	1	71-156/21
96-18-4	1,2,3-Trichloropropane	ND		6250	6710	107	6250	6580	105	2	77-120/16
95-63-6	1,2,4-Trimethylbenzene	ND		6250	6810	109	6250	6660	107	2	79-120/18
108-67-8	1,3,5-Trimethylbenzene	ND		6250	6780	108	6250	6570	105	3	79-120/19
108-05-4	Vinyl Acetate	ND		31300	29800	95	31300	30000	96	1	43-154/14
75-01-4	Vinyl Chloride	ND		6250	7570	121	6250	7790	125	3	69-159/18
	m,p-Xylene	51000	E	12500	ND	-408* [a]	12500	ND	-408* [a]	nc	79-126/15
95-47-6	o-Xylene	ND		6250	6030	96	6250	6120	98	1	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA37995-1	Limits
1868-53-7	Dibromofluoromethane	97%	97%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	97%	100%	79-125%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA37966
Account: GFLEMFLT Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA37995-1MS	J0980459.D	250	10/26/16	DP	n/a	n/a	VJ5470
FA37995-1MSD	J0980460.D	250	10/26/16	DP	n/a	n/a	VJ5470
FA37995-1	J0980447.D	250	10/26/16	DP	n/a	n/a	VJ5470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA37966-2, FA37966-4

CAS No.	Surrogate Recoveries	MS	MSD	FA37995-1	Limits
2037-26-5	Toluene-D8	97%	98%	105%	85-112%
460-00-4	4-Bromofluorobenzene	97%	99%	103%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Metals Analysis

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA37966
Account: GFLEMFLT - Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

QC Batch ID: MP31025
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/21/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	14		
Antimony	6.0	1	1		
Arsenic	10	1.3	1.3	2.0	<10
Barium	200	1	1		
Beryllium	4.0	.2	.2		
Cadmium	5.0	.2	.2		
Calcium	1000	50	50		
Chromium	10	1	1		
Cobalt	50	.2	.2		
Copper	25	1	1		
Iron	300	17	17		
Lead	5.0	1	1.1		
Magnesium	5000	35	35		
Manganese	15	.5	1		
Molybdenum	50	.3	.3		
Nickel	40	.4	.4		
Potassium	10000	200	200		
Selenium	10	2.4	2.9		
Silver	10	.7	.7		
Sodium	10000	500	500		
Strontium	10	.5	.5		
Thallium	10	1.1	1.4		
Tin	50	.9	1		
Titanium	10	.5	1		
Vanadium	50	.5	.6		
Zinc	20	3	4.4		

Associated samples MP31025: FA37966-1, FA37966-2, FA37966-3, FA37966-5, FA37966-6, FA37966-7, FA37966-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA37966
Account: GFLEMFLT - Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

QC Batch ID: MP31025
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			10/21/16					10/21/16	
Metal	FA37921-1 Original	DUP	RPD	QC Limits	FA37921-1 Original	MS	Spikelot MPFLICP2 % Rec		QC Limits
Aluminum	anr								
Antimony	anr								
Arsenic	0.0	1.3	200.0(a)	0-20	0.0	1910	2000	95.5	80-120
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt									
Copper									
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel									
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

Associated samples MP31025: FA37966-1, FA37966-2, FA37966-3, FA37966-5, FA37966-6, FA37966-7, FA37966-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA37966
Account: GFLEMFLT - Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

QC Batch ID: MP31025 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/21/16

Metal	FA37921-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	0.0	1910	2000	95.5	0.0	20
Barium	anr					
Beryllium	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt						
Copper						
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel						
Potassium	anr					
Selenium	anr					
Silver						
Sodium	anr					
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP31025: FA37966-1, FA37966-2, FA37966-3, FA37966-5, FA37966-6, FA37966-7, FA37966-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA37966
Account: GFLEMFLT - Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

QC Batch ID: MP31025
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/21/16

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	1850	2000	92.5	80-120
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel				
Potassium	anr			
Selenium	anr			
Silver				
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP31025: FA37966-1, FA37966-2, FA37966-3, FA37966-5, FA37966-6, FA37966-7, FA37966-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA37966
Account: GFLEMFLT - Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

QC Batch ID: MP31025
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/21/16

Metal	FA37921-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	0.00	0.00	NC	0-10
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel				
Potassium	anr			
Selenium	anr			
Silver				
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP31025: FA37966-1, FA37966-2, FA37966-3, FA37966-5, FA37966-6, FA37966-7, FA37966-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

POST DIGESTATE SPIKE SUMMARY

Login Number: FA37966
Account: GFLEMFLT - Gannett Fleming
Project: Trademark Metals Recycling; 2000 W Savannah, Valdosta, GA

QC Batch ID: MP31025 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/21/16

Metal	Sample ml	Final ml	FA37921-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic	9.8	10			102.8	0.2	5	100	102.8	80-120
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP31025: FA37966-1, FA37966-2, FA37966-3, FA37966-5, FA37966-6, FA37966-7, FA37966-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

APPENDIX F

Advanced Disposal

Central FL Enviro

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WAF-16-01-10263 | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number: 162147

5. Generator's Name and Mailing Address: Trademark Metals
2000 W. Savannah Ave
Valdosta, GA 31601

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: Fasmera Talamite — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Evergreen Landfill — U.S. EPA ID Number

Facility's Phone: 229.239.8157

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.						
2.	C. 8021					
3.						
4.						
5.						
6.						

13. Special Handling Instructions and Additional Information

WAF #

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Allen Blackmon — Signature — Month: 10 Day: 17 Year: 16

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only) Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgement of Receipt of Materials

Transporter 1 Printed/Typed Name: Jim Yancy — Signature — Month: 10 Day: 17 Year: 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a

Printed/Typed Name: P. Jacks — Signature — Month: 10 Day: 17 Year: 16

ORIGINAL - Pt 1 DISPOSAL OFFICE COPY - Pt 2 TRANSPORTER COPY - Pt 3 OTHER COPY - Pt 4

ADS Rev. 2-15

EVERGREEN LANDFILL
3163 WETHERINGTON LANE
VALDOSTA, GA 31601
2292938157

010263
CENTRAL FLORIDA ENVIRONMENTAL SERVICES
11227 MCMULLEN ROAD
RIVERVIEW, FL 33569

INVOICE
INBOUND

SITE	CELL	OPERATOR	TICKET #
Q4		46801	**203950**

TRUCK	CONTAINER	LICENSE
FDL5		

REFERENCE	IN	OUT
	10/17/16 9:33 am	10/17/16 9:45 am

CONTRACT: 16-01-10263 OTO
BOL: 162147

GROSS 103,580.00LBS Manual In
TARE 29,540.00LBS Scale Out
NET 74,040.00 LBS

QTY	UNIT	DESCRIPTION			ORIGIN	%
37.02	TN	Contaminated Soil/Debr	YD	0.00	L6	100.00
37.02	TN	Transportation	YD	0.00	L6	100.00

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Jim Yancey

Advanced Disposal

Central FL Enviro

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
GAF 16-01-10263			162148

5. Generator's Name and Mailing Address: Trademark Metals, 2000 W. Savannah Ave. Valdosta GA 31601

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: Farmers Dolomite — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Evergreen Landfill — U.S. EPA ID Number

Facility's Phone: 229-239-9157

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1.					
	2. C. Soil					
	3.					
	4.					
	5.					
	6.					

13. Special Handling Instructions and Additional Information

WAF # 16-01-10263

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Allen Blackburn — Signature — Month 10 Day 17 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only) Date leaving U.S.:

16. Transporter Acknowledgement of Receipt of Materials

Transporter 1 Printed/Typed Name: Jim Yancey — Signature — Month 10 Day 17 Year 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a

Printed/Typed Name — Signature — Month 10 Day 17 Year 16

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

ORIGINAL - Pt 1 DISPOSAL OFFICE COPY - Pt 2 TRANSPORTER COPY - Pt 3 OTHER COPY - Pt 4

ADS Rev. 2-15

EVERGREEN LANDFILL
3165 WETHERINGTON LANE
VALDOSTA, GA 31601
2292938157

010263
CENTRAL FLORIDA ENVIRONMENTAL SERVICES
11227 MCMULLEN ROAD
RIVERVIEW, FL 33569

INVOICE
INBOUND

SITE	CELL	OPERATOR	TICKET #
Q4		46801	**203965**

TRUCK	CONTAINER	LICENSE
FDL5		

REFERENCE	IN	OUT
	10/17/16 10:26 am	10/17/16 10:40 am

CONTRACT: 16-01-10263 OTO
BOL: 162148

GROSS 104,080.00LBS Manual In
TARE 29,560.00LBS Scale Out
NET 74,520.00LBS

QTY	UNIT	DESCRIPTION			ORIGIN	%
37.26	TN	Contaminated Soil/Debr	YD	0.00	L6	100.00
37.26	TN	Transportation	YD	0.00	L6	100.00

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Jim Yancey

Advanced Disposal

Central FL Enviro

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WAF 16-01-1226 | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number: 162146

5. Generator's Name and Mailing Address: Trademark Metals, 200 W Savannah Ave, Valdosta

Generator's Site Address (if different than mailing address)

Generator's Phone

6. Transporter 1 Company Name: Farmers Dolomite — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Evergreen Landfill — U.S. EPA ID Number

Facility's Phone: 229 293 8157

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	C. Soil				
2.					
3.					
4.					
5.					
6.					

13. Special Handling Instructions and Additional Information

WAF #

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Allen Bagwell — Signature — Month: 10 Day: 17 Year: 16

INT'L

15. International Shipments ☐ Import to U.S ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only) Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgement of Receipt of Materials

Transporter 1 Printed/Typed Name: Jim Yancey — Signature — Month: 10 Day: 17 Year: 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a

Printed/Typed Name: P. Jones — Signature — Month: 10 Day: 17 Year: 16

GENERATOR

ORIGINAL - PINK — DISPOSAL OFFICE COPY - BLUE — TRANSPORTER COPY - GREEN — OTHER COPY - Pink

ADS Rev 2-15

EVERGREEN LANDFILL
3163 WETHERINGTON LANE
VALDOSTA, GA 31601
2292939157

010263
CENTRAL FLORIDA ENVIRONMENTAL SERVICES
11227 MCMULLEN ROAD
RIVERVIEW, FL 33569

INVOICE
INBOUND

SITE	CELL	OPERATOR	TICKET #
Q4		46801	**203938**

TRUCK	CONTAINER	LICENSE
FDLS		

REFERENCE	IN	OUT
REPLACES#203937	10/17/16 8:39 am	10/17/16 8:39 am

CONTRACT: 16-01-10263 OTO
BOL: 162146

GROSS	95,200.00LBS	Manual In
TARE	29,580.00LBS	Manual Out
NET	65,620.00 LBS	

QTY	UNIT	DESCRIPTION			ORIGIN	%
32.81	TN	Contaminated Soil/Debr	YD	0.00	L6	100.00
32.81	TN	Transportation	YD	0.00	L6	100.00

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Jim Yancy

	Facility	Operator
1.0 Address		
1.1 Name	Former Rice Iron & Metals	TMR
1.2 Street Address	2000 W. Savannah Ave	2000 W. Savannah Ave
1.3 City, State	Valdosta, GA	Valdosta, GA
1.4 ZIP Code	31603	31603
1.5 Telephone	N/A - closed down	813-677-4471 ext 7795

2.0 Location: Latitude: 30.818889 Longitude: 83.305

3.0 What is the contaminant in the Ground Water? Benzene, Toluene, Xylenes
4.0 Georgia Licensed Water Well Contractor or Bonded Driller: N/A
5.0 Professional Engineer or Geologist: Aaron Getchell PG. 813-285-0121
6.0 Well Data Table

	~~Injection Wells~~	~~Monitoring Wells~~ A6
6.1 Number ~~Wells~~	Soil excavation - ORC advanced applied to the excavation (12 Ft below land surface)	
6.2 ~~Well~~ Depth(s)		
6.3 ~~Well~~ Diameter		
6.4 Volume in/out	~100 pounds of ORC Advanced	
6.5 Sampling freq.	MW-8, MW-11, MW-16	- Semiannually

7.0 Responsible EPD Associate for site: Ms. Carolyn L. Daniels, PG
8.0 Date injection started: 10/18/16
8.1 Date* injection stopped: 10/18/16
8.2 Reason Injection Stopped? ORC Advanced applied to excavation - one-time
8.3 Date these injection wells were logged in to the UIC Class V Well inventory and file: _____
9.0 UIC Class V Well Inventory Number: _____
10.0 UST/HWMB CAP tracking number: VRP: 13486013401HSI No. 10923
11.0 Pending UIC Class V Permit Number: _____

*Note: This pilot test well form is valid only for 90 days from the start of injection.

**Submit this form to:
Georgia Environmental Protection Division,
Regulatory Support Program
UIC Unit
Suite 1062 East Tower
2 M.L. King, Jr. Dr.
Atlanta, Georgia, 30334