VOLUNTARY REMEDIATION PROGRAM APPLICATION

Former Commercial Electric Company
2217 West Bay Street
Savannah, Chatham County, Georgia
HSI No. 10919

November 27, 2018
Terracon Project No. ES187154

Prepared for:

Ms. Stephanie S. Serio
West Palm Beach, Florida

and

Georgia Environmental Protection Division
Atlanta, Georgia

Prepared by:

Terracon Consultants, Inc.
Savannah, Georgia

November 27, 2018

Georgia Environmental Protection Division
Response and Remediation Program
Land Protection Branch
2 Martin Luther King, Jr. Drive, SE
Suite 1054, East Tower
Atlanta, Georgia 30334

Attn: Mr. David Brownlee / Unit Coordinator
E: david.brownlee@dnr.ga.gov

Re: Voluntary Remediation Program Application
Former Commercial Electric Company
2217 West Bay Street
Savannah, Chatham County, Georgia
HSI No. 10919
Terracon Project No. ES187154

Dear Mr. Brownlee:

On behalf of Ms. Stephanie Serio, Terracon Consultants, Inc. (Terracon) is submitting this Voluntary Remediation Program (VRP) Application and Voluntary Investigation and Remediation Plan (VIRP) for the above-referenced facility. This submittal is in response to the Georgia Environmental Protection Division's (EPD's) Compliance Status Report (CSR) Call-In Letter dated February 23, 2018. In a letter dated August 21, 2018, the Georgia EPD extended the deadline for the submittal of a CSR to November 23, 2018. In lieu of submitting a CSR, Ms. Serio has elected to submit this VRP Application and VIRP in general accordance with the Georgia Voluntary Remediation Program Act (O.C.G.A. § 12-8-100). The VRP Application fee is attached.

If you have any questions concerning this document, please contact us at (912) 629 4000.

Sincerely,
Terracon Consultants, Inc.

Justin J. Johnson, PG
Senior Geologist

Stewart A. Dixon, PG
Environmental Department Manager

cc: Georgia EPD (1 hard copy; 2 electronic copies)
Client (1 hard copy; 1 electronic copy)
File (1 electronic copy)

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1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) has prepared this Voluntary Remediation Program (VRP) Application and Voluntary Investigation and Remediation Plan (VIRP) on Ms. Stephanie Serio (property owner) for the Former Commercial Electric Company located at 2217 West Bay Street in Savannah, Chatham County, Georgia (Property).

This VRP Application and VIRP have been completed in general accordance with the Georgia Voluntary Remediation Program Act (O.C.G.A. § 12-8-100). The VRP Application and Checklist are provided in Appendix A. The tax map and warranty deed documentation for the property are included in Appendix B. A Site Location Map (Figure 1), Site Vicinity Map (Figure 2), and Site Vicinity Map (Figure 3) are included in Appendix C.

1.1 Purpose

The purpose of this document is to provide justification for enrollment of the property into the VRP by presenting a current understanding of site conditions based on existing data and a preliminary conceptual site model (CSM), a plan for additional investigation to fill data gaps, and a plan for site remediation.

1.2 Property Eligibility

Under O.C.G.A § 12-8-105, the following criteria must be met in order to be considered a qualifying property for the VRP:

1. The property must be listed on the inventory under Part 2 of this article or be a property which meets the criteria of O.C.G.A. § 12-8-105 or otherwise have a release of regulated substances into the environment;
2. The property shall not:

a. Be listed on the federal National Priorities List pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601, et seq;

b. Be currently undergoing response activities required by an order of the regional administrator of the federal Environmental Protection Agency; or

c. Be a facility required to have a permit under O.C.G.A. § 12-8-66

3. Qualifying the property under this part would not violate the terms and conditions under which the division operates and administers remedial programs by delegation or similar authorization from the United States Environmental Protection Agency; and

4. Any lien filed under subsection (e) of O.C.G.A. § 12-8-96 or subsection (b) of O.C.G.A. § 12-13-12 against the property shall be satisfied or settled and released by the director pursuant to O.C.G.A. § 12-8-94 or O.C.G.A. § 12-13-6.

Based on the criteria listed above, the Former Commercial Electric Company is a "qualifying property" under the VRP.

1.3 Participant Eligibility

Under O.C.G.A. § 12-8-106, the following criteria must be met in order for the participant to meet the qualifications of the VRP:

1. Be the property owner of the voluntary remediation property or have express permission to enter another's property to perform corrective action including, to the extent practical, implementing controls for the site pursuant to written lease, order, or indenture;

2. Not be in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the director; and

3. Meet other such criteria as may be established by the board pursuant to O.C.G.A. § 12-8-103.

The participant, Ms. Serio, meets all of the criteria stated above, and is therefore "qualified" under the VRP. The contact for the applicant and owner of the site is as follows:

Ms. Stephanie Serio / Property Owner
7810 S. Dixie Highway
West Palm Beach, Florida 33405-4820
(800) 588 9296
stephanie@cubiclecurtainfactory.com

2.0 BACKGROUND

2.1 Site Description

The site is a single parcel (Parcel ID No. 2-0026-10-003) consisting of 0.32 acres of industrial land located at 2217 West Bay Street in the City of Savannah, Chatham County, Georgia. The site location is shown on Figure 1 in Appendix C. The topography of the site and general vicinity is depicted on Figure 2 in Appendix C.

The site is improved with an approximately 13,000-square foot, single story concrete block structure. A diagram of the site is shown on Figure 4 in Appendix C.

2.2 Site History

The site building was constructed in 1955. The site building was most recently occupied by the Commercial Electric Company and used for the maintenance and repair of motors and pumps. The site has been vacant since the mid-2000s.

2.3 Summary of Previous Investigations

Terracon completed a Phase I Environmental Site Assessment (ESA) for the site in February 2011 and identified the following recognized environmental conditions (RECs):

- The site operated as a motor and pump maintenance and repair facility until the mid-2000s;
- A fill port for an underground storage tank (UST) was observed on the south side of the site building;
- Several drums with unknown contents were observed inside and outside of the site building; and
- A filling station operated on the western adjoining property in the mid-1950s.

Based on the findings of the Phase I ESA, Terracon conducted a Limited Site Investigation (LSI) in March 2011 to evaluate soil and shallow groundwater conditions in the areas of concern at the subject site. The LSI included the advancement of two soil borings (denoted as S-3 and S-5) and installation of two temporary groundwater monitoring points (denoted as GW-3 and GW-5) on the site. LSI sample locations are depicted on Figure 4 in Appendix C.

Soil and groundwater samples were collected from both locations and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and Resource Conservation and Recovery Act (RCRA) metals. Analytical results indicated that cis-1,2-dichloroethene, trichloroethene, and tetrachloroethene were detected in groundwater samples

GW-3 and GW-5 at concentrations exceeding the Georgia EPD Hazardous Site Response Act (HSRA) Appendix III Criteria.

Based on the LSI results, reportable conditions exist at the site. As such, the property owner submitted a Release Notification / Reporting Form to the Georgia EPD on June 3, 2011. The Georgia EPD reviewed this release notification and performed a Reportable Quantities Screening Method (RQSM) evaluation. The RQSM evaluation determined that the groundwater exposure pathway scored as having a release of tetrachloroethylene above the threshold value of 10. Based on the RQSM evaluation, the Georgia EPD recommended listing the site on the HSI in an internal memorandum dated July 20, 2011. The Georgia EPD notified the current property owner of the HSI listing in a letter dated September 16, 2011.

Twin Rivers Capital, LLC submitted a Brownfield Application and Prospective Purchaser Corrective Action Plan (PPCAP) for the site on March 25, 2013. The Georgia EPD approved the PPCAP and issued a Brownfield Program acceptance letter for the site on June 11, 2013. The PPCAP was never implemented, as Twin Rivers Capital, LLC decided not to move forward with the purchase of the site.

On February 23, 2018, the Georgia EPD sent a letter to Ms. Serio requesting the submittal of a Compliance Status Report (CSR), Corrective Action Plan (CAP), or VIRP by August 23, 2018. On behalf of Ms. Serio, Mill Creek Environmental, LLC submitted a 90-day deadline extension request to the Georgia EPD in a letter dated August 10, 2018. In a letter dated August 21, 2018, the Georgia EPD approved a new submittal deadline of November 23, 2018.

On behalf of Ms. Serio, Whitaker Laboratory, Inc. (Whitaker) performed a limited soil and groundwater assessment at the site in September 2018. The assessment included completion of two hand auger borings (A-1 and A-2) and the installation of two temporary monitoring wells (TMW-1 and TMW-2) to total depths of 15 feet below ground surface (bgs). Whitaker's sample locations were completed adjacent to Terracon's 2011 LSI sample locations. Whitaker's sample locations are depicted in Figure 4 in Appendix C.

Whitaker collected one soil sample from each boring and one groundwater sample from each temporary monitoring well for laboratory analysis. The two soil samples were analyzed for VOCs and SVOCs. The two groundwater samples were analyzed for VOCs, SVOCs, and RCRA metals. The soil and groundwater analytical results for Whitaker's limited assessment are similar to the results of Terracon's 2011 LSI.

3.0 CURRENT SITE CONDITIONS

3.1 Subsurface Soil

As part of the 2011 LSI, Terracon advanced two direct push soil borings (S-3 and S-5) to 15 ft bgs to assess soil conditions in areas of concern identified for the site. Soil samples were collected and field-screened for volatile organic vapors with a Photo-Ionization Detector (PID). One soil sample was selected from each boring and submitted for laboratory analysis of VOCs, SVOCs, and RCRA Metals. Terracon's soil sample locations are depicted on Figure 4 in Appendix C.

Whitaker's limited soil assessment included the completion of two hand auger soil borings (A-1 and A-3) to 15 ft bgs. One soil sample was selected from each boring and submitted for laboratory analysis of VOCs and SVOCs. Whitaker's soil sample locations are depicted on Figure 4 in Appendix C.

Soil analytical results were compared to the Georgia EPD Type 3 Risk Reduction Standards (RRS). No VOCs, SVOCs or RCRA metals were detected in the four soil samples at concentrations exceeding Type 3 RRS. Soil analytical results and the applicable Type 3 RRS are summarized in Table 1 of Appendix D. Laboratory analytical reports are included in Appendix E.

3.2 Groundwater

Terracon converted the two direct push soil borings into temporary monitoring wells (GW-3 and GW-5) to facilitate the collection of groundwater samples. The two groundwater samples were submitted for laboratory analysis of VOCs, SVOCs, and RCRA metals. Terracon's temporary monitoring well locations are depicted on Figure 4 in Appendix C.

Whitaker's limited groundwater assessment included the installation and sampling of two temporary monitoring wells (TMW-1 and TMW-2). The two groundwater samples were submitted for laboratory analysis of VOCs, SVOCs, and dissolved RCRA metals. Whitaker's temporary monitoring well locations are depicted on Figure 4 in Appendix C.

Groundwater analytical results were compared to the Georgia EPD Type 3 RRS. Groundwater analytical results and the applicable Type 3 RRS are summarized in Table 2 of Appendix D. Laboratory analytical reports are included in Appendix E.

3.2.1 VOCs

The following VOCs were detected in the groundwater samples at concentrations exceeding Type 3 RRS:

- Tetrachloroethylene (PCE) was detected in samples GW-3, GW-5, and TWM-2 at concentrations of 201 micrograms per liter (µg/L), 705 µg/L, and 640 µg/L, respectively. These detections exceed the Type 3 RRS of 5 µg/L for PCE.
- Trichloroethylene (TCE) was detected in samples GW-3, GW-5, and TWM-2 at concentrations of 122 µg/L, 8,360 µg/L, and 7,800 µg/L, respectively. These detections exceed the Type 3 RRS of 5 µg/L for TCE.
- Cis-1,2-Dichloroethylene (cis-1,2-DCE) was detected in samples GW-5 and TWM-2 at concentrations of 7,850 µg/L and 22,000 µg/L, respectively. These detections exceed the Type 3 RRS of 70 µg/L for cis-1,2-DCE.
- Trans-1,2-Dichloroethylene (trans-1,2-DCE) was detected in sample TWM-2 at concentration of 150 µg/L, which exceeds the Type 3 RRS of 100 µg/L.
- Vinyl chloride (VC) was detected in sample TWM-2 at concentration of 240 µg/L, which exceeds the Type 3 RRS of 2 µg/L.

No other VOCs were detected above Type 3 RRS in the four groundwater samples submitted for laboratory analysis.

3.2.2 SVOCs

No SVOCs were detected above laboratory reporting limits (RLs) in the groundwater samples submitted for analysis.

3.2.3 RCRA Metals

The following RCRA metals were detected in the groundwater samples at concentrations exceeding Type 3 RRS:

- Total arsenic was detected in sample GW-3 at a concentration of 16.2 µg/L, which exceeds the Type 3 RRS of 10 µg/L.
- Total chromium was detected in sample GW-3 at a concentration of 105 µg/L, which exceeds the Type 3 RRS of 100 µg/L.
- Total lead was detected in sample GW-3 at a concentration of 61.4 µg/L, which exceeds the Type 3 RRS of 15 µg/L. However, dissolved lead was not detected above the laboratory method detection limit (MDL).

It was noted the LSI Report that groundwater sample GW-3 exhibited high turbidity. Dissolved lead was not detected in GW-3 after the sample was filtered at the laboratory. Therefore, the metals exceedances are likely associated with particulates in the sample and are not considered

representative of dissolved metals conditions. No other RCRA metals were detected above the Type 1 RRS in the groundwater samples submitted for analysis.

3.3 UST Contents

The UST contains approximately 0.5 feet of liquid. On September 25, 2018, Whitaker collected as sample of the UST contents. The liquid sample was analyzed for VOCs. No chlorinated solvent compounds were detected in the sample at concentrations above laboratory RLs. In addition, no VOCs were detected at concentrations exceeding Maximum Concentration of Contaminants for Toxicity Characteristic. The following constituents were detected at concentrations above laboratory RLs:

- Total xylenes were detected at a concentration of 6.6 µg/L; and
- Acetone was detected at a concentration of 87 µg/L.

No other VOCs were detected above laboratory RLs in the UST contents sample.

4.0 PRELIMINARY CONCEPTUAL SITE MODEL

A preliminary CSM has been developed using data collected during previous site investigations and information obtained from reviews of published literature. It is intended that the CSM will be updated as new information is gathered for the site. The CSM illustrates the site's surface and subsurface setting; potential human health and ecological receptors; and the complete and incomplete exposure pathways that exist for the site.

4.1 Geologic Setting

The following subsections summarize the regional and site-specific geomorphic, stratigraphic, and hydrogeologic settings. Geologic data for this area are based on numerous published reports, previous environmental studies conducted at the site, and discussions with other researchers familiar with the geology and hydrogeology of the area.

4.1.1 Regional Geology

The site is located in the Coastal Plain physiographic province of Georgia. The stratigraphy of the Coastal Plain of Georgia and Chatham County has been described by numerous authors (e.g., Herrick, 1961; Herrick and Vorhis, 1963; Counts and Donsky, 1963; Furlow, 1969; Chowns and Williams, 1983; Clarke et al., 1990; Weems and Edwards, 2001; Williams and Gill, 2010; and Clarke et al., 2011) and is summarized in the following paragraphs. The area stratigraphic units are discussed in ascending order, from the deepest Paleocene units to the surficial Holocene

deposits. Cretaceous and pre-Cretaceous rock units are typically found at depths of several thousand feet below ground surface in the area; therefore, only a general description of the lithologic character is included in this report.

Cretaceous and pre-Cretaceous Stratigraphy

Pre-Cretaceous strata underlying the area are considered "basement" rocks. These "basement" rocks consist of igneous intrusive rocks and low-grade metamorphic rocks of Paleozoic age, and sedimentary rocks and volcanic rocks of Triassic to Early Jurassic Age (Chowns and Williams, 1983). Upper Cretaceous sediments consist of inter-bedded sands and clayey silts at depths of 1,600 feet below ground surface (Herrick, 1961).

Paleocene Stratigraphy

Paleocene units in the area mark the beginning of a regional transgression of the sea that lasted through the late Eocene (Clarke et al., 1990). Paleocene units unconformably overlie strata of Late Cretaceous age. The Clayton Formation and the Cedar Keys Formation make up the Paleocene units in the area. The upper portion of the Clayton Formation is a hard, sandy glauconitic, fossiliferous limestone, while the remaining portion of the formation consists of glauconitic sand, argillaceous sand, and small amounts of medium-to-dark gray clay (Clarke et al., 1990). The Cedar Keys Formation is a Paleocene carbonate-evaporite facies. The Cedar Keys Formation consists of thick beds of anhydrite and dolomite (Clarke et al., 1990).

Eocene Stratigraphy

The early Eocene Oldsmar Formation unconformably overlies the Paleocene Clayton Formation (Clarke et al., 1990). Glauconitic limestone and dolomite are characteristic lithologies of the Oldsmar Formation (Miller, 1986; Clarke et al., 1990). The Oldsmar Formation may also contain an upper layer of sand in some areas (Clarke et al., 1990).

The middle Eocene Avon Park Formation unconformably overlies the Oldsmar formation (Miller, 1986; Clarke et al., 1990). The Avon Park, a glauconitic dolomite and limestone, has a thickness in the range of 700 to 500 feet in the Chatham County area.

The Ocala Limestone is a massive, fossiliferous limestone. Fossils identified in the Ocala include bryozoan remains, foraminiferal tests, and mollusk shells (Furlow, 1969; Miller, 1986; Clarke et al., 1990). The Ocala Limestone unconformably overlies the dolomite and limestone of the Avon Park Formation (Furlow, 1989; Krause and Randolph, 1989; and Clarke et al., 1990). The thickness of the Ocala is more than 200 feet thick, and in some areas exceeds 400 feet (Clarke et al., 1990).

Oligocene Stratigraphy

Buff-colored, porous fossiliferous (foraminiferal tests, micrite, and non-particulate ubiquitous phosphate) limestone describe the sediments of Oligocene age (Clarke et al., 1990). Huddleston (1988) named these sediments the Lazaretto Creek Formation and the Tiger Leap Formation.

Weems and Edwards (2001) refined the descriptions of the two formations. The Lazaretto Creek Formation includes the lower Oligocene sediments in the study area and the Tiger Leap Formation includes the upper Oligocene sediments marked by an increase in phosphate. The abundance of miliolid foraminifera in the Oligocene sediments is used to differentiate the unit from the underlying Ocala Limestone, and the absence of particulate phosphate is used to differentiate the overlying Miocene carbonate sediments.

Miocene Stratigraphy

There are three units of Miocene age in Chatham County. These units have been described lithologically and by geophysical markers by several authors (Furlow, 1969; Huddleston, 1988; Clarke et al., 1990; Weems and Lewis, 2001). The three (3) layers are lithologically similar and are only differentiated based on stratigraphic position, geophysical characteristics, and limited paleontologic evidence (Clarke et al., 1990).

The lowermost Miocene unit in the Chatham County area was designated as Unit C by Clarke and others (1990). Unit C is correlative to the Parachucla Formation of Huddleston (1988) and the Tampa Limestone equivalent of Furlow (1969). Typically, only the lower portion of Unit C is found in the area, which is generally a sandy, phosphatic dolomite or limestone (Clarke et al., 1990). The middle clay and upper sandy layers have been removed by erosion (Clarke et al., 1990).

The middle Miocene unit has been designated as Miocene Unit B (Miller, 1986, and Clarke et al., 1990). Unit B is correlative to the Hawthorn Formation of Counts and Donsky (1963) and Miller (1986); the Marks Head Formation of Woolsey (1977) and Huddlestun (1988). The Marks Head Formation name has been used for this study after the work of Weems and Edwards (2001). The basal carbonate layer on Unit B typically consists of olive-green dolomite and limestone that contains very fine to coarse quartz sand, shiny brown to black phosphatic sand, and contains some fossils, typically mollusk molds and shark teeth. (Furlow, 1969; Clarke et al., 1990). Distinguishing the basal layer of Unit B from Unit C is difficult because both Unit C and Unit B are lithologically similar, therefore requiring paleontological evidence and/or borehole geophysical logs (Clarke et al., 1990). The two (2) basal units are juxtaposed because the middle and upper clastic layers of Unit C have been eroded away (Clarke et al., 1990). The middle layer of Unit B typically consists of olive-green phosphatic silty clay and clayey silt and grades upward to the upper sandy layer (Furlow, 1969; and Clarke et al., 1990). The upper sandy unit of Unit B typically consists of poorly sorted, very fine to coarse sand and locally a thin very dense dolomite layer (Furlow, 1969; and Clarke et al., 1990). Unit B (Hawthorn Formation) ranges in thickness from 20 to 55 feet thick (Furlow, 1969).

Miocene Unit A overlies Unit B and is included in the Hawthorn Formation of Counts and Donsky (1963) and Miller (1986) and correlates with the Coosawhatchie Formation of Woolsey (1977) and Huddleston (1988). The name Coosawhatchie Formation is adopted for this study based on the work of Weems and Edwards (2001). The Coosawhatchie Formation contains two (2)

members. The basal layer, which is the Tybee Phosphorite Member, consists of a sandy phosphatic limestone and dolomite with some fossils (Clarke et al., 1990). In Chatham County, clay is the matrix material surrounding most of the phosphate grains instead of dolomite (Clarke et al., 1990). The sand in the basal unit generally consists of very fine to coarse quartz and brown to black phosphate. The middle clay layer consists of fossiliferous clay and silt laminae and the upper sand unit consists of a very fine to coarse, poorly sorted sand (Clarke et al., 1990). The upper portion of this unit is equivalent to the Berryville Clay Member. Unit A is about 20 feet thick in the Savannah Area.

Pliocene, Pleistocene, and Holocene Stratigraphy

Sediments of Pliocene age are generally accepted as absent in Chatham County, with Pleistocene sediments unconformably overlying Miocene sediments (Herrick, 1965; Furlow, 1969; and Clarke et al., 1990). Pleistocene sediments typically consist of arkosic sand and gravel with discontinuous clay beds. Basal Pleistocene sediments contain reworked olive-green clay from the underlying Miocene units (Furlow, 1969). Lignitic and fossiliferous clay and micaceous sandy sediment ranging in thickness from 10 to 60 feet are typical of Pleistocene sediments. The Penholoway Formation is the principal surficial Pleistocene deposit in Chatham County (Weems and Edwards, 2001). The Penholoway is one of many remnants of former shoreline complexes through the area, which were the result of numerous transgressions and regressions of the sea, the result of extensive glaciations in North American during the Pleistocene Epoch.

4.1.2 Regional Hydrogeology

Hydrologic units in Chatham County, Georgia include (in descending order), the surficial aquifer system, consisting of the water-table zone, upper confined zone; the Upper Floridan Aquifer; middle confining; the lower Floridan Aquifer; and the lower confining unit (Williams and Gill, 2010).

In the vicinity of the site, the surficial aquifer system is present from land surface to approximately 60 feet bgs (Williams and Gill, 2010). For this study, the surficial aquifer is undifferentiated; however, the surficial aquifer is typically informally divided into a water-table zone, an upper confined zone, and a lower confined zone. The confining unit underlying the surficial aquifer system is identified on natural-gamma radiation logs by the A-marker horizon. The bottom of the confining unit is determined by the location of the C-marker horizon, which coincides with the top of the Upper Floridan Aquifer (Clarke et al., 1990).

The principal source for all drinking water uses in the coastal area of Georgia is the Floridan Aquifer system. The Floridan Aquifer system is composed of carbonate rocks of varying permeability (Clarke et al., 1990; Clark et al., 2011). There are several water-bearing zones within the Floridan Aquifer system that are separated by layers of relatively dense limestone and dolostone that act as semi-confining units (Krause and Randolph, 1989; Clarke et al., 1990; Williams and Gill, 2010).

The Chatham County area, the two shallowest water bearing zones of the five that comprise Floridan Aquifer system are part of the upper Floridan Aquifer (McCollum and Counts, 1964; Krause and Randolph, 1989; Clark et al., 1990; Williams and Gill, 2010). The upper Floridan Aquifer is overlain by a confining unit consisting of layers of silty clay and dense phosphatic Oligocene dolomite identified by a distinct response on gamma-ray logs (Clarke et al., 1990). Clarke and others (1990) identified the base of the confining unit as the C-marker horizon. The C-marker horizon is present near the top of the Suwannee Limestone and is considered to be the top of the upper Floridan Aquifer in the study area (Williams and Gill, 2010). Based on well log information for nearby Meddin Package Co. No. 2 Well (USGS Well ID 36Q038), the top of the upper Floridan Aquifer is encountered at a depth of 215 feet. The D-marker horizon represents the top of the permeable zone of the Upper Floridan Aquifer and is present at the top of the Ocala Limestone at a depth of 309 feet in the study area (Williams and Gill, 2010).

4.1.3 Site Geology

Based on the LSI soil boring logs, the general lithology of the site consists of sand extending from beneath the pavement / building slab to an approximate depth of 2 feet bgs, underlain by clay to total boring depths (approximately 15 feet bgs). Soil boring logs are included in Appendix E.

Insufficient soil data is currently available to develop stratigraphic cross-sections for the site. Therefore, stratigraphic cross-sections will be prepared using soil information collected during the installation of monitoring wells for the proposed VRP investigation. The stratigraphic cross-sections will be provided in the first semi-annual progress report.

4.1.4 Site Hydrogeology

Saturated soil conditions were encountered during the advancement of the LSI borings at approximately 13 feet bgs. Insufficient groundwater data is currently available to develop a potentiometric surface map and determine the shallow groundwater flow direction for the site. Groundwater elevation data collected during the proposed VRP investigation will be used to create a potentiometric surface map; determine the groundwater flow direction and hydraulic gradient; and calculate the groundwater flow velocity. In addition, slug tests will be performed for select wells to determine a representative hydraulic conductivity for the site. This hydrogeologic information will be provided in the first semi-annual progress report.

4.2 Contaminants of Concern

Contaminants of concern (COCs) for groundwater at the site include PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and VC. These chlorinated solvent compounds have been detected in groundwater samples collected from one or more temporary monitoring wells at concentrations exceeding Type 3 RRS.

Total arsenic, total chromium and total lead were detected at concentrations exceeding Type 3 RRS in a turbid groundwater sampled collected from temporary well GW-3. Dissolved lead was not detected above laboratory RL in the filtered sample for GW-3. Therefore, the exceedances of total arsenic, total chromium and total lead are attributed to particulates in the sample and are not considered representative of dissolved conditions. Arsenic, chromium, and lead are not considered to be COCs at this time.

No regulated constituents have been detected above Type 3 RRS in the soil at the site.

4.3 Potential Environmental Receptors

4.3.1 Human Receptors

The site is zoned industrial and developed with a 13,000-square foot industrial building. Based on the current use of the site, on-site residents are not considered potential human receptors.

The building is currently vacant and secured with door locks and boarded up windows. enclosed by a chain link fence capped with three strands of barbed wire. Currently, there is no surveillance system or fence to prevent unauthorized access to the exterior of the site. Based on the current accessibility of the site, trespassers are considered potential human receptors.

The site is bound to the north by West Bay Street followed by a bulk oil storage and distribution facility (Barrett Oil Distribution, Inc.). The eastern adjoining property (2215 West Bay Street) consists of a vacant industrial facility previously occupied by Power Brake and Wheel. The western adjoining property consists of a parking lot and grass-covered lot. The site is bound to the south by Margery Street followed by Bethany Missionary Baptist Church and single-family residential structures. Based on the surrounding land use and distance from residential structures, off-site residents are considered potential human receptors.

Based on the current use of the site and adjoining properties, the potential exposure pathways were evaluated for the following potential human receptors:

- Current and future on-site industrial/construction workers
- Current and future off-site industrial/construction workers
- Current and future off-site residents
- Current and future on-site trespassers

4.3.2 Ecological Receptors

The site is developed with an industrial building and does not provide a suitable habitat for plants or animals. In the absence of natural habitats, vegetation, and surface water, as well as the significant amount of anthropogenic disturbance, biologically significant populations of wildlife receptors are not likely to be present at the site.

The surrounding area consists of industrial, commercial, and residential properties. building and does not provide a suitable habitat for plants or animals. There are no nearby areas that could provide a suitable habitat for plants or animals. In the absence of natural habitats, vegetation, and surface water, as well as the significant amount of anthropogenic disturbance, biologically significant populations of wildlife receptors are not likely to be in the vicinity of the site.

4.4 Potential Exposure Pathways

An evaluation of potential exposure pathways was conducted for the site. The exposure pathways evaluated include drinking water, soil, groundwater, vapor intrusion, and sediment and/or surface water from impacted soil and groundwater.

4.4.1 Drinking Water

The site and surrounding properties receive water from the Main System of the City of Savannah Water Supply and Treatment Department. According to the City of Savannah's 2017 Water Quality Report (most recently published report available), the drinking water for the Main System is drawn from 22 wells installed within the Floridan Aquifer at depths between 414 and 1,006 feet deep.

According to information from the USGS National Water Information System (NWIS) database, 19 water wells exist within a 1-mile radius of the site. The closest water well is City of Savannah Well No. 10 located approximately 1,500 feet to the west of the site. Based on the data provided by the NWIS database, the off-site wells within a 1-mile radius are cased to withdraw from the Floridan Aquifer system, specifically the upper Floridan Aquifer.

Chlorinated solvent compounds are present within the surficial aquifer at the site. As stated previously, the Floridan Aquifer system in the Savannah, Chatham County area is hydraulically separated from the surficial aquifer system by a series confining units. Therefore, contamination within the surficial aquifer at the site is unlikely to impact off-site water wells producing from the Floridan Aquifer. Based on this information, the drinking water pathway is considered incomplete for chlorinated solvent compounds in shallow groundwater at the site.

4.4.2 Soil Ingestion, Inhalation, or Direct Contact

The soil exposure pathway is not complete, as COCs exceeding Type 3 RRS have not been identified in the soil at this time. The proposed VRP investigation will include additional soil sampling to determine if COCs exist in the on-site vadose zone soils. If COCs are identified in the vadose zone soils, the potential soil exposure pathway will be reevaluated in the first semi-annual progress report.

4.4.3 Groundwater Ingestion, Inhalation, or Direct Contact

The groundwater exposure pathway for ingestion, inhalation, or direct contact by on-site and off-site construction workers during future excavation activities is potentially complete. Chlorinated solvent compounds have been detected above Type 3 RRS in the shallow groundwater at the site. The chlorinated solvent compound exceedances are in close proximity to the southern boundary of the site. Therefore, it is possible that chlorinated solvent groundwater impacts extend off-site. The proposed VRP investigation will include the installation of additional monitoring wells to further delineate the extent of chlorinated solvent impacts and determine if other COCs are present in the groundwater at the site. The data collected by the proposed VRP investigation will be used to further evaluate the potential groundwater exposure pathway.

4.4.4 Vapor Intrusion

The vapor intrusion exposure pathway is potentially complete, as volatile COCs have been identified in the shallow groundwater at the site. The soil vapor intrusion pathway will be initially evaluated using the USEPA Vapor Intrusion Screening Level (VISL) Calculator. The VISL calculations will based on a commercial exposure scenario with a target hazard quotient (THQ) of 0.1 and a target risk (TR) of $1x10^{-5}$. Target groundwater concentrations (TGCs) for commercial properties will be calculated for the regulated VOCs detected in the groundwater samples collected from the site. The results of the initial vapor intrusion evaluation will be presented in the first semi-annual progress report.

4.4.5 Surface Water / Sediment

No surface water bodies or drainage ditches are present at the site. Based on the absence of surface water bodies and drainage features, surface water and sediment are not considered complete exposure pathways at this time.

4.5 Fate and Transport Modeling

Terracon will use BIOCHLOR to simulate the potential migration and natural attenuation of the dissolved phase VOCs in the groundwater at the site. BIOCHLOR is a fate and transport model

(F&T Model) developed by the USEPA for chlorinated solvent release sites. The initial results of the F&T Model will be presented in the first semi-annual progress report.

4.6 Cleanup Standards

Soil contamination will be subject to non-residential (Type 3 or 4) RRS. Groundwater contamination will be subject to Type 5 RRS. The Type 5 RRS allows contamination to remain in place, provided the principal exposure pathways at the site are mitigated by engineering and institutional controls. These controls could include, but are not limited to, a uniform environmental covenant governing site activity and use limitations (AULs), restricted access, and 24-hour security measures.

5.0 VRP INVESTIGATION PLAN

5.1 Soil Investigation

The soil investigation will include the completion of four soil borings across the site. The proposed boring locations are depicted on Figure 5 in Appendix C.

Each soil boring will be initially advanced with a stainless steel hand auger to a depth of 5 feet bgs in order to verify underground utility clearance. Once cleared, the borings will be advanced using direct push methods to a not to exceed depth of 20 feet bgs. Soil samples will be continuously collected to total boring depth to screen for organic vapors with a PID as well as document soil lithology and saturated zone depths. Terracon will use this information to prepare stratigraphic cross-sections of the area of concern and further develop the CSM.

One surface soil sample (≤ 1 foot bgs) and one subsurface soil sample will be collected from each boring for laboratory analysis. The subsurface soil sample will be collected from the interval exhibiting the highest PID reading. If no elevated PID reading is observed within the boring; the sample will be collected from the interval of most likely environmental impact above the saturated zone as determined in the field by the sampling professional.

The soil samples selected for analysis will be placed in laboratory prepared containers, labeled, and placed on ice in a cooler which will be secured with a custody seal. The samples and completed chain-of-custody forms will be transported to an independent Georgia-certified laboratory for analysis of the following parameters:

- VOCs by USEPA Method 8260

The soil analytical data will be evaluated to determine the COCs for the site. If soil COCs are identified, Terracon will continue investigation activities as practical until COCs are delineated to Type 3 RRS.

5.2 Groundwater Investigation

5.2.1 Groundwater Sampling

Following the completion of soil sampling activities, the four soil borings will be converted to permanent monitoring wells. In addition, one double-cased deep well (total depth not to exceed 50 feet bgs) will be installed to further delineate the vertical extent of groundwater impacts. The proposed monitoring well locations are depicted on Figure 5 in Appendix C.

The wells will be completed in general accordance with procedures described in the US EPA Region 4, Science and Ecosystem Support Division (SESD) guidance document titled *Design and Installation of Monitoring Wells* (SESDGUID-101-R1), effective date January 29, 2013.

Hollow stem auger drilling methods will be used to install the wells. The monitoring wells will be constructed with 2-inch diameter, Schedule 40 PVC risers and 0.010-inch slotted screens. Sand pack will be installed around the well screen from the bottom of the boring to approximately one (1) to two (2) feet above the top of the screen. Approximately 2 feet of hydrated bentonite pellets will be placed above the sand pack. The remaining annular space will be filled with grout to within approximately 6 inches below the ground surface. The wells will be completed at the surface with concrete pads and metal covers.

Upon the completion of installation activities, the monitoring wells will be developed by surging and removing groundwater with a whale pump (or equivalent) until fluids appear relatively free of sediment. Following the completion of development activities, the monitoring wells will be purged and sampled in general accordance with the low-flow sampling protocol described in the USEPA Region 4, SESD guidance document titled *Groundwater Sampling Operating Procedure* (SESDPROC-301-R4), effective date April 26, 2017.

Following the stabilization of field parameters, groundwater samples will be collected and placed in laboratory prepared containers, labeled, and placed on ice in coolers secured with custody seals. The groundwater samples and completed chain-of-custody forms will be transported to an independent Georgia-certified laboratory and analyzed for the following parameters:

- VOCs by USEPA Method 8260

Groundwater elevation data collected during the investigation will be used to create a potentiometric surface map; determine the groundwater flow direction and hydraulic gradient; and

calculate the groundwater flow velocity. This information will be presented in the first semi-annual progress report.

The groundwater analytical data will be compared to Type 3 RRS to determine the regulated COCs for the site. Terracon will continue groundwater investigation activities as practical until regulated COCs are delineated to Type 3 RRS.

5.2.2 Hydraulic Conductivity

Hydraulic conductivity, or the coefficient of permeability, describes the ease with which a fluid moves through the pore spaces or fractures in the subsurface. Terracon will determine a representative site hydraulic conductivity pursuant to the further development of the conceptual site model.

A representative hydraulic conductivity value will be determined by conducting rising head slug tests within various monitoring wells throughout the site. Rising head slug tests are conducted by quickly removing a known volume of water (the slug) from a monitoring well and measuring the rate at which groundwater returns to static conditions. In order to collect accurate data, a transducer with an on-board data logger will be used to collect depth to water and hydrostatic pressure data over time.

Upon completion of the slug tests, time and depth to water data will be imported into the AQTESOLV™ aquifer software for analysis. Additional information input to the software will include the monitoring well diameter, the borehole diameter, the total depth of the monitoring well, the static water column height, the initial displacement, and an assumed gravel pack porosity. It is presumed that the Bouwer and Rice method for determining the hydraulic conductivity in an unconfined aquifer will be used.

6.0 REMEDIATION PLAN

6.1 UST Closure

The unregistered UST will be removed in accordance with Georgia EPD UST Closure Guidance Document, dated October 2010. As part of UST closure activities, two soil samples will be collected beneath the tank. In addition, one soil sample will be collected per every 200 cubic yards of stockpiled soil generated during closure activities. The soil samples will be placed in laboratory prepared containers, labeled, and placed on ice in a cooler which will be secured with a custody seal. The samples and completed chain-of-custody forms will be transported to an independent Georgia-certified laboratory for analysis of the following parameters:

- Total Petroleum Hydrocarbons (TPH) – Diesel Range Organics (DRO) by USEPA Method 8015
- TPH – Gasoline Range Organics (GRO) by USEPA Method 8015
- VOCs by USEPA Method 8260
- SVOCs by USEPA Method 8270

If groundwater is encountered during closure activities, a groundwater sample will be collected from the excavation. The groundwater sample will be collected in laboratory prepared containers, labeled, and placed on ice in a cooler secured with custody seals. The groundwater sample and completed chain-of-custody form will be transported to an independent Georgia-certified laboratory and analyzed for the following parameters:

- VOCs by USEPA Method 8260
- SVOCs by USEPA Method 8270

Upon the completion of the field work and receipt of analytical data, a UST Closure Report (findings, laboratory results, map, etc.) will be prepared and submitted to the Georgia EPD. The closure report will be prepared under the direction of a Professional Geologist licensed in the State of Georgia.

6.2 Groundwater Monitoring

Upon completion of horizontal and vertical delineation of regulated COCs in groundwater, a semi-annual groundwater monitoring program will be implemented for the site. Groundwater monitoring will be conducted on a semi-annual basis for a period of three years to demonstrate attenuation and/or stabilization of regulated COCs and to confirm the results of the groundwater fate and transport model. The monitoring program will be terminated by the end of the three-year period if regulated COC concentrations are below Type 5 RRS; have stabilized and/or decreased over time; and are consistent with values predicted by the groundwater fate and transport model.

6.3 Institutional Controls

Soil contamination will be subject to non-residential (Type 3 or 4) RRS. Groundwater contamination will be subject to Type 5 RRS. The Type 5 RRS allows contamination to remain in place, provided the principal threats at the site are mitigated by engineering and institutional controls. An environmental covenant will likely be executed on the site in conformance with O.C.G.A. § 44-61-1, et seq., the “Georgia Uniform Environmental Covenants Act.” This covenant will require that the site land use remain industrial and no drinking water well will be installed on-site. Other controls could include, but are not limited to, restricted access and 24-hour security measures.

7.0 MILESTONE SCHEDULE

The schedule for the implementation of the VIRP is presented in Appendix F. Progress reports will be submitted to the Georgia EPD on a semi-annual basis during the implementation period until the final VRP CSR is submitted. A discussion of the VRP milestones is below:

- **Identification of Regulated COCs in Soil and Groundwater** – Identification of the applicable COCs will occur immediately following VRP enrollment. It is likely that this information will be acquired within 6 months after VRP enrollment and presented in Semi-Annual Progress Report No. 1.
- **Source Zone Soil Profiling and Slug Testing** – Source zone soil profiling and slug testing activities will be conducted in conjunction with identification of the applicable COCs. This information will be developed within 6 months after VRP enrollment and presented in Semi-Annual Progress Report No. 1.
- **On-site Horizontal/Vertical Delineation of Soil and Groundwater Impacts** – The results of on-site soil and groundwater delineation will be completed within the 12-month period specified under the VRP. The results of the delineation effort will be presented in Semi-Annual Progress Report No. 2.
- **Off-site Horizontal/Vertical Delineation of Soil and Groundwater Impacts** – The results of off-site soil and groundwater delineation will be completed within the 24-month period specified under the VRP. The results of the delineation effort will be presented in Semi-Annual Progress Report No. 4.
- **Updated CSM Submittal with Final Remediation Plan** – An updated CSM and final remediation plan will be submitted as part of Semi-Annual Progress Report No. 5 within 30 months following VRP enrollment. A Uniform Environmental Covenant will be prepared and executed in conjunction with this submittal.
- **VRP Compliance Status Report** – A VRP CSR certifying compliance with applicable rules and regulations will be submitted within 60 months following VRP enrollment.

8.0 REFERENCES

- Chowns, T.M., and Williams, C.T., 1983, Pre-Cretaceous rocks beneath the Georgia Coastal Plain- Regional Implications: *in* Gohn, G.S., *ed.,* Studies related to the Charleston, South Carolina Earthquake of 1886-tectonics and seismicity: U.S. Geologic Survey Professional Paper, p. L1- L42
- Clarke, J.S., Hacke, C.M., and Peck, M.F., 1990, Geology and Ground-Water Resources of the Coastal Area of Georgia: Georgia Geologic Survey Bulletin 113, 106 pages.
- Clarke, J.S., Cherry, G.C., and Gonthier, G.J., 2011, Hydrogeology and water quality of the Floridan aquifer system and effects of Lower Floridan aquifer pumping on the Upper Floridan aquifer at Fort Stewart, Georgia: U.S. Geological Survey Scientific Investigations Report 2011–5065, p. 59
- Clarke, W.Z., and Zisa, A.C., 1976, *Physiographic Map of Georgia*: Georgia Department of Natural Resources, 1 plate.
- Counts, H.B., and Donsky, E., 1963, Salt-water encroachment, geology, and ground-water resources of the Savannah area, Georgia and South Carolina: U.S. Geological Survey Water Supply Paper 1611, 100 pages, 6 plates, 9 figures.
- Furlow, J.W., 1969, Stratigraphy and Economic Geology of the Eastern Chatham County Phosphate Deposit: Georgia Department of Natural Resources, Division of Mines, Mining, and Geology Bulletin 82, 40 pages.
- Georgia Department of Natural Resources (GDNR), 1976, Geologic Map of Georgia, Atlanta, Georgia.
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- Herrick, S.M., 1965, A subsurface study of Pleistocene deposits in coastal Georgia: Georgia Dept. of Natural Resources, Division of Mines, Mining, and Geology Information Circular 31, 8 p.
- Herrick, S.M., and Vorhes, R.C., 1963, Subsurface Geology of the Georgia Coastal Plain, Georgia: State Division Conservation, Department of Mines, Mining and Geology, Geological Survey Information Circular 25, 79 p.
- Huddlestun, P.F., 1988, A revision of the Lithostratigraphic Units of the Coastal Plain of Georgia, the Miocene through Holocene: Georgia Geologic Survey Bull 104, 162 p.
- Krause, R.E., and Randolph, R.B., 1989, Hydrology of the Floridian Aquifer System in Southeast Georgia and Adjacent Parts of Florida and South Carolina: U.S. Geologic Survey Professional Paper 1403-D, 65 pages.

- Miller, J. A., 1986, Hydrogeologic framework of the Floridan aquifer system in Florida and parts of Georgia, Alabama, and South Carolina: U.S. Geological Survey Professional Paper 1403-B, 91 pages.
- United States Geologic Survey (USGS), 2017, National Water Information System: Mapper.
- Weems, R.E., and Edwards, L.E., 2001, Geology of Oligocene, Miocene, and Younger Deposits in the Coastal Area of Georgia: Georgia Geologic Survey Bulletin 131, 124 p.
- Williams, L.J., and Gill, H.E., 2010, Revised hydrogeologic framework of the Floridan aquifer system in the northern coastal area of Georgia and adjacent parts of South Carolina: U.S. Geological Survey Scientific Investigations Report 2010–5158, 103 p., 3 plates.

APPENDIX A

VOLUNTARY REMEDIATION PROGRAM APPLICATION AND CHECKLIST

Voluntary Investigation and Remediation Plan Application Form and Checklist

VRP APPLICANT INFORMATION					
COMPANY NAME	Not Applicable				
CONTACT PERSON/TITLE	Stephanie Serio / Property Owner				
ADDRESS	7810 S. Dixie Highway				
PHONE	(800) 588-9296	**FAX**	(866) 804-5692	**E-MAIL**	stephanie@cubiclecurtainfactory.com

GEORGIA CERTIFIED PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER OVERSEEING CLEANUP					
NAME	Justin J. Johnson			**GA PE/PG NUMBER**	PG No. 2196
COMPANY	Terracon Consultants, Inc.				
ADDRESS	2201 Rowland Avenue, Savannah, 31404				
PHONE	(912) 662-8481	**FAX**	(912) 629-4001	**E-MAIL**	jjjohnson@terracon.com

APPLICANT'S CERTIFICATION

In order to be considered a qualifying property for the VRP:

(1) The property must have a release of regulated substances into the environment;
(2) The property shall not be:
- (A) Listed on the federal National Priorities List pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601.
- (B) Currently undergoing response activities required by an order of the regional administrator of the federal Environmental Protection Agency; or
- (C) A facility required to have a permit under Code Section 12-8-66.

(3) Qualifying the property under this part would not violate the terms and conditions under which the division operates and administers remedial programs by delegation or similar authorization from the United States Environmental Protection Agency.
(4) Any lien filed under subsection (e) of Code Section 12-8-96 or subsection (b) of Code Section 12-13-12 against the property shall be satisfied or settled and released by the director pursuant to Code Section 12-8-94 or Code Section 12-13-6.

In order to be considered a participant under the VRP:
- (1) The participant must be the property owner of the voluntary remediation property or have express permission to enter another's property to perform corrective action.
- (2) The participant must not be in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the director.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

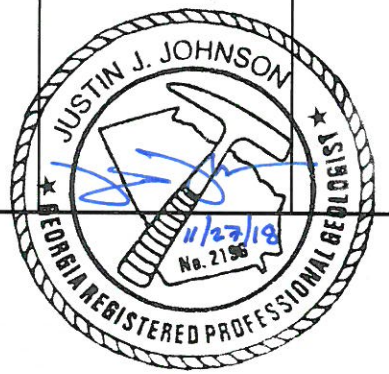
I also certify that this property is eligible for the Voluntary Remediation Program (VRP) as defined in Code Section 12-8-105 and I am eligible as a participant as defined in Code Section 12-8-106.

APPLICANT'S SIGNATURE			
APPLICANT'S NAME/TITLE (PRINT)	STEPHANIE SERIO / PROPERTY OWNER	**DATE**	NOV 15, 2018

QUALIFYING PROPERTY INFORMATION (For additional qualifying properties, please refer to the last page of application form)			
HAZARDOUS SITE INVENTORY INFORMATION (if applicable)			
HSI Number	10919	Date HSI Site listed	9/16/2011
HSI Facility Name	Former Commercial Electric Company	NAICS CODE	Not applicable
PROPERTY INFORMATION			
TAX PARCEL ID	2-0026-10-003	PROPERTY SIZE (ACRES)	0.32
PROPERTY ADDRESS	2217 West Bay Street		
CITY	Savannah	COUNTY	Chatham
STATE	Georgia	ZIPCODE	31415
LATITUDE (decimal format)	32.089836°	LONGITUDE (decimal format)	-81.125441°
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)	Stephanie & Elizabeth Serio	PHONE #	(800) 588-9296
MAILING ADDRESS	7810 S. Dixie Highway		
CITY	West Palm Beach	STATE/ZIPCODE	Florida/33405

ITEM #	DESCRIPTION OF REQUIREMENT	Location in VRP (i.e. pg., Table #, Figure #, etc.)	For EPD Comment Only (Leave Blank)
1.	**$5,000 APPLICATION FEE** IN THE FORM OF A CHECK PAYABLE TO THE GEORGIA DEPARTMENT OF NATURAL RESOURCES. (PLEASE LIST CHECK DATE AND CHECK NUMBER IN COLUMN TITLED "LOCATION IN VRP." PLEASE DO NOT INCLUDE A SCANNED COPY OF CHECK IN ELECTRONIC COPY OF APPLICATION.)	Check included with submittal. Check No. 686 Dated: 11/15/2018	
2.	**WARRANTY DEED(S)** FOR QUALIFYING PROPERTY.	Appendix B	
3.	**TAX PLAT** OR OTHER FIGURE INCLUDING QUALIFYING PROPERTY BOUNDARIES, ABUTTING PROPERTIES, AND TAX PARCEL IDENTIFICATION NUMBER(S).	Appendix C Figure 2	
4.	**ONE (1) PAPER COPY AND TWO (2) COMPACT DISC (CD) COPIES** OF THE VOLUNTARY REMEDIATION PLAN IN A SEARCHABLE PORTABLE DOCUMENT FORMAT (PDF).	Included with submittal.	
5.	The VRP participant's initial plan and application must include, using all reasonably available current information to the extent known at the time of application, a graphic three-dimensional preliminary conceptual site model (CSM) including a preliminary remediation plan with a table of delineation standards, brief supporting text, charts, and figures (no more than 10 pages, total) that illustrates the site's surface and subsurface setting, the known or suspected source(s) of contamination, how contamination might move within the environment, the potential human health and ecological receptors, and the complete or incomplete exposure pathways that may exist at the site; the preliminary CSM must be updated as the investigation and remediation progresses and an up-to-date CSM must be included in each semi-annual status report submitted to the director by the participant; a **PROJECTED MILESTONE SCHEDULE** for investigation and remediation of the site, and after enrollment as a participant, must update the schedule in each semi-annual status report to the director describing implementation of the plan during the preceding period. A Gantt chart format is preferred for the	Sections 4 & 7 Appendices C - E	

	milestone schedule. The following four (4) generic milestones are required in all initial plans with the results reported in the participant's next applicable semi-annual reports to the director. The director may extend the time for or waive these or other milestones in the participant's plan where the director determines, based on a showing by the participant, that a longer time period is reasonably necessary:		
5.a.	Within the first 12 months after enrollment, the participant must complete horizontal delineation of the release and associated constituents of concern on property where access is available at the time of enrollment;	Section 7 Appendix E	
5.b.	Within the first 24 months after enrollment, the participant must complete horizontal delineation of the release and associated constituents of concern extending onto property for which access was not available at the time of enrollment;	Section 7 Appendix E	
5.c.	Within 30 months after enrollment, the participant must update the site CSM to include vertical delineation, finalize the remediation plan and provide a preliminary cost estimate for implementation of remediation and associated continuing actions; and	Section 7 Appendix E	
5.d.	Within 60 months after enrollment, the participant must submit the compliance status report required under the VRP, including the requisite certifications.	Section 7 Appendix E	
6.	**SIGNED AND SEALED PE/PG CERTIFICATION** AND SUPPORTING DOCUMENTATION: "I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances. Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." Justin Johnson P.G. #2196 — Printed Name and GA PE/PG Number 11/27/18 — Date Signature and Stamp		



APPENDIX B

TAX PLAT AND WARRANTY DEED

Prepared By:
Stephanie Serio
7810 S. Dixie Highway
West Palm Beach, Florida 33405

After Recording Return To:
Stephanie Serio
7810 S. Dixie Highway
West Palm Beach, Florida 33405

Doc ID: 030518580002 Type: QCD
Recorded: 07/27/2017 at 01:12:20 PM
Fee Amt: $12.00 Page 1 of 2
Chatham, Ga. Clerk Superior Court
Tammie Mosley Clerk Superior Court
BK 1136 PG 629-630

SPACE ABOVE THIS LINE FOR RECORDER'S USE

QUITCLAIM DEED

On July 19, 2017 THE GRANTOR(S),

- Marjory B. Stephens,

for and in consideration of: Ten Dollars ($10.00) and/or other good and valuable consideration conveys, releases and quitclaims to the GRANTEE(S):

- Stephanie S. Serio and Elizabeth A. Serio, located at 7810 S. Dixie Highway, West Palm Beach, FL County, Florida 33405

the following described real estate, situated in Savannah, in the County of Chatham, State of Georgia:

Legal Description: LTS 12, 13, 14, 23, 24, 25 BLK L BURNEY WD

All that certain lot, tract or parcel ofland situate, lying and being in the County of Chatham, State of Georgia, being known and designated upon a map of a part of Jasper Springs Subdivision made by M. F. Smith, Consulting Engineer, in December, 1939, as Lots numbered 12,13,14,23,24, and 25 in Block L, Jasper Springs, Burney Ward; said lots being contiguous, and having a combined frontage on the South side of Bay Street of90 feet, more or less, and rectangular depth southwardly of 200 feet, more or less; and being as a whole bounded on the north by Bay Street; on the East by lots 11 and 26, said Block, Ward and Subdivision; on the South by Margary Street; and on the West by lots 15 and 22, said Block, Ward and Subdivision.

Tax Parcel Number: 2-0026-10-003

Grantor Signatures:

DATED: July 19, 2017

Marjory B. Stephens

Marjory B. Stephens
5516 Camelot Drive
Savannah, Georgia, 31405

In Witness Whereof,

Witness

Address:
5110 Waters Ave

Savannah, Georgia

31404

Witness

Address:
7 E. Congress Street

Savannah, Georgia

31401

STATE OF GEORGIA, COUNTY OF CHATHAM, ss:

On this 19th day of July, 2017, before me, Tyesha Nelson, personally appeared Marjory B. Stephens, known to me (or satisfactorily proven) to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same as for the purposes therein contained.

TYESHA NELSON
NOTARY PUBLIC
Chatham County
State of Georgia
My Comm. Expires May 11, 2019

In witness whereof I hereunto set my hand and official seal.

Notary Public

Notary Public
Title (and Rank)

My commission expires 05-11-2019

2018 Chatham County Board of Assessors

2-0026-10-003

Property Record Card

2217 W BAY ST SAVANNAH

APPRAISER	SWCORCOR	LTS 12, 13, 14, 23, 24, 25 BLK L BURNEY WD	SERIO STEPHANIE S & ELIZABETH A* 7810 S DIXIE HWY WEST PALM BEACH FL 33405	CAMA	ASMT		
LAST INSP	03/01/2018			66,700	66,700	LAND	1
APPR ZONE	000009			130,400	130,400	BLDG	1
				3,600	3,600	OBXF	2
				200,700	200,700	Cost - MS	

SALES	BOOK / PAGE	INS	VI	QU	RSN	PRICE
17 Jul 2017	1136 629	QC	I	U	UQ	
GRANTOR:STEPHENS MARJORY B ETAL *GRANTEE:SERIO STEPHANIE S & ELIZABETH A**						
19 Jun 2009	352T 186	NA	I	U	UR	
GRANTOR:STEPHENS MARJORY B *GRANTEE:STEPHENS MARJORY B ETAL**						
21 Jan 2009	348I 91	QC	I	U	U5	
GRANTOR:STEPHENS FRED S *GRANTEE:STEPHENS MARJORY B*						
12 Nov 2002	243B 0495	NA	I	U	UN	
GRANTOR:WILDER JUANITA S *GRANTEE:STEPHENS FRED S*						
15 May 2002	235Y 0091	NA	I	U	UN	
GRANTOR:STEPHENS & WILDER F S &JS *GRANTEE:WILDER JUANITA S*						
15 Mar 1968	93N 0521	WD	I	Q		42,000
GRANTOR: *GRANTEE:STEPHENS & WILDER, FS &JS*						

[Click for larger picture]

CODES		
PROPERTY USE	0004	INDUSTRIAL
UTA	0002	Savannah
NBHD	002500.00	B500 BAY ST EXTENSN
EXEMPTIONS		
COMMCATEG	494	Industrials, Light Mftg.

HISTORY	LAND	IMPR	TOTAL	
2017	66,700	131,500	198,200	Cama
2016	65,100	130,000	195,100	Cama
2015	65,100	128,800	193,900	Cama
2014	65,100	126,900	192,000	Cama
2013	65,700	132,500	198,200	Cama
2012	65,700	117,400	183,100	Cama
2011	65,500	95,000	160,500	MAV
2010	65,500	95,000	160,500	MAV
2009	65,500	95,000	160,500	Over
2008	65,500	95,000	160,500	Cama
2007	65,500	95,000	160,500	Cama
2006	65,500	95,000	160,500	Cama
2005	65,500	95,000	160,500	Cama
2004	65,500	87,500	153,000	Cama
2003	65,500	87,500	153,000	Cama
2002	65,500	87,500	153,000	Cama
2001	65,500	92,500	158,000	Cama
2000	65,500	79,500	145,000	Cama
1999	37,500	79,500	117,000	Cama
1998	37,500	79,500	117,000	Cama
1997			115,500	A/C
1996	37,540	90,110	127,650	Cama
1995	40,500	95,280	135,780	Over
1994	40,500	95,280	135,780	Over
1993	40,500	95,280	135,780	Over
1992	40,500	95,280	135,780	Over

COMMENTS:	
13 Sep 2017	TY18 SVSHIP REMAINS*
31 May 2012	COA PER LTR FM OWNER
07 Dec 2009	TY10 352T/186: *ETAL: STEPHANIE S SERIO, EIZABETH A SERIO- *SVRSHP
16 Dec 2002	R/W DEED 173S 498 $137,000 1996 .030 ac SPLIT FOR RIGHT OF WAY DEED 173S 498 12/18/95 INSPECTED 1/12/96 BY AGR. CAMA CONVERSION FOR 1996. ADJUSTED LAND FOR R/W-- AGR. BOE affirm ed value of $115,000 11/14/97 VLC. FOR SALE 11/27/98 FOR $250,000 FOR SALE 2/22/99 FOR $229,000 FOR SALE 10/27/00 $265,000

EXTRA FEATURES

ID#	BLDG #	SYSTEM DESC	DIM 1	DIM 2	UNITS	QL	UNIT PRICE	RCN	AYB	EYB	DT	ECON	FUNC	SP	SP%	RCNLD	MKT VALUE
65209	37634	CAN STY 14 FR AB AVG *CANOPIES ONFRONT & REAR.*	0	0	722.00	3	24.25	17,509	1960	1960						3,502	3,200
65210	37634	AWN STY 14 ST AB AVG *AWNING OVER MACHINERY.*	0	0	135.00	3	15.38	2,076		1960						415	400

LAND

ID#	USE DESC	FRONT	DEPTH	UNITS / TYPE	PRICE	ZONING	LCTN	TOPO	OTHER	ADJ1	ADJ2	ADJ3	ADJ4	MKT VALUE
45494	Industrial 1	0	0	16,683.48-SF	4.00	BG								66700

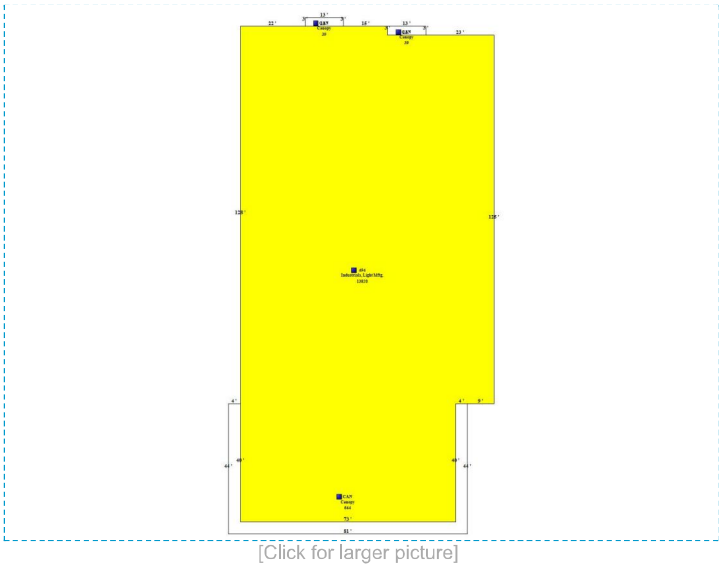
2018 Chatham County Board of Assessors

Property Record Card

2-0026-10-003

2217 W BAY ST SAVANNAH

BUILDING SECTION 37634-1-2018	CONSTRUCTION TYPE	RCN	AYB	EYB	DEP TYPE	PHYS	ECON	FUNC	OBSV / %	TOTAL DEP %	RCNLD	U.FACTOR	MKT VAL
	Commercial	652,027	1955		MS	80.00	0.00	0.00	0.00	80.00	130,405		130,405



[Click for larger picture]

Commercial Electrical Company. One story concrete block; 10'height; wet sprinkler system; built in 1955; not much has been done to update interior; used to manufacture and repair electric motors.

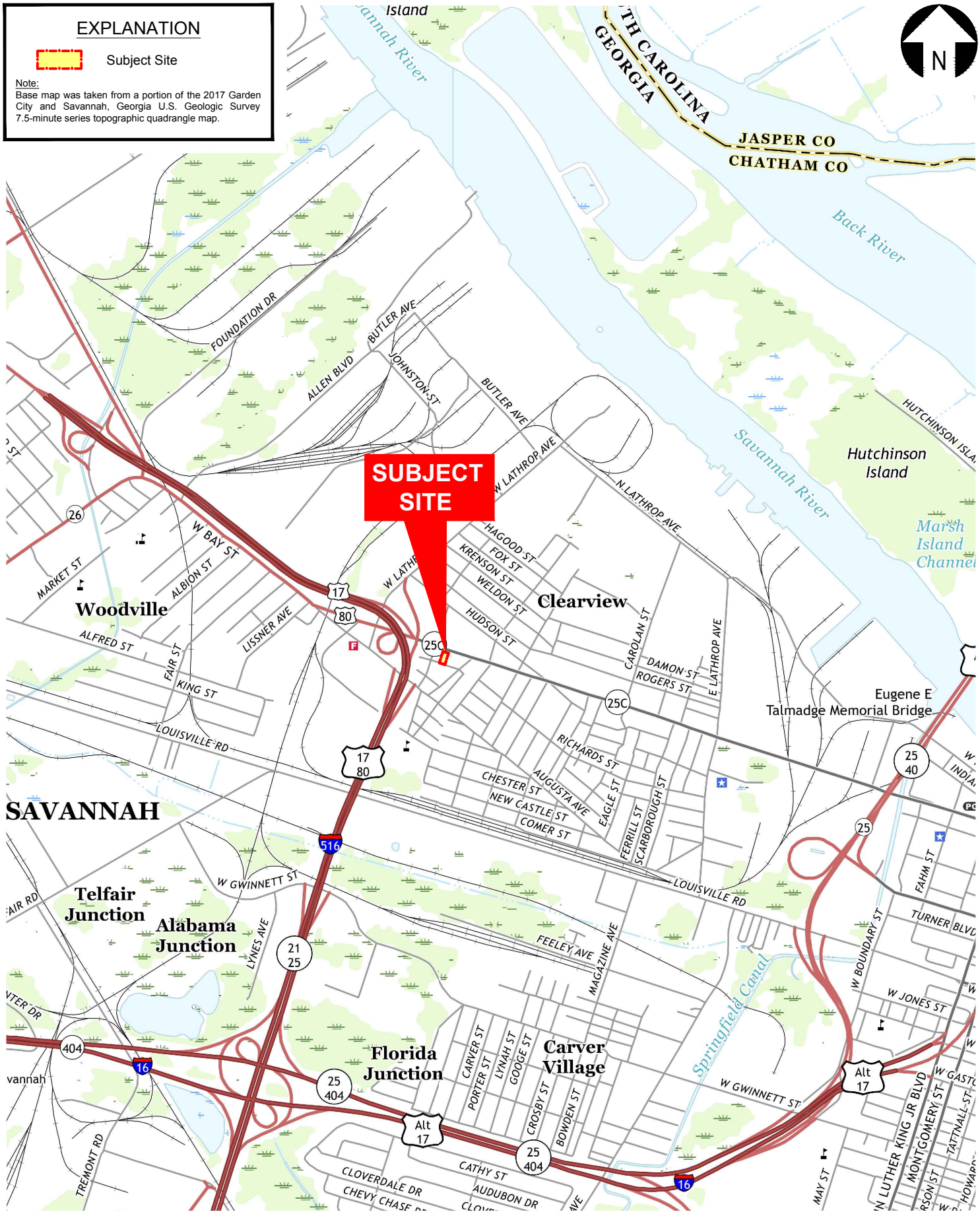
AREA	13820
STORIES	1.0
PERIMETER / SHAPE	508

OCCUPANCIES		AREA	%	CLASS	HEIGHT	QUAL
494	Industrials, Light Mftg.	13820	100.00	C	10.00	2.00

COMPONENTS			Units	%	QUAL
C2	611	Package Unit		100.00	
C4	683	Wet Sprinklers		100.00	
C1	812	Concrete Block		100.00	

APPENDIX C

FIGURES



Project Mngr:	JJJ
Drawn By:	MLM
Checked By:	JJJ
Approved By:	SAD

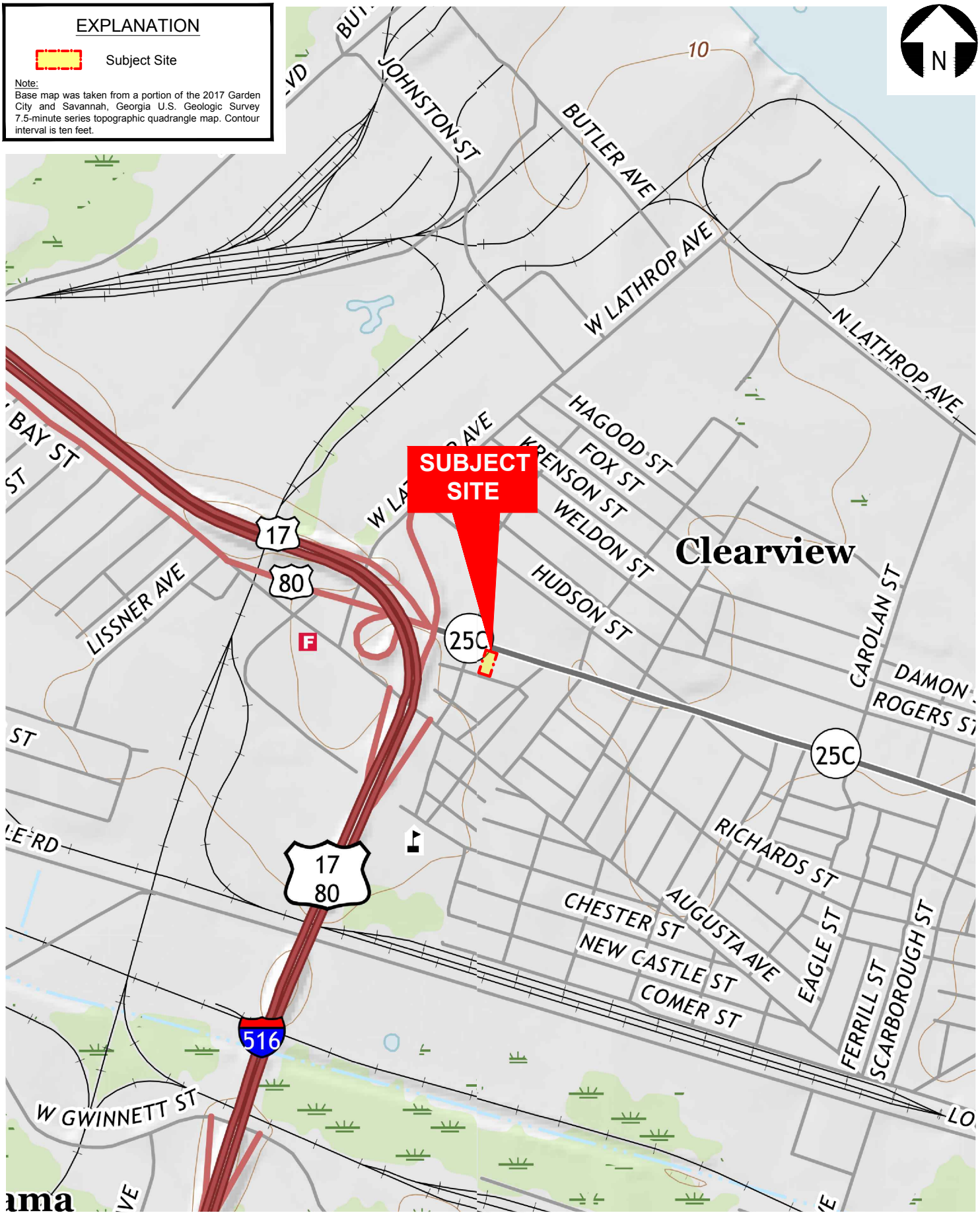
Project No.	ES187154
Scale:	As Shown
File Name:	ES187154.dwg
Date:	November 26, 2018

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax. (912) 629 4001

SITE LOCATION MAP

Former Commercial Electric Company
2217 West Bay Street
Savannah, Chatham County, Georgia

Figure 1



Project Mngr:	JJJ
Drawn By:	MLM
Checked By:	JJJ
Approved By:	SAD
Project No.	ES187154
Scale:	As Shown
File Name:	ES187154.dwg
Date:	November 20, 2018

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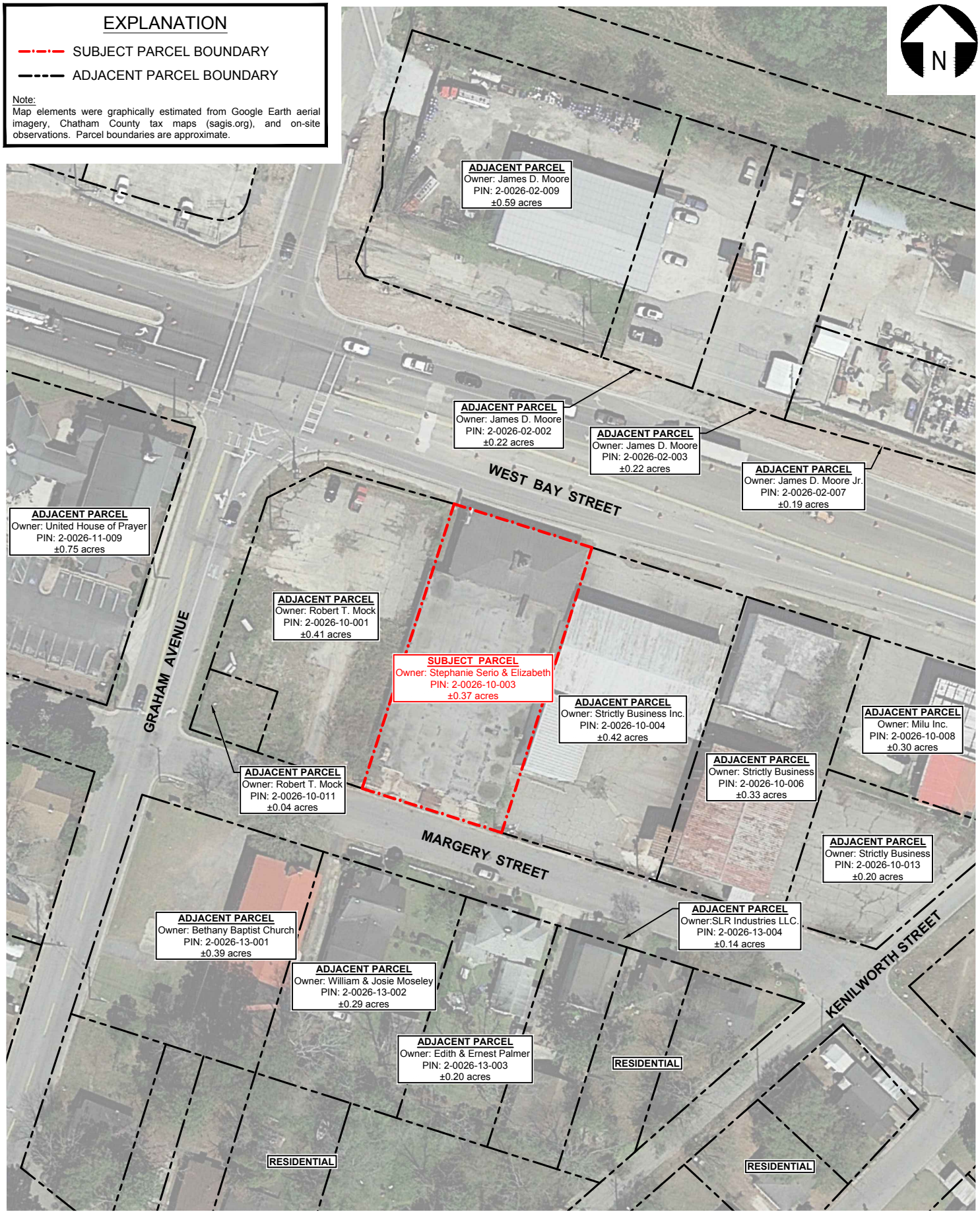
TOPOGRAPHIC MAP

Former Commercial Electric Company
2217 West Bay Street
Savannah, Chatham County, Georgia

Figure 2



0 40' 80'

1" = 80'

SCALE IN FEET

Project Mngr:	JJJ
Drawn By:	MLM
Checked By:	JJJ
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Project No.	ES187154
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GENERAL VICINITY MAP

Former Commercial Electric Company
2217 West Bay Street
Savannah, Chatham County, Georgia

Figure 3

EXPLANATION

SUBJECT PARCEL BOUNDARY

HISTORICAL SAMPLE LOCATION

Note:
Map elements were graphically estimated from Google Earth aerial imagery, Chatham County tax maps (sagis.org), and on-site observations. Parcel boundaries are approximate.

0 20' 40'
1" = 40'
SCALE IN FEET

Project Mngr:	JJJ
Drawn By:	MLM
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Project No.	ES187154
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SITE DIAGRAM

Former Commercial Electric Company
2217 West Bay Street
Savannah, Chatham County, Georgia

Figure
4

EXPLANATION

SUBJECT PARCEL BOUNDARY

PROPOSED SAMPLE LOCATIONS

Note:
Map elements were graphically estimated from Google Earth aerial imagery, Chatham County tax maps (sagis.org), and on-site observations. Parcel boundaries are approximate.

0 20' 40'
1" = 40'
SCALE IN FEET

Project Mngr:	JJJ
Drawn By:	MLM
Checked By:	JJJ
Approved By:	SAD

Project No.	ES187154
Scale:	As Shown
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PROPOSED VRP INVESTIGATION PLAN

Former Commercial Electric Company
2217 West Bay Street
Savannah, Chatham County, Georgia

Figure
5

APPENDIX D

TABLES

Former Commercial Electric Company

2217 West Bay Street
Savannah, Chatham County, Georgia
Terracon Project No. ES187154

TABLE 1: SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

Compound	Georgia EPD Type 3 RRS (mg/kg)	S-3 5-6 ft bgs 3/3/2011 (mg/kg)	A-1 13-14 ft bgs 9/25/2018 (mg/kg)	S-5 5-6 ft bgs 3/3/2011 (mg/kg)	A-2 13-14 ft bgs 9/25/2018 (mg/kg)
Volatile Organic Compounds (VOCs) - USEPA Method 8260					
1,3,5-Trimethylbenzene	ns	<0.00498	<0.0037	**0.0153**	<0.0031
1,2,4-Trimethylbenzene	ns	<0.00498	<0.0037	**0.0197**	<0.0031
cis-1,2-Dichloroethylene	0.530	<0.00498	<0.0037	<0.00691	**0.0050**
Ethylbenzene	20.0	<0.00498	<0.0037	**0.0138**	<0.0031
Isopropylbenzene	79.9	<0.00498	<0.0037	**0.014**	<0.0031
n-Butylbenzene	ns	<0.00498	<0.0037	**0.0365**	<0.0031
n-Propylbenzene	ns	<0.00498	<0.0037	**0.0281**	<0.0031
Naphthalene	100	<0.00498	<0.0037	**0.140**	<0.0031
sec-Butylbenzene	ns	<0.00498	<0.0037	**0.0285**	<0.0031
Tetrachloroethylene	0.180	**0.0729**	<0.0037	<0.00691	<0.0031
Trichloroethylene	0.130	**0.0069**	<0.0037	<0.00691	**0.0048**
Semi-Volatile Organic Compounds (SVOCs) - USEPA Method 8270					
Fluorene	993	<0.394	<0.44	**0.777**	<0.38
Naphthalene	90.9	<0.394	<0.44	**0.639**	<0.38
Phenanthrene	ns	<0.394	<0.44	**1.18**	<0.38
RCRA 8 Metals - USEPA Methods 6010 & 7471					
Arsenic	41	**1.56**	--	**1.33**	--
Barium	1,650	**21.4**	--	**31.0**	--
Chromium	1,200	**6.01**	--	**8.31**	--
Lead	400	**6.08**	--	**10.2**	--
Mercury	6.82	**0.107**	--	<0.040	--

NOTES:

mg/kg = milligrams per kilogram

ft bgs = feet below ground surface

< = Laboratory analytical result is below laboratory reporting limit

BOLD = analytical detection above the laboratory reporting limit

-- = sample not analyzed for this constituent

ns = screening level has not been established for this analyte

EPD = Environmental Protection Division

RRS = Risk Reduction Standard

USEPA = United States Environmental Protection Agency

RCRA = Resource Conservation and Recovery Act

Former Commercial Electric Company

2217 West Bay Street
Savannah, Chatham County, Georgia
Terracon Project No. ES187154

TABLE 2: SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

Compound	Georgia EPD Type 3 RRS (µg/L)	GW-3 3/3/2011 (µg/L)	TMW-1 9/25/2018 (µg/L)	GW-5 3/3/2011 (µg/L)	TMW-2 9/25/2018 (µg/L)
Volatile Organic Compounds (VOCs) - USEPA Method 8260					
cis-1,2-Dichloroethylene	70	**42.2**	<5	**7,850**	**22,000**
Ethylbenzene	700	<1	<5	<250	**150**
Tetrachloroethylene	5	**201**	<5	**705**	**640**
Trichloroethylene	5	**122**	<5	**8,360**	**7,800**
trans-1,2-Dichloroethylene	100	**2.5**	<5	<250	**150**
Vinyl Chloride	2	<2	<2	<250	**240**
RCRA 8 Metals - USEPA Methods 6010 & 7470					
Total Arsenic	10	**16.2**	--	<10	--
Total Barium	2,000	**392**	--	**57.0**	--
Dissolved Barium	2,000	--	**40.5**	--	**41.6**
Total Chromium	100	**105**	--	**13.1**	--
Total Lead	15	**61.4**	--	**11.2**	--
Dissolved Lead	15	<5.0	<10	--	<10
Total Mercury	2	<0.2	--	<0.2	--

NOTES:

µg/L = micrograms per liter

< = Laboratory analytical result is below laboratory reporting limit

Bold = analytical detection above the laboratory reporting limit

RED = analytical detection exceeds Georgia EPD Type 3 RRS

-- = sample not analyzed for this constituent

EPD = Environmental Protection Division

RRS = Risk Reduction Standard

USEPA = United States Environmental Protection Agency

RCRA = Resource Conservation and Recovery Act

APPENDIX E

MILESTONE SCHEDULE

VRP Project Milestone Schedule

Former Commercial Electric Company
2217 West Bay Street, Savannah, Chatham County, Georgia
HSI No. 10919
Terracon Project No. ES187154

Task Name	ID	Start	Finish	Duration
Submit VRP Application	1	11/26/2018	11/26/2018	0w
Identification of Regulated COCs	2	5/27/2019	11/27/2019	26w 3d
Source Zone Profile and Slug Testing	3	5/27/2019	11/27/2019	26w 3d
Semi-Annual Progress Report #1	4	5/27/2019	11/27/2019	26w 3d
On-Site Horizontal / Vertical Delineation	5	11/26/2019	5/27/2020	26w 2d
Semi-Annual Progress Report #2	6	11/26/2019	5/27/2020	26w 2d
Off-Site Horizontal / Vertical Delineation	7	5/26/2020	5/28/2021	52w 4d
Semi-Annual Progress Report #3	8	5/26/2020	11/26/2020	26w 3d
Semi-Annual Progress Report #4	9	11/25/2020	5/27/2021	26w 2d
Semi-Annual Groundwater Monitoring Event #1	10	8/31/2021	9/24/2021	3w 4d
Updated CSM with Final Remediation Plan	11	5/26/2021	11/26/2021	26w 3d
Semi-Annual Progress Report #5	12	5/26/2021	11/26/2021	26w 3d
Semi-Annual Groundwater Monitoring Event #2	13	2/14/2022	3/11/2022	4w
Semi-Annual Progress Report #6	14	11/26/2021	5/27/2022	26w 1d
Semi-Annual Groundwater Monitoring Event #3	15	8/29/2022	9/23/2022	4w
Semi-Annual Progress Report #7	16	5/26/2022	11/25/2022	26w 2d
Semi-Annual Groundwater Monitoring Event #4	17	2/27/2023	3/24/2023	4w
Semi-Annual Progress Report #8	18	11/25/2022	5/26/2023	26w 1d
Semi-Annual Groundwater Monitoring Event #5	19	8/28/2023	9/22/2023	4w
Semi-Annual Progress Report #9	20	5/26/2023	11/28/2023	26w 3d
Semi-Annual Groundwater Monitoring Event #6	21	2/26/2024	3/29/2024	5w
VRP Compliance Status Report	22	11/27/2023	5/27/2024	26w 1d