October 24, 2022

Mr. John Sayer, P.G.
Remedial Sites Unit 1 Manager
Georgia Department of Natural Resources
Environmental Protection Division
Hazardous Waste Corrective Action Program
2 Martin Luther King, Jr Dr., SE, Suite 1054 East
Atlanta, Georgia 30334-9000

Re: Corrective Action Plan for GPA Connector Road Construction
Georgia Atlantic Port Site
202 Oxnard Drive, Port Wentworth, GA 31407
EPA ID# GAD084914787
RCRA Permit No. EPA-HW-055(D)

Dear Mr. Sayer:

On behalf of Georgia Atlantic Port, LLC, enclosed please find 3 hard copies and a CD of the *Corrective Action Plan for Georgia Ports Authority Connector Road Construction* for the Georgia Atlantic Port LLC (GAP) site. EAG requests that Georgia EPD reviews the plan and provides comments.

Please contact me at tbiggs@enviroanalyticsgroup.com or (314) 835-2824 should you have any questions regarding the report.

Sincerely,

Tim Biggs, P.G.
Project Manager

CORRECTIVE ACTION PLAN FOR GEORGIA PORTS AUTHORITY CONNECTOR ROAD CONSTRUCTION

GEORGIA ATLANTIC PORT LLC
(FORMER ATLANTIC WOOD INDUSTRIES, INC.)

202 Oxnard Drive
Port Wentworth, Georgia 31407
Chatham County

EPA ID# GAD084914787
Hazardous Waste Facility Permit No. EPA-HW-055(D)

Prepared for:

Georgia Atlantic Port LLC
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October 2022

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ACRONYMS AND ABBREVIATIONS

AST	aboveground storage tank
bgs	below ground surface
BRA	baseline risk assessment
BTV	background threshold value
CAMU	corrective action management unit
CAO	corrective action objective(s)
CAP	corrective action plan
CFR	Code of Federal Regulations
cm/sec	centimeters per second
COPC	constituent of potential concern
DO	dissolved oxygen
DNAPL	dense non-aqueous phase liquid
EAG	EnviroAnalytics Group, LLC
EC	Environmental Covenant
EF	exposure factor
EPD	Environmental Protection Division
FSRA	focused screening risk assessment
ft	foot or feet
GAP	Georgia Atlantic Port LLC
GPA	Georgia Ports Authority
HI	Hazard Index
I-H	Heavy Industrial
LNAPL	light non-aqueous phase liquid
MCL	Maximum Contaminant Level
NAPL	non-aqueous phase liquid
O&M	operations and maintenance
ORP	oxidation-reduction potential
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PID	photo-ionization detector
PPE	personal protective equipment
QA/QC	quality assurance/quality control
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RSL	Regional Screening Level
SEPCO	Savannah Electric Power Company
SESD	Science & Ecosystem Support Division
SI	surface impoundment

ACRONYMS AND ABBREVIATIONS (CONTINUED)

SSL	site-specific soil screening level
SVOC	semi-volatile organic compound
SWMU	Solid Waste Management Unit
TAL	Target Analyte List
VOC	volatile organic compound

1 INTRODUCTION

EnviroAnalytics Group, LLC (EAG) has prepared this *Corrective Action Plan for Georgia Ports Authority Connector Road Construction* on behalf of Georgia Atlantic Port LLC (GAP) at its site in Port Wentworth, Georgia. The Corrective Action Plan (CAP) serves as the basis for design and implementation of corrective measures at this Resource Conservation and Recovery Act (RCRA) hazardous waste management facility. The CAP addresses corrective measures to be implemented to mitigate potential risks to human health evaluated via a focused screening risk assessment (FSRA) of soil analytical results from a June 2022 soil investigation of an approximate 2.37-acre footprint of a future connector road that will be constructed by the Georgia Ports Authority (GPA) at the GAP site (**Figure 1**). The potential health risks to a road worker exposed to soil and its dust/vapors during road construction was evaluated during the FSRA. The connector road construction comprises Stage 1 of GPA's Steamship Terminal Redevelopment.

This CAP is intended to address only the area of the future connector road footprint and surrounding area. A future CAP will be prepared to address potential risks at other parts of the GAP site that are identified during a future site-wide baseline risk assessment (BRA).

1.1 Current Site Conditions

The GAP site is located at 202 Oxnard Drive, Port Wentworth, Chatham County, Georgia (**Figure 1**). The site was a former wood treating facility formerly owned and operated by Atlantic Wood Industries, Inc. (Atlantic Wood) in an industrial area adjacent to the Savannah River. The facility formerly used creosote, pentachlorophenol and other chemicals to pressure treat wood within the approximate two-acre Process Area located in the southwest portion of the 58-acre site. Wood treatment activities at the site began in 1919 and ended in 2008.

The site is located in a Heavy Industrial (I-H) zoning district of unincorporated Chatham County and is bounded: to the north by a tidal canal and by a GPA property, the former Savannah Electric Power Company (SEPCO)/Georgia Power generation facility (former Plant Kraft); to the east by the Savannah River; to the south by the Imperial Sugar Company factory; and to the west by a 50-foot railroad right-of-way (**Figure 2**).

The main features of the Site include a closed 1.8-acre landfill (a RCRA Regulated Unit that was a former surface impoundment closed in 1988) and the approximate two-acre former process area. The clay-lined and capped landfill contains wood preserving-impacted soils/sludges that were excavated from the former surface impoundment and process area and stabilized prior to placement in the landfill. A final cover was then placed over the landfill.

All former wood-treating processing equipment and associated aboveground storage tanks have been decommissioned, demolished and removed. The maintenance shop, former pressure vessel sump (aka, cylinder house) and the covered drip-pad structure remain intact.

Other site features include a groundwater monitoring well network consisting of 72 site and off-site (Former Plant Kraft property) wells and a water supply well that pumps from the Ocala Formation. The site is currently unoccupied except for a tenant that utilizes the eastern portion for preparing and storage of logged trees for off-site shipment.

1.2 Regulatory Status

The site has a Corrective Action Program that is being conducted in accordance with the requirements of Hazardous Waste Facility Permit No. EPA-HW-055(D) (RCRA Permit) reissued for the facility by the Georgia Department of Natural Resources, Environmental Protection Division (Georgia EPD) on September 30, 2019. Ownership of the site and obligations associated with the RCRA Permit were transferred from Atlantic Wood Industries, Inc. (Atlantic Wood) to GAP. On March 20, 2015, the Georgia EPD notified GAP that the RCRA permit had been transferred from Atlantic Wood to GAP.

A former surface impoundment (SI) received wastewater from 1971 to 1985. The wastewater was removed and the remaining sludge was solidified. The SI was closed in 1988 as a RCRA Part B landfill. In 1989, a groundwater extraction and treatment system was installed to remove non-aqueous phase liquids (NAPL) and remove/treat dissolved-phase impacted groundwater.

As part of the Corrective Action Program, GAP is performing post closure care and corrective action for: a hazardous waste surface impoundment that was closed as a landfill with stabilized waste; contaminated soil; and contaminated groundwater.

This CAP meets the requirements of 40 Code of Federal Regulations (CFR) Part 264.101(a) Corrective action for solid waste management units (SWMUs), which states the owner or operator of a facility seeking a permit for the treatment, storage or disposal of hazardous waste must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any SWMU at the facility, regardless of the time at which waste was placed in such unit. The GPA connector road will be constructed within portions of Combined SWMUs A (Canal Area) and B (Process Area) (**Figure 2**).

1.2.1 Site Investigations

Numerous investigations have been completed. Between 1992 and 1994, three separate phases of RFI were completed at the site and at the adjacent former Plant Kraft property to address the 24 SWMUs identified in the *RCRA Facility Assessment Report* (Georgia DNR, 1990). During the

three RFIs, 110 soil samples were collected from 38 Site surface soil and 72 subsurface soil locations. In 2001 and 2003, additional off-site investigation of the former SEPCO Plant Kraft property was completed including sampling of 46 soil borings.

GAP completed a soil investigation within the footprint of the future connector road in June 2022 to assess the presence and concentrations of chemicals of potential concern (COPCs). EAG submitted the document *Soil Investigation Report for Georgia Ports Authority Connector Road Construction* to Georgia EPD in September 2022. The results are summarized in Section 2 of this CAP.

GAP completed the most recent site-wide investigation, a Phase 1 Supplemental RCRA Facility Investigation (RFI) completed in 2019. Soil, groundwater, surface water, and sediment samples were collected and analyzed. A tidal influence study was completed. The following sub-sections summarize the 2019 RFI results.

1.2.1.1 Soil

GAP installed 78 soil borings. One surface soil and two subsurface soil samples were collected from each boring for laboratory analysis of a variety of COPCs including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Target Analyte List (TAL) metals, pesticides, and polychlorinated biphenyls (PCBs). The historical RFI and 2019 RFI surface and subsurface soil investigation lab results in the vicinity of the future GPA connector road are summarized on **Figures 3 and 4**.

Background threshold value (BTV) concentrations were determined through statistical analyses of VOC, SVOC, TAL metal, pesticide, and PCB analytical results for surface and subsurface soil samples collected from 10 background soil borings installed near the western-most part of the GAP site. Surface and subsurface soil analytical results for the 78 soil borings and historical RFI soil samples were then compared to the BTVs.

SVOCs, particularly polycyclic aromatic hydrocarbons (PAHs), were the COPC group for surface soil that most commonly exceeded their respective BTVs and EPA Regional Screening Levels (RSLs) for Residential Soil during the Phase 1 Supplemental RFI. Several metals, a few VOCs and one pesticide exceeded their respective BTVs for surface soil. Seven metals and one VOC exceeded their respective EPA RSLs for Residential Soil.

SVOCs, particularly PAHs, were the COPC group for subsurface soil that most commonly exceeded their respective BTVs and EPA RSLs for Residential Soil. Several metals, 11 VOCs, three pesticides, and one PCB exceeded their respective BTVs for subsurface soil. One metal and one VOC exceeded their respective EPA RSLs for Residential Soil.

1.2.1.2 Groundwater

GAP conducted a site-wide groundwater monitoring event of the 50 existing site and off-site wells in 2017. Groundwater levels were measured and each well was evaluated for the presence of light non-aqueous liquids (LNAPL) and dense non-aqueous liquids (DNAPL). Groundwater samples were collected and analyzed from 26 existing wells that had not been sampled for several years.

GAP installed, developed and sampled 22 additional monitoring wells (MW-43 through MW-57 and TW-1 through TW-7) and a background monitoring well (BGMW-58) during the 2019 Phase 1 Supplemental RFI. Each well was then developed and sampled for laboratory analysis of a variety of COPCs including VOCs, SVOCs, TAL metals, pesticides, and PCBs.

BTVs for groundwater were determined for VOCs, SVOCs, TAL metals, pesticides, and PCBs from background well BGMW-58 located near the western-most part of the GAP site. Groundwater analytical results from the existing and Phase 1 Supplemental RFI wells were compared to the BTVs established for BGMW-58. Naphthalene and pentachlorophenol, which are associated with wood-treating, along with a few PAHs were the SVOC constituents that had the most exceedances of their respective BTVs, USEPA Maximum Contaminant Levels (MCLs) or Resident Tapwater RSLs. Several metals, four VOCs and one pesticide exceeded their respective BTVs for groundwater. Six metals and three VOCs exceeded their respective MCL or Resident Tapwater RSL.

Figure 5 of this CAP depicts the extent of LNAPL, DNAPL, and the dissolved-phase total SVOC concentrations in groundwater in the vicinity of the proposed connector road that were generated during the 2017 and 2019 investigations.

1.2.1.3 Surface Water

GAP collected three surface water samples within the County Canal. Each sample was analyzed for VOCs, SVOCs, TAL metals, pesticides, and PCBs. BTVs were determined through statistical analyses of VOC, SVOC, TAL metal, pesticide, and PCB analytical results for surface water samples collected from 10 background locations near the northwestern-most part of the GAP site. Analytical results for the three surface water samples were then compared to the BTVs. Twelve PAHs, five metals and two VOCs exceeded their respective BTVs. Six PAHs and four metals exceeded their respective Georgia Instream Water Quality Standard, National Recommended Water Quality Criteria, or EPA Region 4 Ecological Screening Value for surface water.

1.2.1.4 Sediment

GAP collected six sediment samples within the County Canal. Each of the sediment samples were analyzed for VOCs, SVOCs, TAL metals, pesticides, and PCBs. BTVs were determined

through statistical analyses of VOC, SVOC, TAL metal, pesticide, and PCB analytical results for sediment samples collected from 10 background locations near the northwestern-most part of the GAP site. Analytical results for the six sediment samples were then compared to the BTVs. Several SVOCs and seven metals exceeded their respective BTVs. Six SVOCs and three metals exceeded their respective EPA RSL for Residential Soil or EPA Region 4 Ecological Screening Value for sediment.

1.2.1.5 Tidal Influence Study

GAP performed a tidal influence study to better understand the tidal effect of the Savannah River and County Canal on the local Pleistocene deposits groundwater flow regime. The tidal influence study quantified the range of groundwater elevations and the lateral extent of groundwater elevation variations over a tidal cycle (i.e., low tide to high tide). Water table and surface water elevation measurements were recorded over a 48-hour time period that coincided with a full moon phase when maximum tidal effects on groundwater elevations were expected to occur. Pressure transducers and data loggers were used to collect and record surface water and groundwater elevation measurements.

Groundwater elevation data was attained by placing pressure transducers in 16 monitoring wells on the site and former Plant Kraft site. Surface water elevation data were attained from pressure transducers placed in three PVC stilling wells installed in the County Canal and Savannah River. The data was analyzed to determine groundwater flow direction and to estimate the maximum distances of canal and river tidal influences on groundwater. Potentiometric surface maps were prepared for low, medium and high tides. Groundwater flow patterns were very similar for each tide phase. Groundwater in the western part of the site (railroad tracks eastward to the former tank farm area) appears to flow north toward the canal. Groundwater in the eastern part of the site (former tank farm to the river) appears to flow east toward the river. Tidal effects on groundwater fluctuations in the Pleistocene deposits appear to be limited to within 1,700 feet of the Savannah River and 350 feet from the county canal.

1.2.2 Baseline Risk Assessment

A site-specific BRA is planned to be performed for the site. A site-specific document *Baseline Risk Assessment (BRA) Approach* (GAP, 2020) has been prepared and was approved by Georgia EPD in July 2020. The BRA will be based upon data generated during the 2019 Supplemental RFI and, where applicable, historical soil data generated during three previous RFIs conducted between 1992 and 1994. Additional site characterization may be required to provide data necessary to complete the BRA. The BRA will be conducted in accordance with the *Guidance for Selecting Media Remediation Levels at RCRA Solid Waste Management Units* (Georgia EPD, 1996) and the *USEPA Region 4 Human Health Risk Assessment Supplemental Guidance* (March 2018).

The BRA will include human health risk assessment scenarios for potential residential and non-residential site use, as well as addressing potential recreational exposures to surface water and sediment in the adjacent tidal canal and potential trespasser exposures to surface soil.

The BRA will address the following human receptors and pathways:

Receptor	Surface Soil	Subsurface Soil	Groundwater	Surface Water	Sediment	Vapor Intrusion
Residential	x		x			x
Industrial	x		x			x
Construction Worker	x	x	x[1]			
Trespasser	x					
Recreator				x	x	

[1]Construction worker in a trench scenario: incidental ingestion, inhalation and dermal contact with shallow groundwater

1.2.3 Interim Corrective Action Measures

Several interim corrective action measures (or interim measures) have been completed to address contaminant source areas. Interim measures are intended to control or abate threats to human health and the environment from releases and/or to prevent or minimize further contaminant migration while long-term remedies are pursued. The GAP corrective action measures that have been completed include: closure of the former SI and conversion to a RCRA Part B landfill; demolition of the former drip track and former tank farm and subsequent soil removal activities; and, groundwater remediation of the closed SI via extraction and treatment. Each of these activities is discussed in more detail in the following sub-sections.

1.2.3.1 Surface Impoundment Remediation and Closure

The SI was constructed in 1971 and received wastewater until 1985. The SI operated under interim status until it was closed as a landfill in 1988. Closure consisted of dewatering the pond's supernatant, pumping wood-treating bottom sludges for transfer to an off-site treatment facility, and landfilling residually-affected soils. The surface impoundment was backfilled with clean soil, a clay bottom liner and leachate collection system were constructed, impacted soils were stabilized and placed within the surface impoundment, which was then covered with a clay cap and a grass surface.

GAP operates and maintains a groundwater extraction and treatment system for the closed SI. Atlantic Wood constructed the groundwater extraction and treatment system in 1989. The extraction system recovers groundwater and NAPL from five extraction wells located on the east side of the closed SI. Extracted groundwater is passed through two oil water separators, ozone

treatment, bag filter treatment, activated carbon filter, and surge tank prior to NPDES discharge to the Savannah River.

1.2.3.2 Drip Track Demolition and Soil Remediation

This interim measure included the removal of visually impacted soil from the former drip track area in 1992. About 1260 tons of soil were excavated from an area about 30 feet wide by 344 feet long. The depth of excavation varied from 3 feet to 0.5 feet. The impacted soil was excavated and transported by railroad gondola cars to United States Pollution Control, Inc.'s Lone Mountain Facility in Waynoka, Oklahoma for disposal in a RCRA secure landfill. Sections of two underground creosote pipelines present near the east end of the drip pad were removed and capped to allow for construction of the drip pad. Clean backfill was placed in the excavation areas.

Atlantic Wood then constructed a reinforced concrete drip pad to meet the requirements of 40 CFR 265, Subpart W. The current drip pad is 450 feet in length and 30 feet wide. It is underlain with a synthetic liner that has a leak detection system between the liner and under side of the pad. This leak detection system includes a 12-inch layer of and with two-inch collection pipes. The pad has a sloped concrete curb around the perimeter and a roofed building. The drip pad functions as a cap and is considered part of the interim measure, which will eliminate the potential for precipitation to leach any residual impacted soils not removed during the interim measure.

1.2.3.3 Aboveground Tank Farm Demolition and Soil Remediation

Aboveground storage tanks (ASTs) 6 and 7 and their creosote waste contents were removed by Atlantic Wood in 1989 and 1978, respectively. GAP completed interim measures in 2015 and 2016 to address the wood-treating chemicals and waste in the remaining 14 ASTs. About 950,000 gallons of chemicals and waste (including petroleum-cutting fluids that were added to make the wastes flowable) were removed and transported for energy recovery and thermal destruction at a licensed off-site disposal facility. The 14 ASTs were subsequently removed, cleaned and the steel was either recycled or transported to off-site recycling/hazardous waste disposal facilities. About 2000 cubic yards of impacted soils were excavated to a maximum depth of about 10 feet bgs and stabilized with a polymer and removed from the tank farm area. The soils were then transported to the covered drip pad structure, placed on plastic on top of the drip pad, were covered with a 20-mil liner, and stored as a staging pile unit.

In 2016, about 77,500 gallons of fluids remaining in the former pressure vessel sump were pumped to frac tanks, characterized, and transported to a licensed off-site wastewater treatment facility. Sludge was removed from the sump, mixed with the AST waste, and transported for energy recovery and thermal destruction at a licensed off-site disposal facility. The sump was then cleaned by pressure washing. The rinse water was pumped to frac tanks, characterized, and transported to a licensed off-site wastewater treatment facility.

Between September 2020 and January 2021 the staging pile soil and an additional 1500 CY of impacted soil were excavated from the former tank farm area and placed within a Corrective Action Management Unit (CAMU) constructed partially over the existing site landfill. Clean fill was imported and compacted and the excavation area was hydroseeded.

1.3 CAP Objectives, Elements, Purpose and Scope

The primary objectives of the CAP include development of the following items:

- Preliminary design for proposed corrective measures
- Schedule necessary to implement corrective measures
- Data collection plan to support corrective measures design and implementation
- Detailed design plans and specifications for the corrective measures
- Operation and maintenance (O&M) plan that identifies the inspection and maintenance items to be implemented
- Monitoring and performance evaluation plan to monitor the effectiveness of the implemented corrective measures.

Key elements of the CAP include:

- Summary of available site information, investigation results, and interim corrective action measures
- Correction action objectives (CAOs) and goals
- Detailed description of the proposed corrective measures
- Design specifications and drawings
- Schedule
- Public notice

The purpose of submitting this CAP is to identify and provide specifications for the corrective action necessary to: (1) mitigate potential health risks for potential exposure to shallow impacted soils by a road worker involved with constructing the connector road; and (2) eliminate the soil pathway (direct contact with soil contaminants and breathing their vapors and dust) for future site workers. The CAP also identifies necessary modifications to the current groundwater monitoring well network to accommodate the connector road construction.

The CAP serves as part of a Class 3 permit modification request submitted to Georgia EPD in August 2022 for review as required in GAP's Hazardous Waste Permit HW-055(D), Section V.F Permit Modification (Georgia EPD, 2019). The CAP is prepared in accordance to the requirements of 40 CFR 264.101 and GAP's Hazardous Waste Permit, Section V.C.

The scope of the CAP is to identify mitigation measures and associated specifications necessary to address the potential risks identified for the area of the connector road footprint during the FSRA, including:

- Personal protective equipment (PPE) and other safety measures that may be necessary to protect a road worker from excessive risks due to exposure to soil chemical constituents through direct skin contact and inhalation of their dust and vapors.
- Constructing an engineered barrier (pavement and associated road materials) upon the soil within the connector road footprint to eliminate potential for exposure by future site workers to soil chemical constituents via direct contact and inhalation of their dusts and vapors.

The scope of the CAP also includes identifying the monitoring wells within the connector road footprint to be plugged, abandoned and relocated.

2 SOIL INVESTIGATION OF FUTURE CONNECTOR ROAD FOOTPRINT

EAG completed a soil investigation within the footprint of the future connector road in June 2022 to assess the presence and concentrations of COPCs. Soil samples were collected from 10 borings for COPC analyses along the approximate 1236-foot (ft) stretch of proposed roadway. Surface soil samples were collected from 0 to 1 ft below ground surface (bgs) at each of the 10 locations (**Figure 3**). One subsurface soil sample was collected from 1 to 3 ft bgs at the soil sample location near where the roadway will cross the existing railroad tracks (**Figure 4**). The 10 borings were evenly spatially-distributed over the length of the future road.

Each of the 10 surface soil samples were analyzed for VOCs, SVOCs, TAL metals, pesticides, PCBs, and hexavalent chromium analyses. Seven of the 10 surface soil samples (SB80, SB82 through SB86, and SB88) were also analyzed for dioxins and furans. The subsurface soil sample collected from boring SB79 were analyzed for VOCs, SVOCs, TAL metals, pesticides, PCBs, hexavalent chromium, and dioxins and furans. Neither photoionization detector (PID) measurements nor visual/olfactory senses indicated the presence of contaminated soil during the field work.

EAG prepared the document *Soil Investigation Report For Georgia Ports Authority Connector Road Construction* on behalf of GAP and submitted it to Georgia EPD in September 2022. Georgia EPD provided approval of the soil investigation report on September 30, 2022. Analytical data generated during the soil investigation was used to perform the FSRA. The report included a description of field work, field forms, lab results, QA/QC sampling, a lab data verification summary, and decontamination methods. A summary of the FSRA results is included in the FSRA report and is also provided in Section 3 of this CAP.

3 FOCUSED SCREENING RISK ASSESSMENT (FSRA) OF SOIL

ARM Group LLC (ARM Group) performed a FSRA on behalf of GAP. The FSRA utilized soil data generated during the June 2022 connector road soil investigation. The results of the FSRA are summarized in a report provided by ARM Group in **Appendix A**. The report *Focused Screening Risk Assessment, Georgia Ports Authority Road Construction Project* evaluated the potential health risk to a road worker that will be involved with constructing the GPA connector road due to potential exposure to contaminated soil and its dust/vapors during grading/intrusive activities.

The FSRA was completed in accordance with the document *Proposed Focused Screening Risk Assessment Approach, Georgia Ports Authority Road Construction Project* (EAG, 2022). The FSRA was also completed in accordance with the BRA approach summarized in Section 1.2.2. The FSRA approach was approved by Georgia EPD in July 2022.

3.1 Soil Pathway

ARM Group prepared the document *Focused Screening Risk Assessment, Georgia Ports Authority Road Construction Project* and it was submitted to Georgia EPD in September 2022. Georgia EPD provided approval of the FSRA on September 30, 2022. The FSRA report evaluated the potential health risk to a road worker that will be involved with constructing the GPA connector road and that may potentially be exposed to contaminated soil via direct contact and breathing its dust/vapors during grading/intrusive activities. The FSRA report for the soil pathway is included in **Appendix A**.

In summary, the FSRA risk estimates indicate that at 30 days of road worker exposure, the estimated risk is below the Georgia EPD's acceptable limit of 1×10^{-5} for cancer risk and a Hazard Index (HI) of 1 for non-cancer risk. Based on the estimated acceptable exposure frequency, an individual road worker should be limited to not more than 34 days of intrusive activity in close contact with the surface soil unless wearing appropriate PPE and following work practices to prevent direct contact with and incidental ingestion of the surface soil. If the actual road worker exposure period as documented in the construction activity logs approaches the acceptable exposure frequency (EF) of 34 days, then appropriate mitigation (PPE, work practices, etc.) should be implemented to ensure that no workers would be exposed to a potentially unacceptable risk.

3.2 Soil to Groundwater Pathway

The soil to groundwater pathway will be evaluated during a future site-wide CAP. This evaluation will be completed to determine the potential for leaching of soil contaminants to the underlying groundwater that could have an adverse impact on hypothetical future receptors installing an on-site potable well in the upper water-bearing unit of the Pleistocene deposits. Site-specific soil

screening levels (SSLs) and site-specific geologic and contaminant plume parameters (e.g., hydraulic conductivity, hydraulic gradient, plume dimensions and depth) and justification for their use will be provided to and approved by Georgia EPD for the soil to groundwater pathway evaluation to be completed during the future site-wide CAP.

4 CORRECTIVE ACTION APPROACH

The approach to implementing the corrective measures at the GAP site involves the following steps:

- Establish corrective action objectives (CAOs) based on the connector road soil investigation data and FSRA.
- Determine areas to be addressed to achieve the CAOs
- Develop a recommended plan and implementation schedule based on the proposed corrective measures.
- Develop an O&M plan describing procedures and corrective measures to be taken to ensure the corrective action continues to perform as intended.

4.1 Corrective Action Objectives and Goals

Based on the findings of the RFIs, connector road soil investigation and FSRA, the following are the CAOs identified for the connector road area:

- Mitigate potential risks to road workers from exposure to surface and subsurface soils.

The corrective action goals are to ensure the potential risks to human health are achieved per the site-specific remediation goals established through the FSRA.

4.2 Area of Interest

The area of interest includes the approximate 120,000 square foot area (about 1236-ft long and 100-ft wide) of the connector road footprint and the immediate area surrounding the connector road.

5 CORRECTIVE MEASURES AND DESIGN SPECIFICATIONS

5.1 Corrective Measures

The purpose of the corrective measures of the RCRA corrective action process is to design, construct, operate, maintain and monitor the performance of the selected corrective measure(s).

GPA will construct the connector road through the GAP site to enhance GPA's cargo shipping and storage operations. The connector road is the selected corrective measure that will serve as an engineered barrier to mitigate the potential risks to human health and the environment in the

vicinity of the connector road. The GPA connector road will eliminate the soil pathway (i.e., a barrier for direct contact with soil and breathing its dust/vapors).

Gravel access roads will be constructed atop the existing site soils to accommodate GAP's access to its groundwater treatment plant, landfill, and the former process area. A gravel access road will also be constructed near the County Canal so that Chatham County can have access to their canal. The gravel placed upon the access roads will act as a barrier to reduce the possibility of direct contact with soil and will help minimize the generation of soil dust/vapors.

The current land use is for industrial purposes only and there is no current potable water use at the site. An Environmental Covenant (EC) is currently being prepared to restrict future residential groundwater use. Institutional controls will also be established in the EC, which will consist of a deed notification restricting the GAP property to non-residential land use, preparing a facility soil management plan to assure adequate worker protection and proper material management during any future excavation activities, and restricting the use of shallow site groundwater for any residential purposes.

5.2 Design Specifications

GPA's contractor AECOM has prepared the construction design plans for the connector road, gravel access roads, and bridge over the County Canal. The design plan specifications are included in **Appendix B**. The connector road is planned to be constructed with a maximum soil disturbance depth of 8 inches bgs, with the exception of the area near the southwest corner of the site entrance where the existing gravel road intersects the railroad tracks. The soil in this area is planned to be disturbed to a maximum depth of 3 ft bgs. The gravel access roads will be constructed atop the existing site soils with minimal soil disturbance anticipated. The concrete and steel bridge over the County Canal will be constructed atop the existing site soils with minimal soil disturbance anticipated. No waste materials are planned to be generated during the connector road or gravel access roads construction.

During construction, disturbance of existing soils shall be kept to the minimum required to complete the cement stabilization and construct the proposed road. Cut (excavated) soils shall be incorporated into fill material and reused onsite. Silt fence, construction exits, and silt control gates shall be installed, in accordance with current GDOT standards, to prevent erosion of soils from the site. The location of silt fencing is shown on sheets 38-0004 and 38-0005 of **Appendix B**. All newly constructed slopes shall be sodded, in accordance GDOT standards, to prevent erosion of soils after construction. Silt fence and control gates will remain in place, where applicable, until the newly placed sod is established and able to be maintained.

The design drawings show the proposed paved 1236-foot connector road travel way (i.e., roadway), edge of the road shoulder, and the connector road area's surface topography. There

will be two travel ways constructed (north-bound to GPA's Steamship Terminal and south-bound GPA's Garden City Terminal), with each travel way being between 12 and 14 ft wide with a 2% sloped crown that divides the two travel ways for drainage purposes. A six-ft wide paved shoulder will extend outward from the edges of each travel way at a 6% slope away from the travel way. A two-ft wide unpaved shoulder will extend outward from the edges of each paved shoulder at a 4:1 slope. The total width of the connector road right-of-way is about 100 ft.

The paved travel ways and paved shoulder will consist of the following layers of construction materials from top to bottom: eight inches of concrete, 19 millimeters of recycled asphalt (including bituminous material and hydrated lime), eight inches of graded aggregate base (drainage layer), and 12 inches of Portland cement-modified soil. The unpaved shoulder will consist of 12 inches of Portland cement-modified soil. The cement-modified soil specifications are provided in **Appendix C** and include: mix design and sampling, quality control, products and equipment used, construction methods, and testing. Part 3 includes the specification that core samples of the cement-modified soil must have a maximum permeability value of $1x10^{-5}$ centimeters/second (cm/sec).

Gravel access roads will be constructed atop existing site soils to accommodate GAP's access to its groundwater treatment plant, the landfill, and the former process area. A gravel access road will also be constructed near the County Canal so that Chatham County can have access to their canal. The gravel access roads will reduce the possibility of direct contact with soil and breathing its dust/vapors.

A concrete and steel bridge will be constructed over the County Canal to allow access to the former Plant Kraft facility. The bridge will be approximately 59 ft long and about 39 ft wide.

6 SCHEDULE

The connector road work is planned to commence on January 1, 2023 and be completed by March 31, 2023. It is estimated that the grading/intrusive road work for which a road worker may be exposed to contaminated soil via direct contact and breathing its dust/vapors will be completed in the first 30 days of the project.

7 CORRECTIVE ACTION PERFORMANCE EVALUATION

The corrective action performance evaluation identifies the activities planned to evaluate the short-term and long-term performance of the selected remedial action relative to project remedial action objectives and goals. The site performance evaluation data serve as the basis for whether or not contingency implementation is necessary.

If the site performance evaluation demonstrates that the corrective measures are incapable of achieving corrective action goals within a reasonable timeframe, contingency modifications will occur to achieve the corrective action goals.

Modifications to the current groundwater monitoring well network are necessary to accommodate the connector road construction. Sections 7.1 through 7.5 describe the wells that will be plugged and abandoned, replaced, developed, surveyed, and sampled. A report describing the field activities related to well plugging/abandonment, replacement, installation, and development will be submitted to Georgia EPD and will include a certification statement signed and sealed by a Georgia-registered Professional Engineer or Geologist.

GPA has prepared an O&M plan that describes the procedures to be followed, documentation requirements, and corrective actions to be taken to ensure the implemented remedy continues to perform as intended. The O&M plan is included as **Appendix D**.

7.1 Monitoring Well Plugging and Abandonment

Six monitoring wells are currently located within the connector road footprint and will need to be properly plugged and abandoned. These six wells are: MW12A, MW12B, MW13, MW16, MW17, and TW1 (**Figure 5**). Each well will be plugged and abandoned following EPA Region 4 Science & Ecosystem Support Division (SESD) Guidance *SESDGUID-101-R2 Design and Installation of Monitoring Wells* (January 16, 2018).

An attempt will be made to completely remove the well casings and screens by over-drilling with hollow-stem augers to the bottom of the borehole. After the well casings and screens are removed, the boring will be pressure grouted by placing a tremie pipe at the bottom of the boring and backfilling the borehole with a grout mixture of 30% solids bentonite grout. The bentonite grout mixture will be brought up to a level of about five feet bgs. The two to four feet bgs interval of the boring will be grouted using cement grout to provide resistance to damage that may occur from future impacts during planned site development. Native surrounding soil will be placed to surrounding grade after the grout has cured to allow re-establishment of vegetation.

If the PVC well casing breaks during removal, one of two options will be used to abandon the well and clean out the borehole: (1) use a solid-stem auger to grind the PVC casing into small cuttings that will be brought to the surface on the rotating flights. After the casing materials have been removed from the borehole, the borehole will be cleaned out and pressure grouted via the tremie method with a 30% solids bentonite grout; (2) grout the casing in place. The pad will be demolished and the area around the casing excavated. The casing will be sawn off at a depth of three feet bgs. The screen and riser will be tremie grouted with a 30% solids bentonite grout.

7.2 Monitoring Well Replacement

Well MW16 is planned to be relocated just east of the connector road footprint to serve as a sentinel well for tracking plume migration (**Figure 5**). MW-16 is required to be sampled on a semi-annual basis per GAP's RCRA permit post-closure monitoring requirements. The replacement well will have the ID "MW16R" with the "R" indicating a "replacement" well. The other five wells are typically not sampled during semi-annual groundwater monitoring events due to the presence of measurable DNAPL, and are therefore not necessary to remain.

7.3 Monitoring Well Installation and Development

Replacement well MW16R will be installed and developed following EPA Region 4 SESD Guidance *SESDGUID-101-R2 Design and Installation of Monitoring Wells* (January 16, 2018). MW16R will be installed to the same depth of approximately 26 ft bgs and will be constructed in a similar manner as the original well MW16.

7.3.1 Monitoring Well Installation

Soil samples will be continuously collected from the MW16R monitoring well boring by advancing hollow-stem augers equipped with split-spoon and/or continuous samplers or a sonic rig advancing core barrel samplers. The soil samples will be inspected by the EAG geologist/engineer. Field instrument readings will be measured and the observations and measurements will be recorded on soil borings logs.

MW16R will consist of a 10-foot section of 2-inch diameter flush-joint threaded Schedule-40 PVC 0.01-inch slotted well screen fitted with a 4.5-inch well point at its base. The screen will be attached to a 2-inch diameter Schedule-40 PVC riser to a level near the ground surface. Before the well screen and casings are placed on the bottom of the borehole, at least 0.5 feet of 20-40 filter sand will be placed at the bottom of the borehole to serve as a firm footing. A 20-40 filter sand pack will then be placed in the boring annulus as the augers are slowly extracted until brought to a level of 2 feet above the screened interval. A two-foot layer of bentonite pellets will then be placed in the annulus and hydrated to form a seal above the screen. Cement grout will then be placed by tremie method into the annulus until brought up to a level of 0.5 feet bgs. The grout will then be allowed to set for at least 24 hours. The well will have a flush-mount completion with a 4-feet x 4-feet concrete surface pad, bolt-down manhole cover, and will be fitted with a locking cap and keyed lock for well security. Four protective bollards will be placed off each corner of the concrete well pad to serve as protection to the well and pad from damage. The bollards will be installed to a minimum depth of 2 feet below the ground surface in a concrete footing and extend about 3 feet above ground surface. Concrete will also be placed into the bollards to provide additional strength. The well will be marked with the well ID. Well construction details will be recorded on the appropriate form and a monitoring well installation report will be submitted to Georgia EPD.

7.3.2 Monitoring Well Development

Well MW16R will be developed no sooner than 24 hours after the surface pad and bollards have been installed. The goal of development is to reduce turbidity and remove the volume of water in the area directly impacted by the well installation procedure. MW16 will be developed in accordance with Section 2.7 of the USEPA Region IV Field Branches Quality System and Technical Procedures, *Design and Installation of Monitoring Wells SESDGUID-101-R2* (January 10, 2018). The well will be developed either with a Teflon® bailer or use of a stainless-steel submersible pump with dedicated tubing to remove the residual materials remaining in the well after installation has been completed, and to try to re-establish the natural hydraulic flow conditions of the formations which may have been disturbed during construction around the vicinity of the well. The bailer or submersible pump will be placed near the bottom of the well and aggressively surged up and down within the screened interval. Attempts will be made to remove sediment from the bottom of the wells. The well will be developed until the column of water is free of visible sediment to the extent practicable, and the pH, temperature, turbidity, and specific conductivity have stabilized. The well development personnel will make the decision as to the development completion of the well.

7.4 Monitoring Well Surveying

Replacement well MW16R will be surveyed by a Georgia-registered land surveyor to record the approximate longitude and latitude (i.e., northing and easting per Georgia State Plane East Zone, NAD83 coordinates) per SESD Operating Procedure SESDPROC-110-R5 *Global Positioning System* (May 5, 2020). Surveying of the elevation of each location will require more accurate instrumentation, such as the use of surveying grade GPS instrumentation or traditional optical surveying equipment that is accurate to within 0.01 feet. Survey work will be conducted using NAVD88 elevation datum. The Georgia-registered land surveyor will sign and seal the survey data figure and provide the certification required under 40 CFR 270.11(b)and (d).

7.5 Groundwater Sampling

Groundwater samples will continue to be collected and analyzed on a semi-annual basis from the wells required to be monitored per the post-closure requirements documented in GAP's RCRA permit. The current monitoring well network is shown on **Figure 6**.

Depth-to-LNAPL and groundwater will be measured prior to sampling each monitoring well by using an oil/water interface probe. The probe will then be lowered to the bottom of each well to determine if DNAPL is present. If NAPL is present in a well, the groundwater will not be sampled. If more than 0.5 feet of NAPL is present in a well, it will be removed and placed in the NAPL collection tank associated with the groundwater extraction/treatment system.

The Low-Flow Method utilizing a peristaltic pump will be employed for purging and sampling of groundwater from the monitoring wells. This method is described in Sections 3.5 and 3.7.1 of the USEPA Region IV Field Branches Quality System and Technical Procedures, *Groundwater Sampling Protocol SESDPROC-301-R4* (April 26, 2017).

At least 24 hours after well development, each monitoring well will be purged of a minimum of three well casing volumes of groundwater with a peristaltic pump. After removing each well casing volume of groundwater, water quality parameters (temperature, pH, oxidation-reduction potential (ORP), dissolved oxygen (DO), turbidity, and conductivity) will be measured. A Horiba U-52 (or equivalent) water quality meter will be utilized to measure groundwater quality parameters. Water quality parameters will be considered stable when:

- pH remains constant within 0.1 standard unit
- conductivity varies by no more than five percent
- temperature remains unchanged to the nearest degree
- turbidity is below 10 NTUs

If the water quality parameter stabilization criteria are not met, the well will be re-purged and the water quality parameters re-measured for up to two additional well casing volumes. A maximum of five well casing volumes of groundwater will be purged, regardless of water quality parameter stabilization criteria results, prior to sampling. If a well is purged dry before three well casing volumes are removed, the sample will be collected when the well has sufficiently recovered to provide the required sample volume for laboratory analyses.

Quality assurance/quality control (QA/QC) groundwater sampling will be performed in accordance with USEPA Region 4, SESD Operating Procedure SESDPROC-011-R5 *Field Sampling Quality Control* (April 26, 2017). QA/QC sampling will be performed to provide data to allow for the assessment of the quality of field and laboratory procedures and to ensure the field sampling results in the collection of representative samples. The same QA/QC sampling will continue to be implemented as is done for each semi-annual groundwater monitoring event. One field blank, equipment blank, blind duplicate, and trip blank sample will be collected as a part of QA/QC data validation.

8 REPORTING

The following connector road construction reports have or will be prepared by GPA's contractor AECOM: O&M plan (**Appendix D**), final design plans and specifications, construction workplan, construction completion report, and a health and safety plan. The O&M plan identifies the inspection and maintenance items to be implemented to ensure the connector road continues to meet its design specifications and is serving as risk mitigation for contamination remaining in place. The O&M plan identifies contingency procedures to be implemented to achieve the

corrective action goals if the site monitoring and performance evaluation demonstrates that the corrective actions are incapable of achieving corrective action goals within a reasonable timeframe.

9 PUBLIC NOTICE

As stated in Section 1.3, this CAP also serves as part of a Class 3 RCRA permit modification request as required in GAP's Hazardous Waste Permit HW-055(D), Section V.F Permit Modification (Georgia EPD, 2019). The permit modification request describes the desired changes to the permit conditions, explains why the modification is necessary per 270.42(c)(1)(iii), and provides the applicable information required by 40 CFR 270.13 through 270.22, 270.62, 270.63, and 270.66.

Public notice is required per 40 CFR 270.42(c)(2) for Class 3 permit modifications. The Class 3 permit modification request will be provided to Georgia EPD. A copy of the Class 3 permit modification request will be made available to the public for review and comment. The document will be available for public review at the Garden City Library in Garden City, Georgia and at Georgia EPD's Hazardous Waste Corrective Action Program office in Atlanta. A 60-day public comment period will be arranged in accordance with 40 CFR 270.42(c)(2). Written comments from the public should be mailed directly to Unit Coordinator of the Georgia EPD Hazardous Waste Corrective Action Program. A notice of the Class 3 permit modification request will be mailed by GAP to those individuals included on the facility mailing list that is maintained by Georgia EPD. A newspaper advertisement will be placed in a major local newspaper of general circulation. This notice of the Class 3 permit modification request will be mailed and published within seven days before or after the date of submission of the modification request. GAP will provide to the Georgia EPD evidence of the mailing and publication

In accordance with 40 CFR 270.42(c)(2), GAP will hold a public meeting concerning the Class 3 RCRA permit modification request during the 60-day public comment period. The public meeting will be held no earlier than 15 days after the permit modification request is published and no later than 15 days before the close of the 60-day comment period. The public meeting will be held at the Garden City Library in Garden City, Georgia. After conclusion of the 60-day comment period, Georgia EPD will grant or deny the permit modification request and will consider and respond to all significant written public comments received during the 60-day comment period.

After all public comments have been addressed, the public meeting has occurred, and Georgia EPD approves the Class 3 permit modification request, Georgia EPD will provide a notice of intent to modify GAP's hazardous waste facility permit to include the CAP for the GPA connector road as a part of GAP's Corrective Action Program. The notice of intent will be available for public review at the Garden City Library in Garden City, Georgia, on the Georgia EPD website

https://epd.georgia.gov/public-announcements-0/land-protection-branch-public-announcements, and at Georgia EPD's Hazardous Waste Corrective Action Program office in Atlanta. A 45-day public comment period will be arranged in accordance with 40 CFR 270.145. Written comments from the public should be mailed directly to Unit Coordinator of the Georgia EPD Hazardous Waste Corrective Action Program. Public comments may also be submitted to Georgia EPD via the email address EPDComments@dnr.state.ga.gov. Georgia EPD's notice of intent to modify GAP's hazardous waste facility permit will be mailed by Georgia EPD to those individuals included on the facility mailing list that is maintained by Georgia EPD. A newspaper advertisement will be placed in a major local newspaper of general circulation within seven days before or after the date of submission of the modification request. A radio advertisement will also be broadcasted on a local FM radio station.

10 CERTIFICATIONS

This plan has been prepared, signed, and certified according to the requirements of the Georgia EPD, as set forth in 40 CFR 270.11, and the Rules and Regulations of the State of Georgia, Chapter 180. State Board of Registration for Professional Engineers and Land Surveyors governing the practice of engineering and land surveying contained in O.C.G.A. § 43-15 (Title 43 Chapter 15).

10.1 Statement of Professional Engineer

I certify that I am a qualified professional engineer who has received a baccalaureate or postgraduate degree in engineering, and have sufficient training and experience in environmental-related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding preparation of corrective action plans. I further certify that this plan was prepared by me or by qualified professionals working under my direction, and based upon my review and inquiries of same, representations herein, are to the best of my knowledge, true and correct.

Daniel M. Dunn, PE
Georgia Registration No. 043873

10.2 Statement of Sole Proprietorship Member

Per 40 CFR 270.11(b), I certify that I am a Member of Georgia Atlantic Port LLC and that the information provided in this report is true and accurate, and an independent review of the submittal has been conducted by GAP LLC.

Sincerely,

Michael J. Roberts
Member
Georgia Atlantic Port, LLC

FIGURES

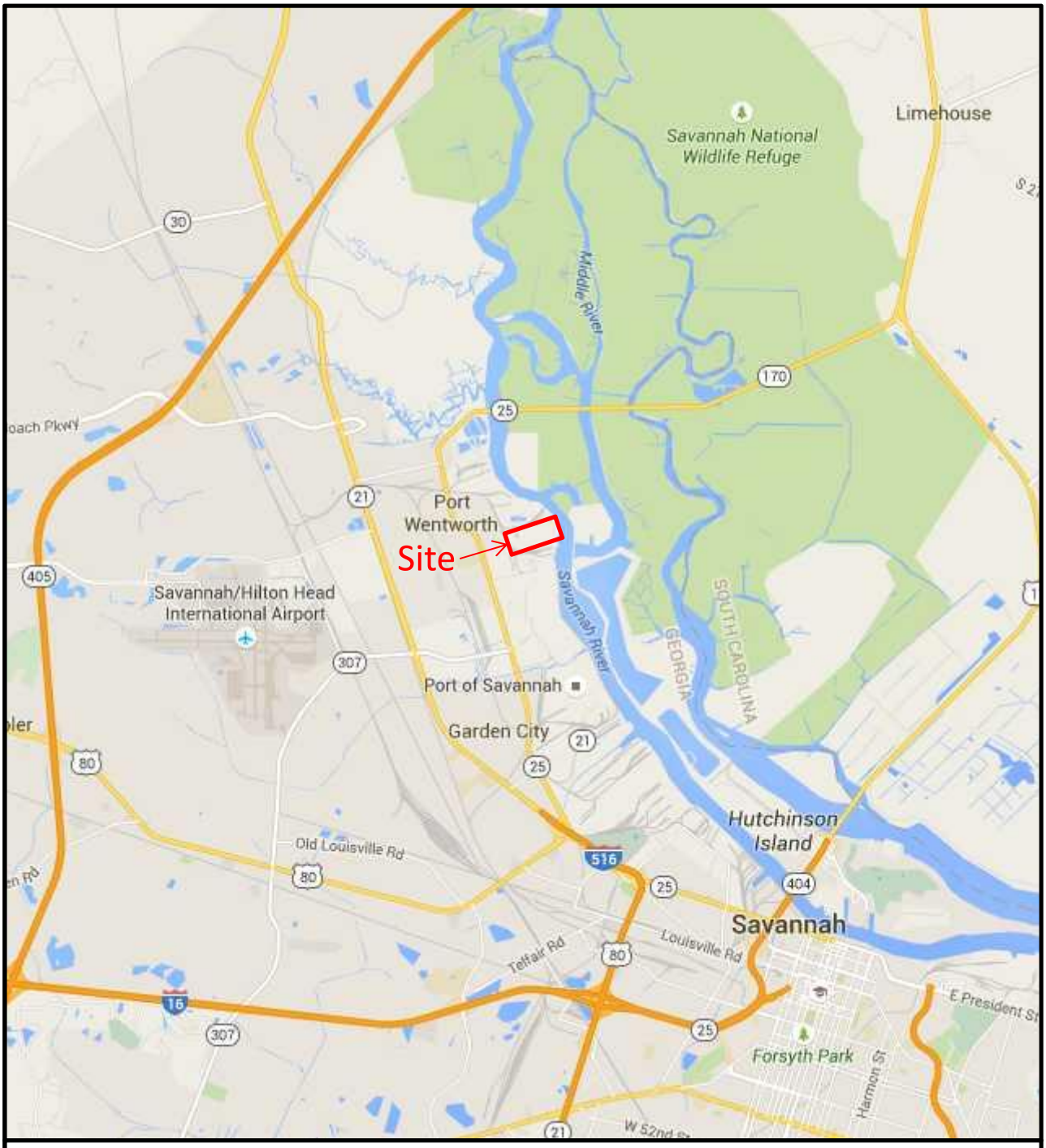

FIGURE 1
Site Location Map
Georgia Atlantic Port, LLC
202 Oxnard Drive
Port Wentworth, Georgia

N

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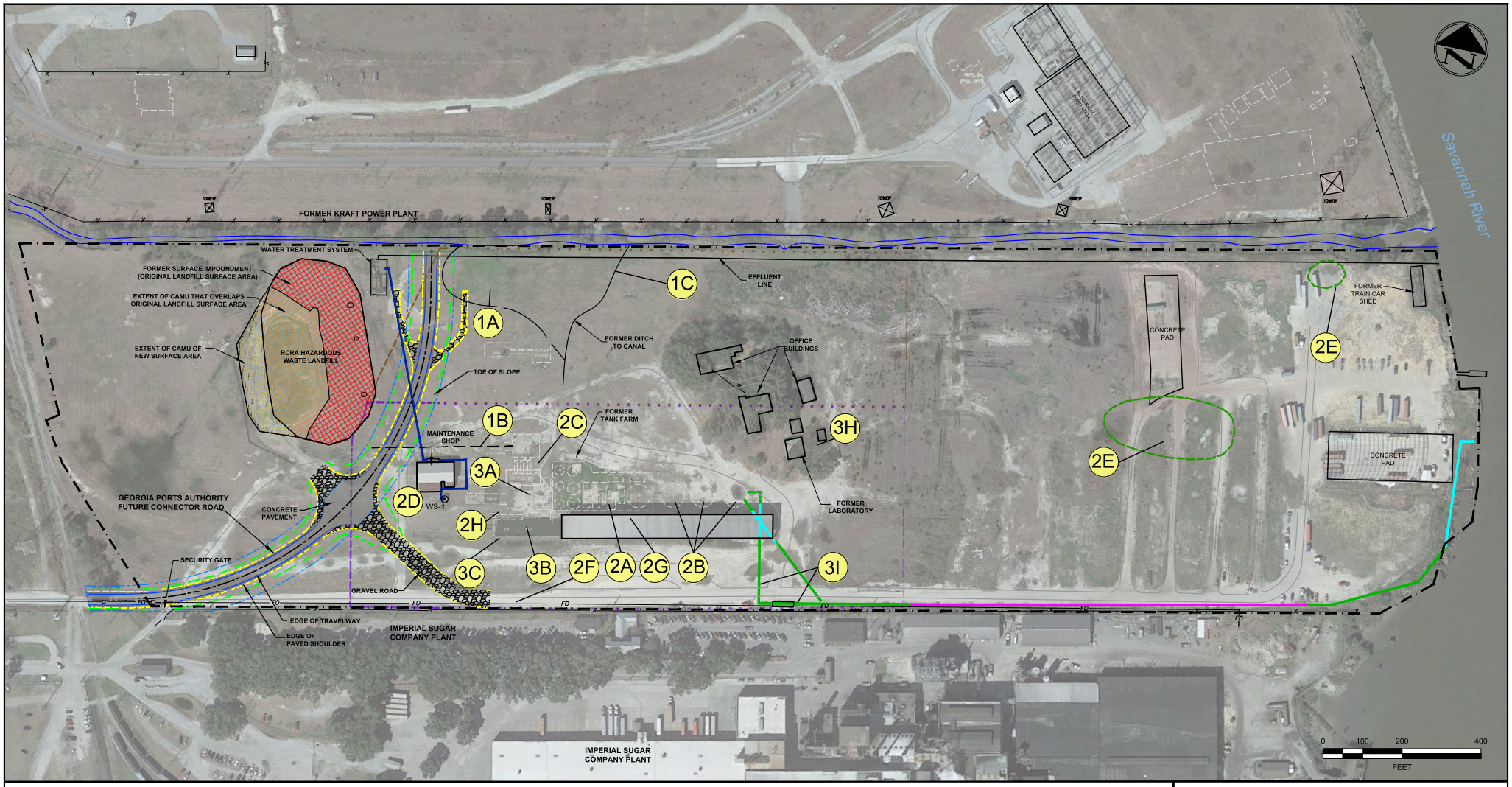
Not to scale



LEGEND

- WATER SUPPLY WELL
- EXISTING STRUCTURES
- FORMER STRUCTURES
- FORMER SURFACE IMPOUNDMENT (ORIGINAL LANDFILL SURFACE AREA)
- EXTENT OF CAMU THAT OVERLAPS ORIGINAL LANDFILL SURFACE AREA
- EXTENT OF NEW CAMU SURFACE AREA
- PROPERTY BOUNDARY
- ROADS (DIRT AND/OR GRAVEL)
- FENCE LINE
- FUEL OIL LINE TO IMPERIAL SUGAR COMPANY PLANT
- COMBINED SWMU A
- COMBINED SWMU B
- COMBINED SWMU C
- UNDERGROUND CREOSOTE LINE REMOVED 1992-93
- UNDERGROUND CREOSOTE LINE STILL IN PLACE
- ABOVE GROUND CREOSOTE LINE REMOVED EARLY 1990s
- PROPOSED WATER SUPPLY DISTRIBUTION LINE

SWMU/AOC NUMBER	SWMU/AOC NAME	SWMU/AOC NUMBER	SWMU/AOC NAME
1A	FILL AREA NEAR DITCH TO CANAL	2F	SOIL ALONG SOUTH DITCH
1B	DITCH TO IMPOUNDMENT	2G	DRIP TRACK AREA
1C	DITCH TO CANAL	2H	CREOSOTE RAILCAR CONTAINMENT AREA
2A	DIKED TANK FARM	3A	TREATING ROOM
2B	TANK 5, 6, & 7	3B	CYLINDER HOUSE FLOOR AND DOOR PITS
2C	CONCRETE OIL/WATER SEPARATOR	3C	NO. 6 FUEL OIL TANK
2D	PIT AT MAINTENANCE SHOP	3H	LABORATORY SEPTIC TANK/DRAIN FIELD
2E	TANK BOTTOM DISPOSAL AREAS	3I	CREOSOTE PIPELINES FROM RIVER

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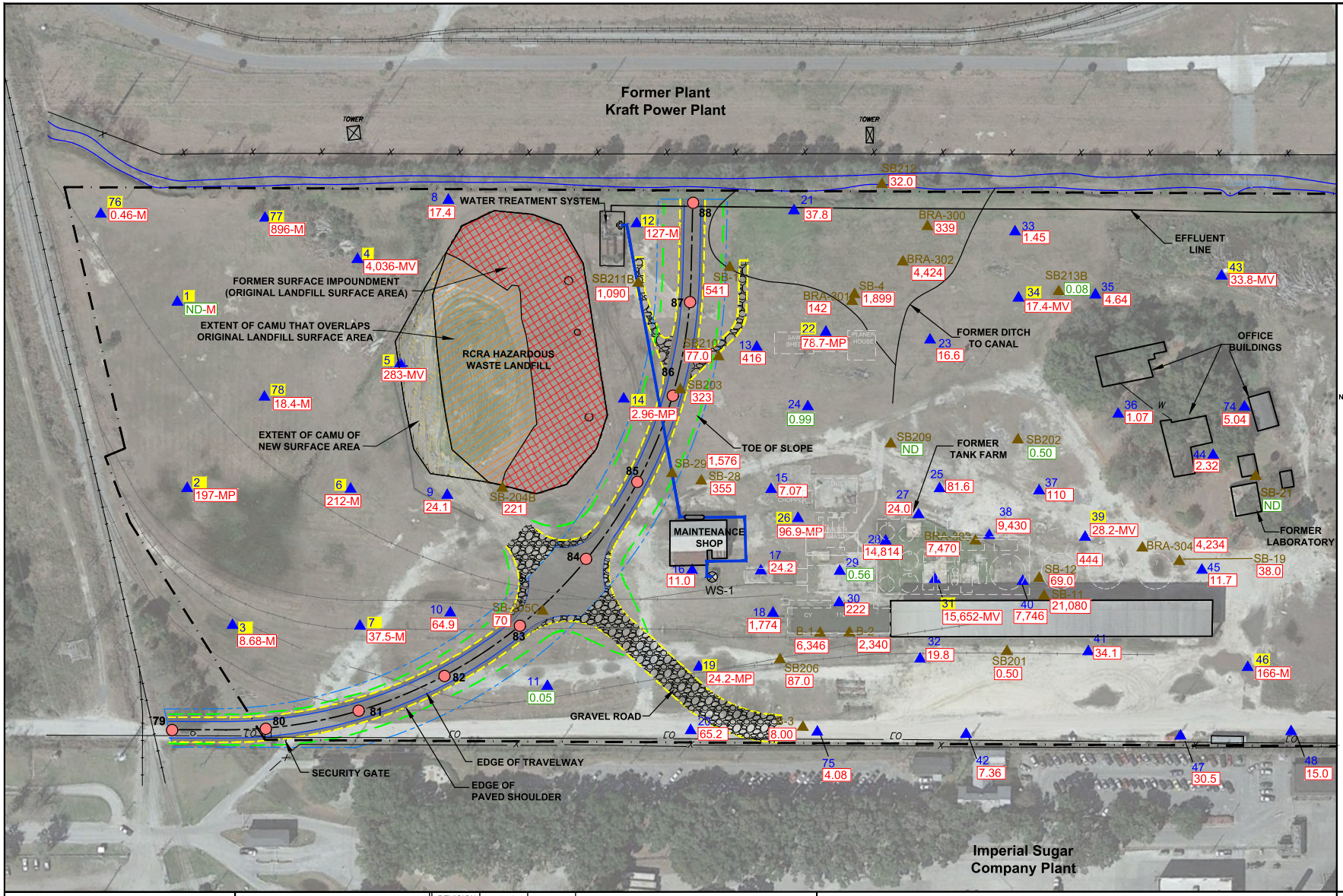
FIGURE 2
SITE FEATURES
Georgia Atlantic Port LLC
Port Wentworth, Georgia

DESIGN: TB	DRAWN: MN	CHKD.: TB
DATE: 09/26/2022	SCALE: AS SHOWN	REV.:



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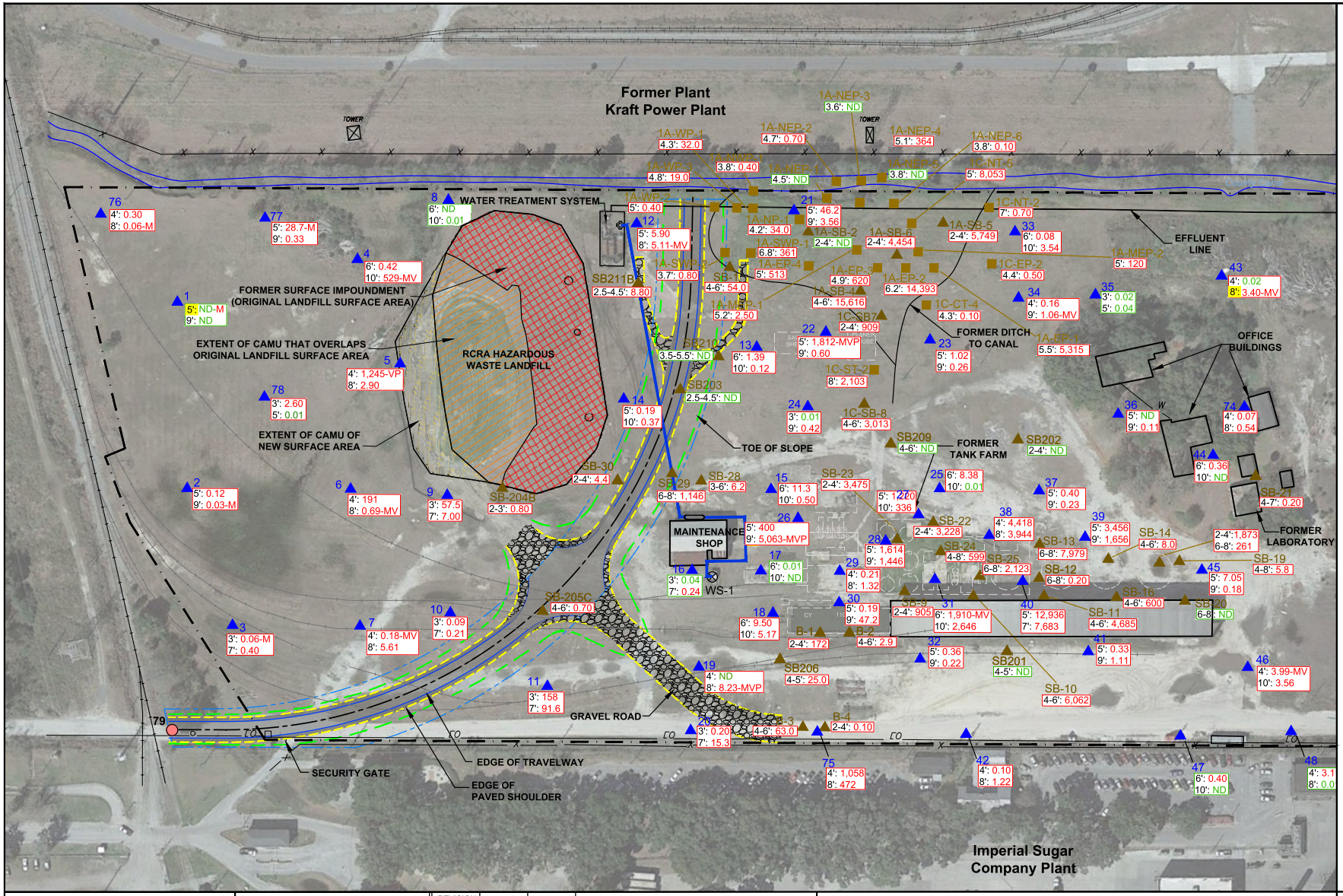
APPROVED BY: TB	#1	NA	NA	NA
DATE: 09/26/2022	#2	NA	NA	NA
SCALE: AS SHOWN	#3	NA	NA	NA

CONNECTOR ROAD SURFACE SOIL (0 TO 1 FOOT) SAMPLE LOCATIONS

Georgia Atlantic Port, LLC
Port Wentworth, Georgia

PROJECT NUMBER:	SHEET NUMBER:
NA	1 OF 1
DRAWING DATE:	FIGURE NUMBER:
09/26/2022	3



LEGEND

- PROPOSED EAG ROAD SOIL BORINGS (1) & CONSTITUENT ANALYSIS (M=METALS, S=SVOCs, V=VOCs, P=PESTICIDES, C=PCBs, D=DIOXINS H=HEXAVALENT/TOTAL CHROMIUM)
- SUPPLEMENTAL PHASE 1 RFI SURFACE SOIL BORING LOCATION (72)
- HISTORICAL (1990s) SUBSURFACE SOIL BORING LOCATION (41)
- HISTORICAL SUBSURFACE TEST PIT LOCATION (29)
- WATER SUPPLY WELL (1)
- WATER HYDRANT
- EXISTING STRUCTURES
- FORMER STRUCTURES
- FORMER SURFACE IMPOUNDMENT (ORIGINAL LANDFILL SURFACE AREA)
- EXTENT OF CAMU THAT OVERLAPS ORIGINAL LANDFILL SURFACE AREA
- EXTENT OF NEW CAMU SURFACE AREA
- PROPERTY BOUNDARY
- RAILROAD TRACKS
- FORMER RAILROAD TRACKS
- FENCE
- FUEL OIL LINE TO IMPERIAL SUGAR COMPANY PLANT
- PROPOSED WATER SUPPLY DISTRIBUTION LINE

NOTES:

1. ALL RESULTS SHOWN ARE IN MILLIGRAMS PER KILOGRAM (mg/kg)
2. SUPPLEMENTAL PHASE 1 RFI AVERAGE TOTAL SVOCs FOR 10 BACKGROUND SUBSURFACE SOIL SAMPLES = 0.04 mg/kg
3. SUPPLEMENTAL PHASE 1 RFI BACKGROUND SUBSURFACE SOIL SAMPLES WERE COLLECTED BETWEEN 2 AND 5 FT
4. HISTORIC TOTAL SVOCs EQUAL SUM OF TOTAL PAHs & TOTAL PHENOLICS
5. RED VALUE INDICATES SVOC(s) > BACKGROUND THRESHOLD VALUES
6. GREEN VALUE INDICATES SVOC(s) < BACKGROUND THRESHOLD VALUES
7. ND=NON-DETECT
8. 4' = BOTTOM DEPTH BELOW GROUND SURFACE IN WHICH SAMPLE WAS COLLECTED
9. YELLOW SHADE INDICATES SUPPLEMENTAL PHASE 1 RFI SUBSURFACE SOIL SAMPLES ANALYZED FOR TCL CONSTITUENTS (28)
10. M = METAL CONSTITUENT(S) > BACKGROUND THRESHOLD VALUES
    V = VOC CONSTITUENT(S) > BACKGROUND THRESHOLD VALUES
    P = PESTICIDE CONSTITUENT(S) > BACKGROUND THRESHOLD VALUES
    C = PCB CONSTITUENT (S) > BACKGROUND THRESHOLD VALUES

0 50 100 200
FEET

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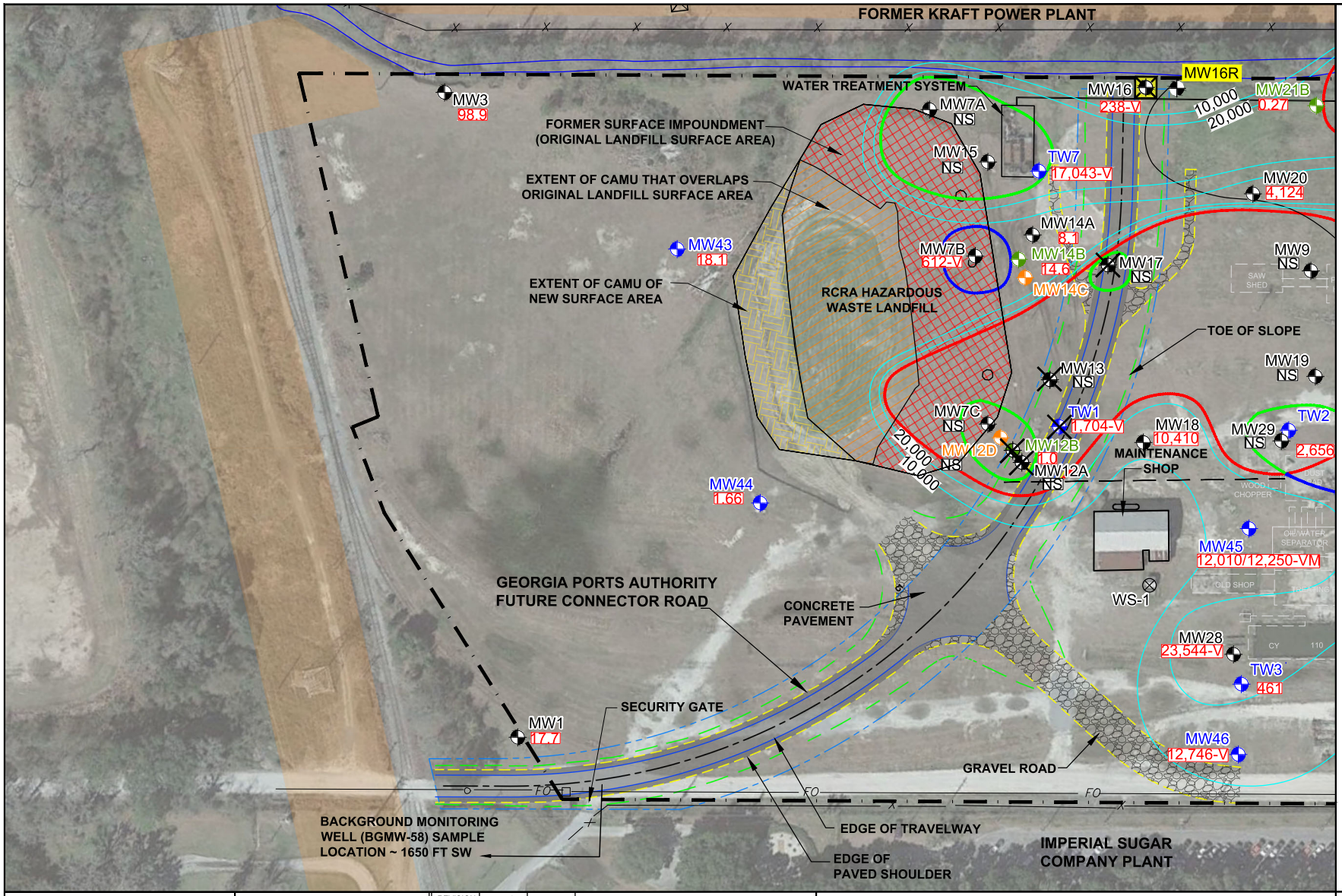
APPROVED BY: TB	#1	NA	NA	NA
DATE: 09/26/2022	#2	NA	NA	NA
SCALE: AS SHOWN	#3	NA	NA	NA

PROPOSED ROAD CONSTRUCTION SUBSURFACE SOIL (1-3 FEET) SAMPLE LOCATIONS

Georgia Atlantic Port, LLC
Port Wentworth, Georgia

PROJECT NUMBER:	SHEET NUMBER:
NA	1 OF 1
DRAWING DATE:	FIGURE NUMBER:
09/26/2022	4



LEGEND

- PLEISTOCENE WELLS (0-33' BGS)
- MIOCENE WELLS (35'-55' BGS)
- MIOCENE WELLS (81'-94' BGS)
- SUPPLEMENTAL RFI WELLS (0-55' BGS)
- WELLS TO BE PLUGGED AND ABANDONED (MW12A, MW12B, MW13, MW17, AND TW1)
- WELLS TO BE PLUGGED AND REPLACED (MW16)
- MW-16R — LOCATION OF REPLACEMENT WELL
- WATER SUPPLY WELL
- GEORGIA POWER CO EASEMENT
- FORMER SURFACE IMPOUNDMENT (ORIGINAL LANDFILL SURFACE AREA)
- EXTENT OF CAMU THAT OVERLAPS ORIGINAL LANDFILL SURFACE AREA
- EXTENT OF NEW CAMU SURFACE AREA
- INFERRED AREAL EXTENT OF DNAPL ACCUMULATION IN PLEISTOCENE
- INFERRED AREAL EXTENT OF LNAPL ACCUMULATION IN PLEISTOCENE
- INFERRED AREAL EXTENT OF DNAPL & LNAPL ACCUMULATION IN PLEISTOCENE
- TOTAL SVOCs ISOPLETH
- FORMER INFRASTRUCTURE
- FENCE
- PROPERTY BOUNDARY

NOTES:

1. ALL TOTAL SVOC RESULTS SHOWN ARE IN MICROGRAMS PER LITER (µg/L)
   WATER SAMPLES = 0.03 µg/L
2. AVERAGE TOTAL SVOCS FOR BACKGROUND GROUNDWATER SAMPLES = NON-DETECT
3. RED VALUE INDICATES SVOC(s) > BACKGROUND THRESHOLD VALUES
4. GREEN VALUE INDICATES SVOC(s) < BACKGROUND THRESHOLD VALUES
5. NS=NOT SAMPLED; ND=NON-DETECT
6. M = METAL CONSTITUENT(S) > BACKGROUND THRESHOLD VALUES
   V = VOC CONSTITUENT(S) > BACKGROUND THRESHOLD VALUES
   P = PESTICIDE CONSTITUENT(S) > BACKGROUND THRESHOLD VALUES
   * = MW27R & MW37R INSTALLED JUNE 2018 TO REPLACE DAMAGED MW27 & MW37. TOTAL SVOC RESULTS LISTED ARE FOR MW27 (43 FT SOUTH OF MW27R) & MW37 (35 FT EAST OF MW37R)
7. IMAGE SOURCE: GOOGLE EARTH IMAGERY 3/8/2021

0 45 90 180
FEET

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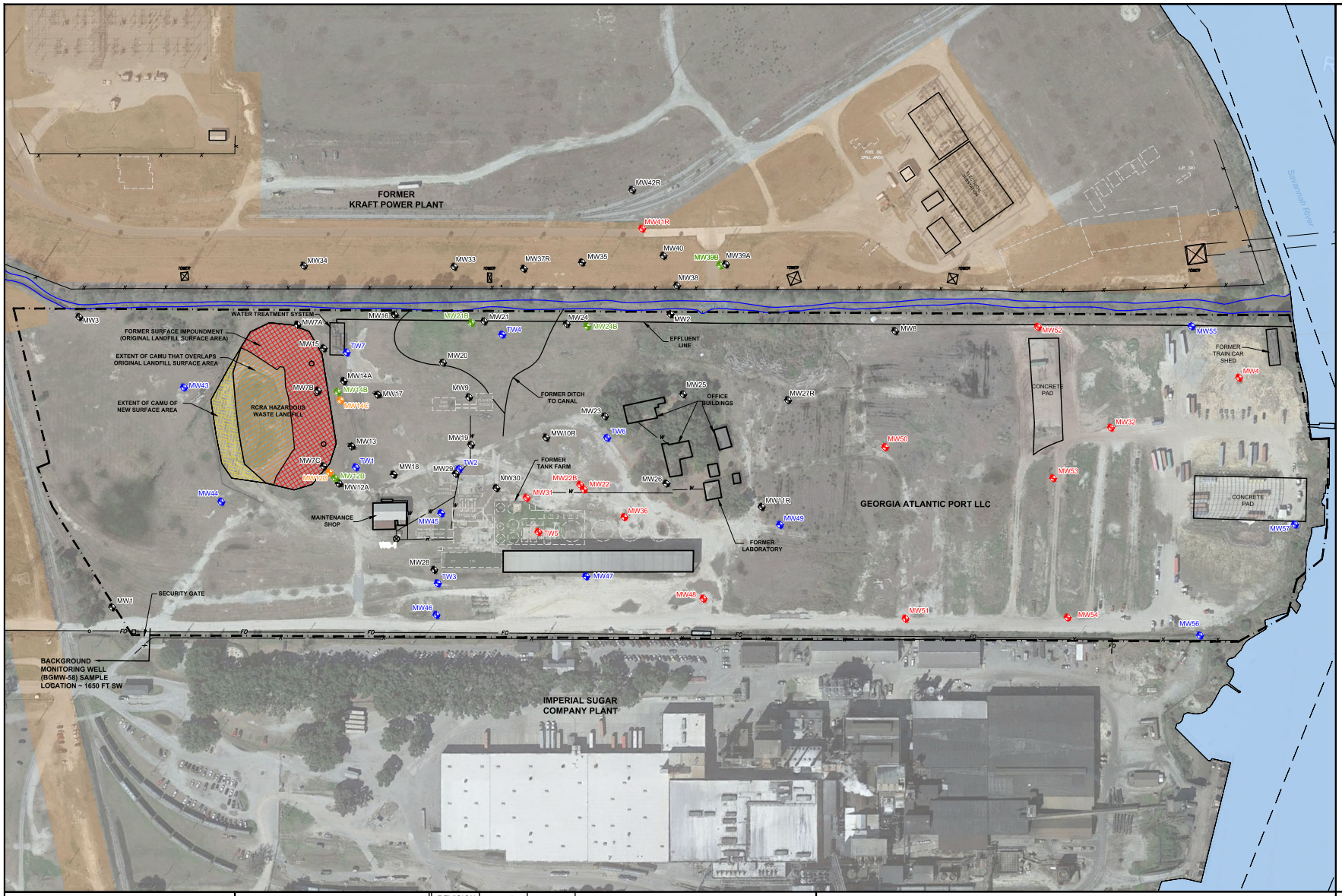
APPROVED BY: TB	#1	NA	NA	NA
DATE: 09/26/2022	#2	NA	NA	NA
SCALE: AS SHOWN	#3	NA	NA	NA

PROPOSED MONITORING WELL NETWORK MODIFICATIONS

Georgia Atlantic Port LLC
Port Wentworth, Georgia

PROJECT NUMBER:	SHEET NUMBER:
NA	1 OF 1
DRAWING DATE:	FIGURE NUMBER:
09/26/2022	5



LEGEND

- PLEISTOCENE WELLS (0-33' BGS)
- MIOCENE WELLS (35'-55' BGS)
- MIOCENE WELLS (81'-94' BGS)
- SUPPLEMENTAL RFI WELLS (0-55' BGS)
- DAMAGED/DESTROYED WELLS
- WATER SUPPLY WELL
- WATER HYDRANT
- GEORGIA POWER CO EASEMENT
- FORMER SURFACE IMPOUNDMENT (ORIGINAL LANDFILL SURFACE AREA)
- EXTENT OF CAMU THAT OVERLAPS ORIGINAL LANDFILL SURFACE AREA
- EXTENT OF NEW CAMU SURFACE AREA
- FORMER INFRASTRUCTURE
- FENCE
- PROPERTY BOUNDARY

SOURCE: GOOGLE EARTH IMAGERY 3/8/2021

EnviroAnalytics Group

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APPROVED BY:	TB
DATE:	09/26/2022
SCALE:	AS SHOWN

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#2	NA	NA	NA
#3	NA	NA	NA

CURRENT MONITORING WELL NETWORK

Georgia Atlantic Port LLC
Port Wentworth, Georgia

PROJECT NUMBER:	SHEET NUMBER:
NA	1 OF 1
DRAWING DATE:	FIGURE NUMBER:
09/26/2022	6