Prepared for
400 Telfair Incorporated

Submitted to
Colonial Group
Savannah, GA

August 15, 2018

SOIL MANAGEMENT PLAN

400 TELFAIR, INC. PROPERTY
SAVANNAH, GEORGIA

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FIGURE

ACRONYMS AND ABBREVIATIONS

EH&S	Environment, Health, and Safety
EPD	Environmental Protection Division
HASP	Health and Safety Plan
HSRA	Hazardous Site Response Act
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
RCRA	Resource Conservation and Recovery Act
SMP	Soil Management Plan
SVOCs	semi-volatile organic compounds
VOCs	volatile organic compounds
USCS	Unified Soil Classification System

1. INTRODUCTION

This Soil Management Plan (SMP) has been prepared for the management of both contaminated and non-contaminated soil at the property owned by 400 Telfair, Inc., which is located at 400 Telfair Road, Savannah, Georgia (the "property"). This plan is to be followed during all soil disturbance activities conducted by 400 Telfair, Inc. anywhere on the property. The property is occupied by a wholesale distributor of industrial chemicals (the "Operator"). Soil and groundwater at the property are known to be impacted by historical operations.

This SMP provides information and general procedures for the following:

- Site Background (Section 2)
- Personal Protective Equipment (Section 3)
- General Procedures (Section 4)
- Contractor Requirements (Section 5)
- Documentation and Reporting (Section 6)
- References (Section 7)

All project engineers, scientists, plant personnel, contractors, and others involved in defining, overseeing, or conducting any land disturbing work are required to have reviewed and follow this SMP.

2. SITE BACKGROUND

The property is located approximately 5 miles northwest of downtown Savannah, Georgia. The property, approximately 12.9 acres in size, is bordered by Telfair Road, railroad tracks, and Gwinnett Street (**Figure 1**). Commercial and industrial operations exist north, west, and southeast of the property, while the areas to the east and southwest consist of undeveloped land. The property as well as the surrounding area are zoned for heavy industrial use.

2.1 Operational History

The 400 Telfair property has historically been used for the wholesale distribution of industrial chemicals. This historical use is consistent with current use and site operations, which involves the storage, blending, drumming, and distribution of chemical products. Shipments of chemicals are delivered to the site via truck and railcar. These materials are dispensed in smaller amounts and distributed to various industrial and commercial users. No chemical products are, or were, manufactured at the site.

The property consists of two adjoining parcels, both of which were formerly owned by Coastal Chemical Company. Ashland, Incorporated (Ashland) purchased the two parcels from Coastal Chemical in 1976 and began operations shortly thereafter. Coastal Chemical re-acquired the parcel of land on the eastern side of the railroad spur in 1984, and the CloWhite Company operated there until manufacturing activities ceased in 1993. While in operation, CloWhite formulated bleach and other household and commercial cleaning agents. In August 1994, Ashland purchased the eastern parcel back from CloWhite. In March 2011, Ashland sold its distribution business and its associated assets to Nexeo Solutions LLC. Nexeo assumed the chemical distribution operations at the property and operated onsite until April 2014. In 2015, 400 Telfair, Inc., assumed site ownership, and Colonial Chemical Solutions began chemical warehousing, repackaging, and distribution operations in 2016.

Historical operations at the 400 Telfair, Inc., property resulted in impacts to soil and groundwater at the property by volatile organic compounds (VOCs), semi-VOCs (SVOCs), and metals. Current operational areas at the property include the following (shown on **Figure 1**):

- Warehouse Areas A through F
- Peroxide Production Area
- Glycerin Storage Tank Farm
- Rail to Truck Transload Area
- Rail Loading Areas
- SPCC Retention Ditch

2.2 Regulatory Involvement

Corrective measures have been required at the 400 Telfair, Inc., property by the Georgia Environmental Protection Division (EPD) pursuant to a Consent Order (EPD-HW-1581) and a Facility Hazardous Waste Permit under RCRA, HW-013(S). The expiration date of the permit was September 30, 2004; however, Consent Order No. EPD-HW-1581 continued the permit enforcement until the permit renewal process was completed by Ashland and 400 Telfair, Inc., and the current Hazardous Waste Facility Permit, HW-013(CA)-2, was issued June 28, 2016. A permit modification was issued on January 5, 2017. The Facility EPA identification number is GAD041007063. Corrective actions at the 400 Telfair property are performed collectively by the former owner of the property, Ashland, and 400 Telfair, Inc., in accordance with the current EPD Hazardous Waste Facility Permit. This Soil Management Plan has been prepared as required in Section I.B.2 of the Hazardous Waste Permit. In addition, use of the property is restricted by an Environmental Covenant pursuant to the Georgia Uniform Environmental Covenants Act, OCGA 44-16-1. (issued to the previous property owner

[Nexeo Solutions, LLC], signed by the EPD on April 15, 2015, and recorded on June 26, 2015 at the Chatham County Superior Court, in Book 564, page 366-376). The covenant states that "any activity on the property that would expose contaminated soil is prohibited, unless such activity is being carried out in accordance with a Soil Management Plan for the property approved by the EPD."

2.3 Site Geology

Based on observations of historic excavations and site investigation activities performed at the property, the near surface site geology at the site includes reworked sand, silt, and clay consistent with lower coastal plain sediments. In addition, naturally-occurring geologic materials are comingled with fill materials consisting of soil, gravel, and concrete on significant portions of the site. The following description of site geology is a summary of work by others (Arcadis, 2016a):

The shallow subsurface is compartmentalized into four stratigraphic horizons, designated Zones A-D. All four zones are water bearing. The shallowest or uppermost zone, Zone A, is approximately 5 feet thick, and consists of fill and reworked sediments (as described above) and silty clay and clay. Zone B consists of silty clay to clay, and is approximately 25 feet thick. Collectively, Zones A and B form the upper water bearing zone, with groundwater typically encountered between 3 and 6 feet below ground surface. Zone C is approximately 20 feet thick, consists of silty clay with sand, silty sand, shell hash, and gravel, and is described as an Intermediate aquifer zone. Zone D is approximately 2 feet thick, consists of marly silty sand, silt, and clay. Groundwater generally flows to the southeast in upper water bearing zone (Arcadis, 2016b).

3. PERSONAL PROTECTIVE EQUIPMENT

3.1 Project-Specific Health and Safety Plans

The available data indicates that soil and groundwater at the site are known to be impacted with VOCs, SVOCs, and metals. Therefore, prior to conducting any activities that will disturb soil at the site, including installing wells, a project-specific Health & Safety Plan (HASP) will be written. The HASP will present the site- and project-specific procedures that must be followed by all employees and any other personnel during soil disturbance activities. The HASP will also describe the personal protective equipment (PPE) that will need to be used during soil disturbance work. Any discrepancy between a contractor's project-specific HASP and the SMP regarding appropriate PPE must be resolved with the 400 Telfair Inc. EH&S Manager before work begins. In addition, any other discrepancies involving procedures in a contractor's project-specific HASP and this SMP must be resolved prior to beginning the work.

3.2 Hazard Assessment

Physical Hazards

There is always a risk of physical injury resulting from activities involved with equipment operations, as well as common-place slips, trips, and falls. All personnel should be aware of the presence of these hazards and take steps to avoid them. In particular, precautions should be taken to avoid hazards from overhead and underground utilities. A comprehensive list of physical hazards and preventive measures must be included in each project-specific HASP. If underground obstructions are suspected at the site, then pre-project clearance will be required. Any equipment on site must not be within 20 feet of overhead power lines that transmit less than 350 kilovolt (kV), and must not be within 50 feet overhead powerlines that transmit greater than 350 kV[1]. Use of steel-toed boots, safety glasses, and hard hats will be required when working in the vicinity of heavy equipment. Before and after each shift (or at the beginning and end of each work day) the work area and areas in proximity to the work area should be cleared of objects that could present a slip/trip hazard to the degree practical. Personnel should be made aware of the fact that the use of protective equipment can impair visibility, hearing, and manual dexterity.

Chemical Hazards

Historically, chemicals have been detected in the soil and groundwater at the 400 Telfair property. The potential for the ingestion of chemicals (or media that contain chemicals) during soil disturbance activities will be controlled by prohibiting any eating, smoking, or drinking in the work zone, and by requiring all field personnel to remove soil particles adhered to their clothing and boots prior to leaving the work zone (or property if a designated work zone is not established for a particular activity). In addition, potential hazards associated with dermal contact will be minimized by using appropriate PPE; specifically, Level D PPE and/or Modified Level D PPE (defined below) will be used by personnel involved in conducting soil disturbance activities. Further, if unexpected vapors are identified during the excavation activities, the activities will be suspended, workers will leave the impacted work area, and the contractor will contact a designated 400 Telfair Inc. representative for further instructions. Activities may resume once the concerns have been addressed. A comprehensive list of chemical hazards will be included in a project-specific HASP. The following table identifies OSHA 8-hour permissible exposure limits (PELs) PID 11.7 eV correction factors:

[1] OSHA 1926.1409 Subpart CC.

	PEL[1] (ppm)	11.7 eV PID Correction Factor[2]	Actual (ppm)	11.7 eV Corrected Reading	
Vinyl Chloride	1	0.6	0.5	0.3	Shut down motorized equipment, screen with colorimetric tube. If positive response exceeds action level, halt work and notify the EHS Manager. Screen for each COC as each action level is reached.
Acetic Acid	10	2.6	5	12.6	
Tetrachloroethene	100	0.31	50	15.5	
Trichloroethene	100	0.4	50	20	
cis or trans 1,2-Dichloroethene[3]	200	0.6[3]	100	60	
1,1,1-Trichloroethane	350	1	175	175	
Acetone	1000	1.4	500	700	

1. OSHA Permissible Exposure limit (PEL) from z-tables of 29 CFR 1926.55 Appendix A and 29 CFR 1910.1017 (incorporated by reference from 29 CFR 1926.1117), Accessed online at www.osha.gov.
2. 11.7 electron volt (eV) lamp correction factors from RAE Systems Technical Note TN-106, A guidance for PID instrument Response, dated 01/16.
3. Most conservative iP and correction factor for the dichloroethene isomers reported.

3.3 Safety Equipment Requirements

It is anticipated that Level D will be the highest personal protective level required to complete most field activities. However, if site conditions make it necessary to upgrade the level of protection, the contractor shall suspend work and contact the EH&S Manager or designated representative for guidance. Contractors shall furnish employees with all necessary safety equipment. Listed below is an itemized list of safety equipment required for Level D and Modified Level D PPE.

Level D PPE

General site work:

- Boots/shoes with steel-toes, and a shank
- Safety glasses with side shields, chemical splash goggles, or face shield
- Hard hat
- Gloves (standard work gloves when working with tools or heavy equipment and/or latex/nitrile gloves when handling soil)

Modified Level D PPE

For splash hazard work areas (i.e., working in excavations containing standing water and any other conditions for which the 400 Telfair Inc. EH&S Manager or designated representative considers such protection is needed), the following shall also be worn in addition to the Level D PPE listed above:

- Poly-coated Tyvek coveralls
- Waterproof boots

4. FIELD METHODS AND PROCEDURES

The general procedures that will be followed during soil disturbance activities at the 400 Telfair property are presented in the following subsections.

4.1 Pre-Soil Disturbance Activities

Pursuant to Permit Condition I.D.9, no later than 30 days prior to any soil disturbance activity, EPD and Ashland should be notified and provided with a description of the intended soil disturbance activity, including a sketch of the proposed sampling location(s) and depth(s) and a discussion of any anticipated deviations from the approved SMP and the reason for each anticipated deviation. However, unplanned activities such as emergency repairs and spill responses require notice after the fact, but within 24 hours, pursuant to Permit Condition I.C.4.

Prior to soil disturbance activities, project personnel and the appropriate personnel will meet to ensure that everyone understands the planned activities and the procedures described in this SMP. A site- and project-specific HASP will be prepared that, at a minimum, presents the chemicals that may be present, potential exposure routes and toxicological effects, and methods to avoid and/or minimize exposure. The HASP will be available onsite at all times when soil disturbing activities are occurring. All applicable permits will be obtained and utilities identified prior to conducting any activities at the site that require the soil to be disturbed.

4.2 Soil Disturbance Activities

Once the disturbance activities begin, the soil will be monitored for odors and stains. 400 Telfair Inc. should be notified if odors or stains are observed or nuisance complaints are received. Dust will be controlled, if necessary, by wetting the soil in the area of removal.

4.2.1 Handling and Management of Excavated Soil

Soil that is excavated during site activities will be staged at a secure location on the 400 Telfair property in a manner that prevents liquid infiltration, run off, and generation of fugitive dust (e.g., covered drums, covered roll-off containers, or enclosed on all side by plastic sheeting). Samples of such excavated soil will be collected and characterized for disposal based on the written requirements of the receiving facility(ies); the analyses will be conducted by State of Georgia approved laboratory. These samples will be collected at a rate of one composite sample (obtained from four locations equally spaced across the area of the pile) for every 30 cubic yards of excavated material. The samples will be collected in accordance with EPA Region 4 Science and Ecosystem Support Division Operating Procedure: Soil Sampling, Number SESDPROC-300-R3, dated 8-21-14 (SESD, 2014).

Once the soil has been characterized, 400 Telfair, Inc., or its contractor will arrange for transportation and disposal of the soil. The soil will be transported from the 400 Telfair property no more than 90 days from the completion of the activities associated with the soil disturbance. Depending upon the waste determination of the displaced soil, the Operator may become a generator of Hazardous Waste and be subject to The Rules and Regulations of the State of Georgia 391-3-11-.08 *Standards Applicable to Generators of Hazardous Waste*, which incorporates 40 CFR Part 262 by reference

4.2.2 Handling and Management of Proposed Backfill Material

If necessary, disturbed areas will be backfilled with clean soil or fill material. To evaluate whether the proposed fill material is suitable for use at the site, one composite sample will be obtained from four locations equally spaced across the area for every 30 cubic yards of fill material to be used at the site. The samples will be collected in accordance with EPA Region 4 Science and Ecosystem

Support Division Operating Procedure: Soil Sampling, Number SESDPROC-300-R3, dated 8-21-14 (SESD, 2014). The samples will be analyzed for VOCs, SVOCs, and RCRA metals by USEPA Methods 8260B, 8270D and 6010C, respectively. The analytical results will be compared to the EPA residential regional screening levels (RSLs) for VOCs and SVOCs, and to site background values for metals (until such time as remedial goal objectives are developed for the property, at which time both values will be used for determining suitability). The backfill samples will be analyzed by a State of Georgia approved laboratory.

4.2.3 Post Excavation Soil Sample Collection

If necessary, soil samples will be collected for the purpose of evaluating whether remediation criteria have been met. Such samples will be collected from the sidewalls and floor of the excavation using decontaminated stainless-steel sampling equipment such as hand augers, scoops, spoons, or trowels, and the collection methodology will be in accordance with EPA Region 4 Science and Ecosystem Support Division Operating Procedure: Soil Sampling, Number SESDPROC-300-R3, dated 8-21-14 (SESD, 2014). The samples will be collected from freshly exposed surfaces that were not smeared during the excavation activities. Soil samples will be collected no less frequently than once every 20 linear feet along the sidewalls (with at least one sample per sidewall), and no less frequently than once every 400 square feet from the floor of the excavation. The samples will be analyzed by a State of Georgia approved laboratory and will be analyzed for VOCs, SVOCs, and RCRA metals by USEPA Methods 8260B, 8270D and 6010C, respectively.

4.2.4 Groundwater Monitoring Well Installation

Pursuant to Permit Condition II.F.7, any wells installed at the property by 400 Telfair, Inc., will be installed in accordance with EPA Region 4 Science and Ecosystem Support Division Guidance Document Design and Installation of Monitoring Wells, Number SESDGUID-101-R1 dated 1-29-13 (SESD, 2013). Any plan for the design, location and installation of any additional permanent monitoring wells will be submitted 30 days prior to installation, and such plans will include a project specific Soil Management Plan.

4.2.5 Equipment Decontamination

All reusable equipment that will contact potentially contaminated soil or water will be decontaminated at the start of the project and prior to each reuse. The decontamination will be performed in accordance with EPA Region 4 Science and Ecosystem Support Division Operating Procedure: Field Equipment Cleaning and Decontamination, Number SESDPROC-205-R3, dated 12-18-15 (2015, SESD).

In general, the decontamination procedures will consist of:

- Non-phosphate detergent (i.e., Luminox) and tap water wash, using a brush if necessary.
- Tap-water rinse.
- Deionized/distilled water rinse.

4.3 Post-Soil Disturbance Activities

After the soil excavation and related activities are complete, the documentation of the activities will be finalized in the log book, with the original kept by 400 Telfair, Inc., and a copy maintained onsite. Information regarding the work conducted, including location of the activity, volume of material removed, volume of backfill material placed on site, number of samples collected, analytical parameters, health and safety protocols, and monitoring activities will be maintained in the log book.

The final laboratory analytical reports will be placed in the project files, along with the waste manifests, weight tickets, and final disposal reports.

5. CONTRACTOR REQUIREMENTS

All contractors performing work at the site that involve disturbing the soil must comply with the following procedures. Contractors not complying with these procedures will not be permitted to work at the site and may be financially responsible for correcting inappropriate soil management and/or disposal activities.

- Contractor is responsible for ensuring the safety of its workers during activities at the site. Contractors must comply with all appropriate regulations, orders, and permits while onsite including the following:
  - Occupational Safety and Health Administration (OSHA) Standards and Regulations, 29 CFR 1910 and 1926.
  - Resource Conservation and Recovery Act (RCRA) 40 CFR 261 and 264.
  - Facility Consent Order and Hazardous Waste Permit.
- Contractor must review this SMP before initiating work. Any questions involving the SMP should be directed to 400 Telfair Inc.'s EH&S Manager, designated representative.
- Contractor's site workers must have received OSHA training and hazard communication training appropriate for the types of chemicals that could be encountered in the soil. Note that, for this site, hazard communication training is required.
- Contractor must be properly trained to conduct field screening (e.g., use of a photoionization detector [PID] and other equipment described in the HASP). Any field observations must be maintained in a log that also describes the activity underway.
- Contractor must prepare and follow a site- and project-specific HASP that, at a minimum, presents the chemicals that may be present, potential exposure routes, and methods to avoid and/or minimize exposure. A copy of the HASP must be forwarded to the EH&S Manager or designated representative for review. The HASP must be available onsite at all times during the soil disturbance activities.
- Contractor must ensure that site workers use appropriate methods to handle and manage excavated soil. Soil suspected to be contaminated must be staged as discussed above for proper characterization.

6. DOCUMENTATION AND REPORTING

Documentation of soil disturbance activities at the site shall be recorded in a bound field logbook with consecutively numbered pages. All entries will use factual objective language, be legible, written in permanent ink, and signed by the individual making the entries. At a minimum, the following information will be recorded in the field logbook:

- General narrative recording daily activities
- Soil sample descriptions (USCS)
- Site or sampling area sketch showing sample location, sample depths, and measured distances. The sampling area sketch will be scaled and the location of the sampling area will be depicted relative to a fixed structure.
- Field instrument readings (including location that the reading was obtained) and calibration
- Field observations and details related to analysis or integrity of samples (e.g., weather conditions, noticeable odors, soil staining, soil descriptions, soil colorations, etc.)
- Lot numbers of the sample containers, sample identification numbers and any explanatory codes, and chain-of-custody form numbers
- Shipping arrangements
- Work start and stop times
- Summary of any meetings or discussions with contractors, regulatory agency representatives, or interested third parties
- Levels of PPE used

Upon completion of each soil disturbance activity, a summary report will be submitted to EPD. The report will be submitted within 30 days of completion of the work (including receipt of analytical data and waste manifests), and will include the following:

- A written summary of the work performed, documenting the performance of all procedures specified in Section 4.0 (Field Methods and Procedures), as well as documentation recorded in the log book as described above
- A description of each deviation from the approved SMP, and the reason for each occurrence
- Tabulated laboratory analytical data for all post-excavation samples, with a comparison of the data to the appropriate screening values (Residential RSLs for VOCs and SVOCs, and site background values for metals)
- A discussion of findings
- Complete laboratory analytical reports for all samples collected, including chain of custody forms
- Waste manifests
- Photographic documentation, if available

7. REFERENCES

Arcadis, 2016a. Revised Solid Waste Management Unit Delineation Work Plan, Ashland, Inc., Savannah, Georgia. June 29, 2016.

Arcadis, 2016b. 2016 Annual Groundwater Monitoring Report, Ashland Inc., Savannah, Georgia. January 27, 2016.

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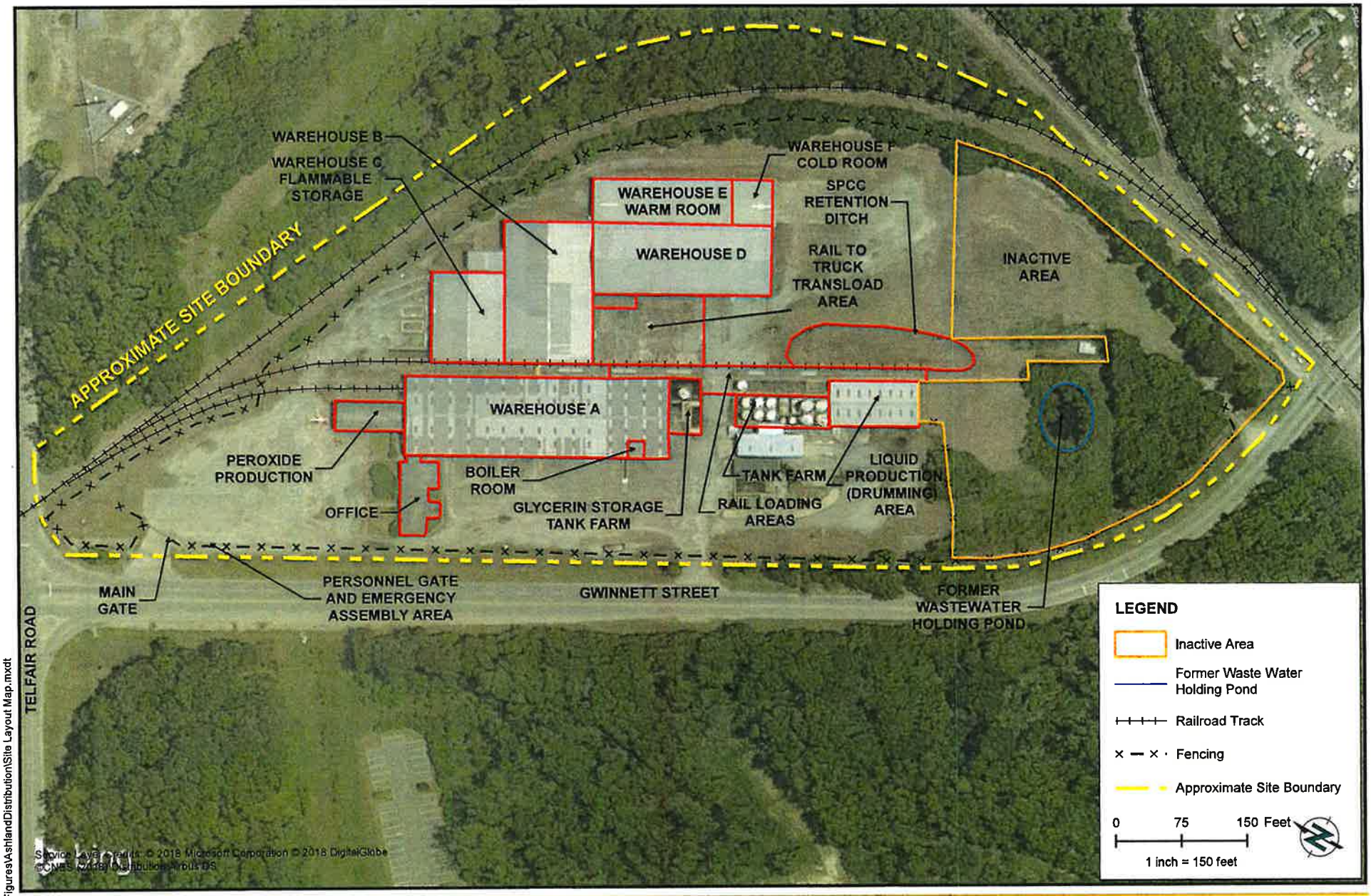
FIGURE



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RAMBOLL

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SITE LAYOUT

400 Telfair Road
Savannah, Georgia

Figure
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