

GROUNDWATER MONITORING PLAN

PLANT MITCHELL – ASH PONDS A, 1 & 2 DOUGHERTY AND MITCHELL COUNTIES, GEORGIA FOR



March 2022
REVISION 1 – JANUARY 2024



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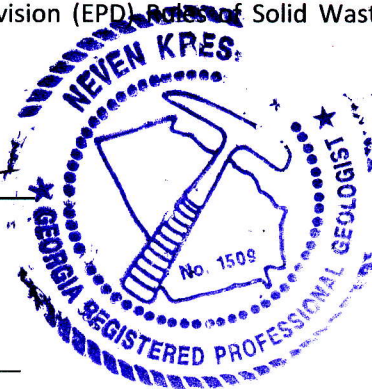
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I. CERTIFICATION

I hereby certify that this Groundwater Monitoring Plan was prepared by, or under the direct supervision of, a "Qualified Groundwater Scientist," in accordance with the Rules of Solid Waste Management. According to 391-3-4-.01(63), a Qualified Groundwater Scientist is "a professional engineer or geologist registered to practice in Georgia who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields that enable individuals to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective action." The design of the groundwater monitoring system was developed in compliance with the Georgia Environmental Protection Division (EPD) Rules of Solid Waste Management, Chapter 391-3-4-.10(6).

Signature: _____



Neven A. Kresic, PhD, P.G.
Registered Professional Geologist
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Date: _____

1/26/2024

Signature: _____


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1. INTRODUCTION

Georgia Power Company (GPC) is monitoring groundwater in and around Ash Ponds A, 1 & 2 to detect and quantify potential changes in groundwater chemistry as summarized in a report titled “*Hydrogeologic Assessment Report*” prepared by Wood dated March 2022 (Wood, 2022) and included in Plant Mitchell CCR Permit Application, Part B, Exhibit 1. This Groundwater Monitoring Plan (plan) describes the groundwater monitoring program for the site. This plan meets the requirements of State CCR Rules Chapter 391-3-4-.10(6) and uses the Georgia Environmental Protection Division (EPD's) *Manual for Ground Water Monitoring* dated September 1991 (EPD, 1991) as a guide. Groundwater sampling locations are presented on Figure B-1A for Ash Ponds A, 1 & 2.

Monitoring will occur in accordance with 391-3-4-.10 of the Georgia Solid Waste Management Rules. If the monitoring requirements specified in this plan conflict with EPD rules (391-3-4), the EPD rules will take precedent.

In accordance with the Georgia Environmental Protection Division CCR Rule 391-3-4-.10 a detection monitoring well network for Ash Ponds A, 1 & 2 has been installed and certified by a qualified groundwater scientist. The existing monitoring wells were installed following the guidelines presented herein. Additionally, this plan documents the methods for future monitoring well installation and/or replacement, and procedures for well abandonment. As required by 391-3-4-.10(6)(g), a minor modification will be submitted to the EPD prior to the installation or decommissioning of monitoring wells. Well installation must be directed by a professional engineer or geologist licensed to practice in Georgia.

All discharges from Plant Mitchell ash ponds associated with industrial activities occur under the existing Plant Mitchell NPDES Industrial Wastewater Permit GA0001465. This permit is likely to remain in effect to support plant demolition and CCR removal activities. GPC will ensure that any discharge of industrial stormwater or construction stormwater are permitted under the applicable General Permit. An appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and in accordance with the current version of the Manual for Erosion and Sediment Control in Georgia will be included to manage discharges.

2. GEOLOGIC AND HYDROGEOLOGIC CONDITIONS

Geologic and hydrogeologic conditions described below are based on observations of drilling logs and data from previous environmental investigations at the site. The geology in the study area generally includes residual soils consisting of an interlayered sequence of predominantly fine-grained unconsolidated material including reddish brown to gray silty and clayey sands overlying sandy clay and clay. Artificial fill is also present in some locations. These surficial materials overlie the Ocala Limestone, which is described as a pink to white, slightly silty friable limestone to partially to well-indurated fossiliferous limestone. The variations in elevation where the pink to white limestone was encountered in site borings indicate that the top of the Ocala Limestone forms an undulating surface beneath the site as a result of differential weathering of the formation.

The hydrogeologic conditions in the study area indicate the presence of three distinct hydrostratigraphic units: (1) a surficial unconfined saturated zone developed in thin sandy residual soils; (2) the clayey sands, sandy clays, and clays of the residual soils which form a discontinuous zone of low permeability separating the shallow water bearing zone from the underlying Ocala Limestone; and (3) the Ocala Limestone (the Upper Floridan aquifer). The elevation of the water table in the surficial saturated zone is consistently approximately a few feet higher than the potentiometric surface of the Upper Floridan aquifer as recorded in the well clusters at the site.

The depth to groundwater typically ranges from approximately 20 to 50 feet below ground surface spatially across the site. The depth to groundwater also varies vertically across the hydrostratigraphic units. As indicated by the differences in the depths to groundwater in the well clusters, a downward hydraulic gradient from the shallow saturated zone to the Ocala Limestone aquifer is present in the study area; however, the sandy clays and clays overlying the Ocala Limestone appear to function as an aquitard limiting the vertical migration of groundwater. Laboratory analysis of undisturbed samples collected from three locations within the surficial sediments overlying the Ocala Limestone resulted in measured hydraulic conductivity values ranging from 10^{-4} to 10^{-8} centimeters per second (cm/sec). These preliminary data suggest that fine-grained material in the surficial residual soils overlying the Ocala Limestone may serve as a barrier that restricts vertical movement of groundwater beneath the site, as discussed above. Slug tests conducted on piezometers screened in the Ocala Limestone resulted in measured hydraulic conductivity values ranging from 10^{-3} to 10^{-4} cm/sec.

The uppermost aquifer is considered to be the Ocala Limestone, since the overburden, which consists predominantly of low permeability clay, is not an aquifer and in places the saturated zone in the overburden is quite thin. The aquitard may be breached or may not be present, providing a potential pathway for vertical migration of groundwater. Because of a pronounced vertical downward gradient from the overburden into the underlying limestone, any off-site migration of groundwater would primarily occur in the limestone bedrock.

Based on potentiometric surface maps for the surficial unconfined saturated zone and for the Upper Floridan aquifer, the horizontal groundwater flow direction for both zones is to the southwest (toward the Flint River). Hydraulic gradients in the Upper Floridan aquifer at the site in August 2022 (Figure B-1B)

ranged from 0.002 ft/ft in the area of AP-1 (using wells PZ-1D and PZ-01R) to 0.001 ft/ft (using wells PZ-4D and PZ-19) in the area of the former coal fired plant.

The groundwater flow velocity at Plant Mitchell Ash Ponds A, 1 & 2 was calculated using a derivation of Darcy's Law. Specifically,

$$V = \frac{K * i}{n_e}$$

Where:

$$V = \text{Groundwater flow velocity} \left(\frac{\text{feet}}{\text{day}} \right)$$

$$K = \text{Average hydraulic conductivity of the aquifer} \left(\frac{\text{feet}}{\text{day}} \right)$$

$$i = \text{Horizontal hydraulic gradient} \left(\frac{\text{feet}}{\text{feet}} \right)$$

$$n_e = \text{Effective porosity}$$

Although Darcy's equation is primarily applicable to diffuse flow in porous media, it is also used where flow is analogous to conditions in a homogenous aquifer. Groundwater flow velocities were calculated using an average hydraulic conductivity value of 3.04 feet/day, and an effective porosity of 20 percent. The groundwater flow velocities ranged from 0.010 to 0.025 feet/day (3.65 to 9.13 feet/year).

3. SELECTION OF WELL LOCATIONS

A groundwater monitoring system was installed to monitor the uppermost aquifer at Ash Ponds A, 1 & 2. The multi-unit monitoring system is designed to monitor groundwater passing the waste boundary of the ash pond units within the uppermost aquifer. Well locations were selected based on site geologic and hydrogeologic considerations and proximity to the ash pond boundaries. Monitoring wells will generally be located outside of areas with frequent auto traffic; however, wells may be installed in heavy trafficked areas when necessary to meet the groundwater monitoring objectives of the EPD rules. Wells were located to serve as upgradient and downgradient monitoring points based on groundwater flow directions as determined by a potentiometric evaluation at the site. A detailed discussion of the conceptual model for groundwater flow and monitoring well placement at the site is included in the *Hydrogeologic Assessment Report* (Wood, 2022).

A map depicting the locations of the wells in the groundwater monitoring (sampling) network is included in Appendix B, Monitoring System Details (Figure B-1A). Figure B-1B depicts the locations of the wells and piezometers used for water level monitoring, and includes the bedrock groundwater elevation contours for the August 2022 monitoring event. Appendix B also includes a tabulated list of individual monitoring wells with well construction details such as location coordinates, top-of-casing elevation, well depths and screened intervals. Table B-1 presents the groundwater monitoring network well details, while Table B-2 presents details for the wells and piezometers used for water level monitoring. Certain monitoring wells and piezometers are in locations that may interfere with planned construction activities. As construction activities become more clearly defined, the installation of additional protective measures, decommissioning, and replacement of these monitoring wells/piezometers will be evaluated and implemented, as appropriate. Any change to the groundwater monitoring network will be made after submitting a minor modification to the permit pursuant to 391-3-4-.10(6)(g) to EPD for review and approval.

4. MONITORING WELL DRILLING, CONSTRUCTION, ABANDONMENT & REPORTING

The existing monitoring well network for AP-A, 1 & 2 is in place. Existing monitoring wells were installed following the Region 4 U.S. Environmental Protection Agency *Science and Ecosystem Support Division Operating Procedure for Design and Installation of Monitoring Wells* (USEPA, 2018) as a general guide for best practices. Monitoring well and piezometer logs for the existing monitoring well network and piezometers are included in Appendix A.

4.1 DRILLING

A variety of well drilling methods are available for the purpose of installing groundwater wells. Drilling methodology may include, but is not limited to: hollow stem augers, direct push, air rotary, mud rotary, or rotosonic techniques. The drilling method shall minimize the disturbance of subsurface materials and shall not cause impact to the groundwater. Borings will be advanced using an appropriate drilling technology capable of drilling and installing a well in the site-specific geology. Monitoring wells will be installed using the most current version of the USEPA SESD SEDGUID-101-R2 as a general guide for best practices. Drilling equipment shall be decontaminated before use and between borehole locations using the procedures described in the latest version of the Region 4 U.S. Environmental Protection Agency *Laboratory Services and Applied Science Division, Operating Procedure for Field Equipment Cleaning and Decontamination* (USEPA, 2020 or latest version) as a guide.

Sampling and/or coring may be used to help determine the stratigraphy and geology. Samples will be logged under the oversight of a qualified groundwater scientist. Screen depths will be chosen based on the depth of the uppermost aquifer.

Drilling and well installation activities will be directed by a qualified groundwater scientist. All drilling for any subsurface hydrologic investigation, installation or abandonment of groundwater monitoring wells will be performed by a driller that has, at the time of installation, a performance bond on file with the Water Well Standards Advisory Council. Copies of the bonds for the existing wells are included as Attachment B1 in Appendix B.

In accordance with the Georgia Water Well Standards Act (O.C.G.A. § 12-5-134(5)(d)(vii), at least once every five years, the owner of the property on which a monitoring well is constructed shall have the monitoring well(s) inspected by a professional engineer or professional geologist, who shall direct appropriate remedial corrective work to be performed if the well does not conform to standards.

4.2 DESIGN AND CONSTRUCTION

Well construction materials will be sufficiently durable to resist chemical and physical degradation and will not interfere with the quality of groundwater samples.

WELL CASINGS AND SCREENS

ASTM, NSF rated, Schedule 40, 2-inch polyvinyl chloride (PVC) pipe with flush threaded connections will be used for the well riser and screens. Compounds that can cause PVC to deteriorate (e.g., organic compounds) are not expected at this facility. If conditions warrant, other appropriate materials may be used for construction with prior written approval from the EPD.

WELL INTAKE DESIGN

The design and construction of the intake of the groundwater wells shall: (1) allow sufficient groundwater flow to the well for sampling; (2) minimize the passage of formation materials (turbidity) into the well; and (3) ensure sufficient structural integrity to prevent the collapse of the intake structure.

Each groundwater monitoring well will include a well screen designed to limit the amount of formation material passing into the well when it is purged and sampled. Screens with 0.010-inch slots have proven effective for the earth materials at the site and will be used unless geologic conditions discovered at the time of installation dictate a different size. Screen length shall not exceed 10 feet without justification as to why a longer screen is necessary (e.g., significant variation in groundwater level). If the above techniques prove ineffective for developing a well with sufficient yield or acceptable turbidity, further steps will be taken to assure that the well screen is appropriately sized for the formation material. This may include performing sieve analysis of the formation material and determining well screen slot size based on the grain size distribution.

Pre-packed dual-wall well screens may be used for well construction. Pre-packed well screens combine a centralized inner well screen, a developed filter sand pack, and an outer conductor screen in one integrated unit composed of inert materials. Pre-packed well screens will be installed following general industry standards and using the latest version of the Region 4 U.S. Environmental Protection Agency *Science and Ecosystem Support Division Operating Procedure for Design and Installation of Monitoring Wells* (USEPA, 2018 or latest version) as a general guide. If the dual-wall pre-packed-screened wells do not yield sufficient water or are excessively turbid after development, further steps will be taken to assure that the well screen is appropriately sized for the formation material. This may include performing sieve analysis of the formation material and determining well screen slot size based on the grain size distribution.

FILTER PACK AND ANNULAR SEAL

The materials used to construct the filter pack will be clean quartz sand of a size that is appropriate for the screened formation. Fabric filters will not be used as filter pack material. Sufficient filter material will be placed in the hole and measurements taken to ensure that no bridging occurs. Upon placement of the filter pack, the well may be pumped to assure settlement of the pack. If pumping is performed, the top of filter pack depth will be measured and additional sand added if necessary. In accordance with the *Design and Installation of Monitoring Wells Guidance Document SESDGUID-101-R2*, the filter pack will extend a minimum of two feet above the top of the well screen.

The materials used to seal the annular space must prevent hydraulic communication between strata and prevent migration from overlying areas into the well screen interval. A minimum of two feet of bentonite (chips, pellets, or slurry) will be placed immediately above the filter pack. The bentonite seal will extend up to the base of any overlying confining zone or the top of the water-bearing zone to prevent cementitious grout from entering the water-bearing or screened zone. If dry bentonite is used, the bentonite must be hydrated with potable water prior to grouting the remaining annulus.

The annulus above the bentonite seal will be grouted with a cement and bentonite mixture (approximately 94 pounds cement / 3 to 5 pounds bentonite / 6.5 gallons of potable water) placed via tremie pipe from the top of the bentonite seal. During grouting, care will be taken to assure that the bentonite seal is not disturbed by locating the base of the tremie pipe approximately 2 feet above the bentonite seal and injecting grout at low pressure/velocity.

PROTECTIVE CASING AND WELL COMPLETION

After allowing the grout to settle, the well will be finished by installing a flush-mount or above-ground protective casing as appropriate, and building a surface cap. The use of flush-mount wells will generally be limited to paved surfaces unless site operations warrant otherwise. The surface cap will extend from the top of the cementitious grout to ground surface, where it will become a concrete apron extending outward with a radius of at least 3 feet from the edge of the well casing and sloped to drain water away from the well.

Each well will be fitted with a cap that contains a hole or opening to allow the pressure in the well to equalize with atmospheric pressure. In wells with above-ground protection, the space between the well casing and the protective casing will be filled with coarse sand or pea gravel to within approximately 6 inches of the top of the well casing. A small weep hole will be drilled at the base of the metal casing for the drainage of moisture from the casing. Above-ground protective covers will be locked.

Protective bollards may be installed around each above-grade groundwater monitoring well. Well construction in high traffic areas will generally be limited unless site conditions warrant otherwise.

The groundwater monitoring well detail attached in Appendix A, Groundwater Monitoring Well Detail, illustrates the general design and construction details for a monitoring well.

WELL DEVELOPMENT

Well development will be conducted under supervision of a certified groundwater professional. After well construction is completed, wells will be developed by alternately purging and surging until relatively clear discharge water with little turbidity is observed. The goal will be to achieve a turbidity of less than 5 nephelometric turbidity units (NTUs); however, formation-specific conditions may not allow this target to be accomplished. Development can be discontinued once a minimum turbidity of 10 NTU is achieved. Additionally, the stabilization criteria contained in Appendix C should be met. A variety of techniques may be used to develop site groundwater monitoring wells. The method used must create reversals or surges in flow to eliminate bridging by particles around the well screen. These reversals or surges can be created by using surge blocks, bailers, or pumps. The wells will be developed using a pump capable of inducing

the stress necessary to achieve the development goals. All development equipment will be decontaminated prior to first use and between wells.

In low yielding wells, potable water may be added to the well to facilitate surging of the well screen interval and removal of fine-grained sediment. If water is added, the volume will be documented and at minimum, an equal volume purged from the well.

Many geologic formations contain clay and silt particles that are small enough to work their way through the wells' filter packs over time. Therefore, the turbidity of the groundwater from the monitoring wells may gradually increase over time after initial well development. As a result, the monitoring wells may have to be redeveloped periodically to remove the silt and clay that has worked its way into the filter pack of the monitoring wells. Each monitoring well should be redeveloped when sample turbidity values have significantly increased since initial development or since prior redevelopment. The redevelopment should be performed as described above. Well development will be conducted under the supervision of a certified groundwater professional. Well development data will be provided as part of the well installation report.

SURVEYING

The monitoring wells and piezometers were surveyed by McKim & Creed Inc, with a horizontal accuracy of 0.5 feet referenced to Georgia State Plane Coordinate System (Georgia State Plane, West Zone, NAD83) and a vertical accuracy of 0.01 feet referenced to North American Vertical Datum 1988 (NAVD88). The certified surveyor's report is included in Attachment B2 of Appendix B.

4.3 ABANDONMENT

Monitoring wells will be abandoned using industry-accepted practices and using the *Manual for Groundwater Monitoring* (EPD, 1991) and Georgia Water Well Standards Act (EPD, 1985) as guides. The wells will be abandoned under the direction of a qualified groundwater scientist. Neat Portland cement or bentonite will be used as appropriate to complete abandonment and seal the well borehole. Any piezometers or groundwater wells located within the footprint of current ash ponds will be over-drilled prior to abandonment.

Per Georgia Rule 391-3-4-.10(6)(g): Monitoring wells require abandonment and replacement after two consecutive dry sampling events, unless an alternate schedule is approved by the GA EPD. Well abandonment will be directed by a qualified groundwater scientist. A minor modification will be submitted to the EPD in accordance with Rule 391-3-4-.02(3)(b)(6) prior to the installation or decommissioning of monitoring wells.

4.4 DOCUMENTATION

The following information documenting the construction and development of each well will be submitted to EPD by a qualified groundwater scientist within 60 days after completing all planned well installations:

- Well Identification
- Name of drilling contractor and type of drill rig
- Documentation stating that a Georgia-registered professional surveyor shall certify that the horizontal accuracy for the installed monitoring wells is 0.5 feet, and vertical accuracy for top of casing elevations to 0.01 feet using a known datum.
- Documentation that the driller, at the time the monitoring wells were installed, had a bond on file with the Water Well Advisory Council
- Dates of drilling and initial well emplacement
- Drilling method and drilling fluid, if used
- Well location (± 0.5 ft)
- Borehole diameter and well casing diameter
- Well depth (± 0.1 ft)
- Lithologic logs
- Well casing materials
- Screen materials and design (i.e., interval in feet below ground surface and elevation)
- Screen length
- Screen slot size
- Filter pack material/size and volume (placement narrative)
- Sealant materials and volume
- Seal emplacement method and type/volume of sealant
- Surface seal and volumes/mix of annular seal material
- Documentation of ground surface elevation (± 0.01 ft)
- Documentation of top of casing elevation (± 0.01 ft)
- Schematic of the well with dimensions
- Type of protective well cap and sump dimensions for each well
- Well development date
- Well turbidity following development
- Narrative of well development method – specific well development

5. GROUNDWATER MONITORING PARAMETERS AND FREQUENCY

The following describes groundwater sampling requirements with respect to parameters for analysis, sampling frequency, sample preservation and shipment, and analytical methods. Groundwater samples used to provide compliance monitoring data will not be filtered prior to collection.

Table 1, Groundwater Monitoring Parameters and Frequency, presents the groundwater monitoring parameters and the sampling frequency. According to EPD rules (391-3-4-.10(6)(b), which incorporates Appendix III and IV constituents of 40 CFR 257.93 by reference) a minimum of eight independent sampling events from each groundwater well will be collected and analyzed for 40 CFR 257, Subpart D, Appendix III and Appendix IV test parameters to establish a background statistical dataset. Subsequently, in accordance with 391-3-4-.10(6), the monitoring frequency for the Appendix III parameters will be at least semi-annual during the active life of the facility and the post-closure care period. Assessment monitoring was initiated on November 13, 2019 per Georgia Chapter 391-3-4-.10, Rules for Solid Waste Management.

According to EPD rules (391-3-4-.10(6)(b)), when referenced throughout this plan, Appendix III and Appendix IV parameters refer to the parameters contained in Appendix III and Appendix IV of 40 CFR 257, Subpart D, 80 Fed. Reg. 21468 (April 17, 2015).

As shown on Table 2, Analytical Methods, the groundwater samples will be analyzed using methods specified in USEPA Manual SW-846, EPA 600/4-79-020, Standard Methods for the Examination of Water and Wastewater (SM18-20), USEPA Methods for the Chemical Analysis of Water and Wastes (MCAWW), American Society for Testing and Materials (ASTM), or other suitable analytical methods approved by the Georgia EPD. The method used will be able to reach a suitable practical quantification limit to detect natural background conditions at the facility. The groundwater samples will be analyzed by licensed and accredited laboratories through the National Environmental Laboratory Accreditation Program (NELAP). Field instruments used to measure pH must be accurate and reproducible to within 0.1 Standard Units (S.U.).

TABLE 1
GROUNDWATER MONITORING PARAMETERS AND FREQUENCY

| MONITORING PARAMETER | | GROUNDWATER MONITORING | |
|---------------------------------|------------------------|------------------------|---|
| | | Background | Semi-Annual Events |
| Field Parameters | Temperature | X | X |
| | pH | X | X |
| | ORP | X | X |
| | Turbidity | X | X |
| | Specific Conductance | X | X |
| | Dissolved Oxygen | X | X |
| Appendix III (Detection) | Boron | X | X |
| | Calcium | X | X |
| | Chloride | X | X |
| | Fluoride | X | X |
| | pH (field) | X | X |
| | Sulfate | X | X |
| | Total Dissolved Solids | X | X |
| Appendix IV (Assessment) | Antimony | X | Assessment sampling frequency and parameter list determined in accordance with Georgia Chapter 391-3-4-.10(6) |
| | Arsenic | X | |
| | Barium | X | |
| | Beryllium | X | |
| | Cadmium | X | |
| | Chromium | X | |
| | Cobalt | X | |
| | Fluoride | X | |
| | Lead | X | |
| | Lithium | X | |
| | Mercury | X | |
| | Molybdenum | X | |
| | Selenium | X | |
| | Thallium | X | |
| | Radium 226 & 228 | X | |

TABLE 2
ANALYTICAL METHODS

| Parameters | EPA Method Number |
|------------------------------|---|
| Boron | EPA 6010D/6020B |
| Calcium | EPA 6010D/6020B/7140 |
| Chloride | EPA 300.0/300.1/9250/9251/9253/9056A |
| Fluoride | EPA 300.0/300.1/9214/9056A |
| pH | EPA 150.1 field/9040C |
| Sulfate | EPA 300.0/300.1/9035/9036/9038/9056A |
| Total Dissolved Solids (TDS) | EPA 160.1/Standard Method 2540C |
| | |
| Antimony | EPA 6010D/6020B/7040/7041 |
| Arsenic | EPA 6010D/6020B/7060A/7061A |
| Barium | EPA 6010D/6020B/7080A/7081 |
| Beryllium | EPA 6010D/6020B/7090/7091 |
| Cadmium | EPA 6010D/6020B/7130/7131A |
| Chromium | EPA 6010D/6020B/7190/7191 |
| Cobalt | EPA 6010D/6020B/7200/7201 |
| Fluoride | EPA 300.0/300.1/9214/9056A |
| Lead | EPA 6010D/6020B/7420/7421 |
| Lithium | EPA 6010D/6020B |
| Mercury | EPA 7470A |
| Molybdenum | EPA 6010D/6020B |
| Selenium | EPA 6010D/6020B/7740/7741A |
| Thallium | EPA 6010D/6020B/7840/7841 |
| Radium 226 and 228 combined | EPA 903.0/9320/9315 |

6. SAMPLE COLLECTION

During each sampling event, samples will be collected and handled in accordance with the procedures specified in Appendix C, Groundwater Sampling Procedures. Sampling procedures were developed using standard industry practice and USEPA Region 4 *Field Branches Quality System and Technical Procedures* as a guide. Low-flow sampling methodology will be utilized for sample collection. Alternative industry-accepted sampling techniques may be used when appropriate with prior EPD approval. The applied groundwater purging and sampling methodologies will be discussed in the groundwater semi-annual monitoring reports submitted to EPD.

For groundwater sampling, positive gas displacement Teflon or stainless-steel bladder pumps with PVC intake screens will be used for purging. If dedicated bladder pumps are not used, portable bladder pumps or peristaltic pumps (with dedicated or disposable tubing) may be used. When non-dedicated equipment is used, it will be decontaminated prior to use and between wells in general accordance with USEPA LSASDPROC-205-R4.

Groundwater wells that are determined to be dry for two consecutive sampling events will be replaced unless an alternate schedule has been approved by EPD. Per Georgia Rule 391-3-4-.10(6)(g) monitoring wells require replacement after two consecutive dry sampling events. Well installation must be directed by a qualified groundwater scientist. A minor modification shall be submitted in accordance with Rule 391-3-4-.02(3)(b)(6) prior to the installation or decommissioning of monitoring wells.

7. CHAIN-OF-CUSTODY

All samples will be handled under chain-of-custody (COC) procedures beginning in the field. The COC record will contain the following information:

- Sample identification numbers
- Signature of collector
- Date and time of collection
- Sample type
- Sample point identification
- Number of sample containers
- Signature of person(s) involved in the chain of possession
- Notated date(s) and time(s) of sample transfer between individuals

The samples will remain in the custody of assigned personnel, an assigned agent, or the laboratory. If the samples are transferred to other employees for delivery or transport, the sampler or possessor must relinquish possession and the samples must be received by the new owner.

If the samples are being shipped, a hard copy COC will be signed and enclosed within the shipping container.

Samplers must use COC forms provided by the analytical laboratory, or use a COC form similarly formatted and containing the information listed above.

8. FIELD AND LABORATORY QUALITY ASSURANCE / QUALITY CONTROL

All field quality control samples will be prepared the same as compliance samples with regard to sample volume, containers, and preservation. The following quality control samples will be collected during each sampling event:

Field Equipment Rinsate Blanks - Where sampling equipment is not new or dedicated, an equipment rinsate blank will be collected at a rate of at least one blank per 20 samples using non-dedicated equipment.

Field Duplicates - Field duplicates are collected by filling additional containers at the same location, and the field duplicate is assigned a unique sample identification number. At least one blind field duplicate will be collected for every 20 samples.

Field Blanks - Field blanks are collected in the field using the same water source that is used for decontamination. The water is poured directly into the supplied sample containers in the field and submitted to the laboratory for analysis of target constituents. At least one field blank will be collected for every 20 samples.

A custody seal shall be placed on each shipping cooler or shipping container. Custody seals on sample containers serve two purposes: to prevent accidental opening of the shipping container and to provide visual evidence should the container be opened or tampered with. The use of custody seals controls the loss of samples and provides direct evidence whether sample containers have been opened and possibly compromised. The groundwater samples will be analyzed by licensed and accredited laboratories through the National Environmental Laboratory Accreditation Program (NELAP).

Calibration of field instruments will occur daily and follow the recommended (specific) instrument calibration procedures provided by the manufacturer and/or equipment manual specific to each instrument. Daily calibration will be documented on field forms and these field forms will be included in all groundwater monitoring reports. Instruments will be recalibrated as necessary (e.g., when calibration checks indicate significant variability), and all checks and recalibration steps will be documented on field calibration forms. Calibration of the instruments will also be checked if any readings during sampling activities are suspect. Replacement probes and meters will be obtained as a corrective action in the event that recalibration does not improve instrument function. Calibration field forms will be provided as part of each groundwater report's quality control documentation.

9. REPORTING RESULTS

A semi-annual groundwater report that documents the results of sampling and analysis will be submitted to EPD. Semi-annual groundwater monitoring reports will be submitted to the EPD within 90 days of receipt and analysis of the groundwater analytical data from the laboratory. At a minimum, semi-annual reports will include:

1. A narrative describing sampling activities and findings, including a summary of the number of samples collected, the dates the samples were collected and whether the samples were required by the detection or assessment monitoring programs.
2. A brief overview of purging/sampling methodologies.
3. Discussion of results.
4. Recommendations for the future monitoring consistent with the Rules.
5. Potentiometric surface contour map for the aquifer(s) being monitored, signed and sealed by a Georgia-registered P.G. or P.E.
6. Table of as-built information for groundwater monitoring wells including top of casing elevations, ground elevations, screened elevations, current groundwater elevations and depth to water measurements.
7. Field logs and forms for each sampling event to include, but not limited to, well signage, well access, sampling and purging equipment condition, and any site conditions that may affect sampling.
8. Groundwater flow rate and direction calculations.
9. Identification of any groundwater wells that were installed or decommissioned during the preceding semi-annual period, along with a narrative description of why these actions were taken.
10. A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent[s] detected at a statistically significant increase over background levels).
11. If applicable, semi-annual assessment monitoring results.
12. Any alternate source demonstration completed during the **reported** monitoring period, if applicable.
13. Laboratory reports.
14. COC documentation.
15. Field sampling logs including field instrument calibration, indicator parameters and parameter stabilization data.
16. Documentation of non-functioning wells.

17. Table of current analytical results for each well, highlighting statistically significant increases and concentrations above maximum contaminant level (MCL).
18. Statistical analyses.
19. Certification by a qualified groundwater scientist.
20. An iso-concentration map of each Appendix IV constituent identified at a statistically significant level (SSL) will be prepared during the reporting period. Inclusion of the map(s) is only applicable for a unit currently undergoing assessment of corrective measures and/or corrective action.
21. Updated potable water well survey, annually (if applicable based on exceedances of groundwater protection standards).

10. STATISTICAL ANALYSIS

Groundwater quality data from each sampling event will be statistically evaluated to determine if there has been a statistically significant change in groundwater chemistry. Historical background data will be used to determine statistical limits.

According to EPD rules (391-3-4-.10(6)(a), which incorporates the statistical analysis requirements of 40 CFR 257.93 by reference), the site must specify in the operating record the statistical methods to be used in evaluating groundwater monitoring data for each identified constituent. The statistical test chosen shall be conducted separately for each constituent in each well. As authorized by the rule, statistical tests that will be used include:

1. A prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper prediction limit (§257.93(f)(3)).
2. A control chart approach that gives control limits for each constituent (§257.93(f)(4)).
3. Another statistical test method (such as prediction limits or control charts) that meets the performance standards of §257.93(g). A justification for an alternative method will be placed in the operating record and the Director notified of the use of an alternative test. The justification will demonstrate that the alternative method meets the performance standards of §257.93(g).

Based on site specific conditions, interwell methods will be used for statistical analysis of Appendix III constituents to background concentrations.

A site-specific statistical analysis plan that provides details regarding the statistical methods to be used will be placed in the site's operating record pursuant to 391-3-4-.10(6). Figure 1, Statistical Analysis Plan Overview, includes a flowchart that depicts the process that will be followed to develop the site-specific plan. Figure 2, Decision Logic for Computing Prediction Limits, presents the logic that will be used to calculate site-specific statistical limits and test compliance results against those limits. Statistical analysis techniques are consistent with Unified Guidance (USEPA, 2009).

11. REFERENCES

- EPD, 1985. Georgia Water Well Standards Act. Official Code of Georgia Annotated (O.C.G.A.) 12-5-120, 1985.
- EPD, 1991. Manual for Groundwater Monitoring, Georgia Department of Natural Resources, Environmental Protection Division, September 1991.
- USEPA, 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*. Office of Resource Conservation and Recovery – Program Implementation and Information Division. USEPA 530/R-09-007.
- USEPA, 2018. Science and Ecosystem Support Division Operating Procedures: SESDGUID-101-R2 Design and Installation of Monitoring Wells, US Environmental Protection Agency, Region 4, Athens, Georgia, January 16, 2018.
- USEPA, 2020. Laboratory Services and Applied Science Division Operating Procedures: LSASDPROC-205-R4 Field Equipment Cleaning and Decontamination, US Environmental Protection Agency, Region 4, Athens, Georgia, June 22, 2020.
- USEPA, 2023. Laboratory Services and Applied Science Division Operating Procedures: LSASDPROC-301-R6 Groundwater Sampling, US Environmental Protection Agency, Region 4, Athens, Georgia, April 22, 2023.
- Wood, 2022. Hydrogeologic Assessment Report, Plant Mitchell – Ash Ponds A, 1 & 2, Dougherty and Mitchell Counties, Georgia, March 2022.

FIGURE 1. STATISTICAL ANALYSIS PLAN OVERVIEW

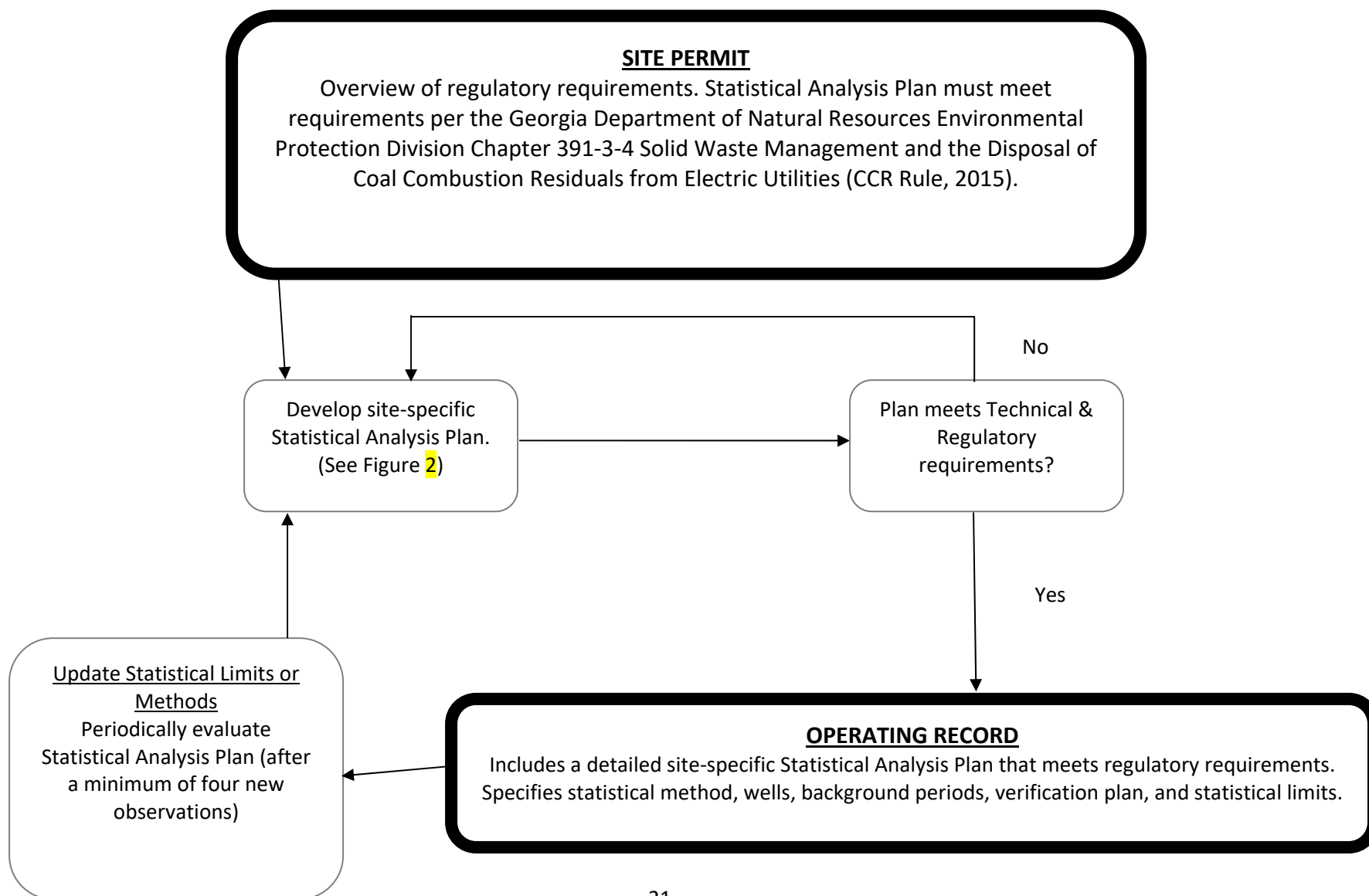
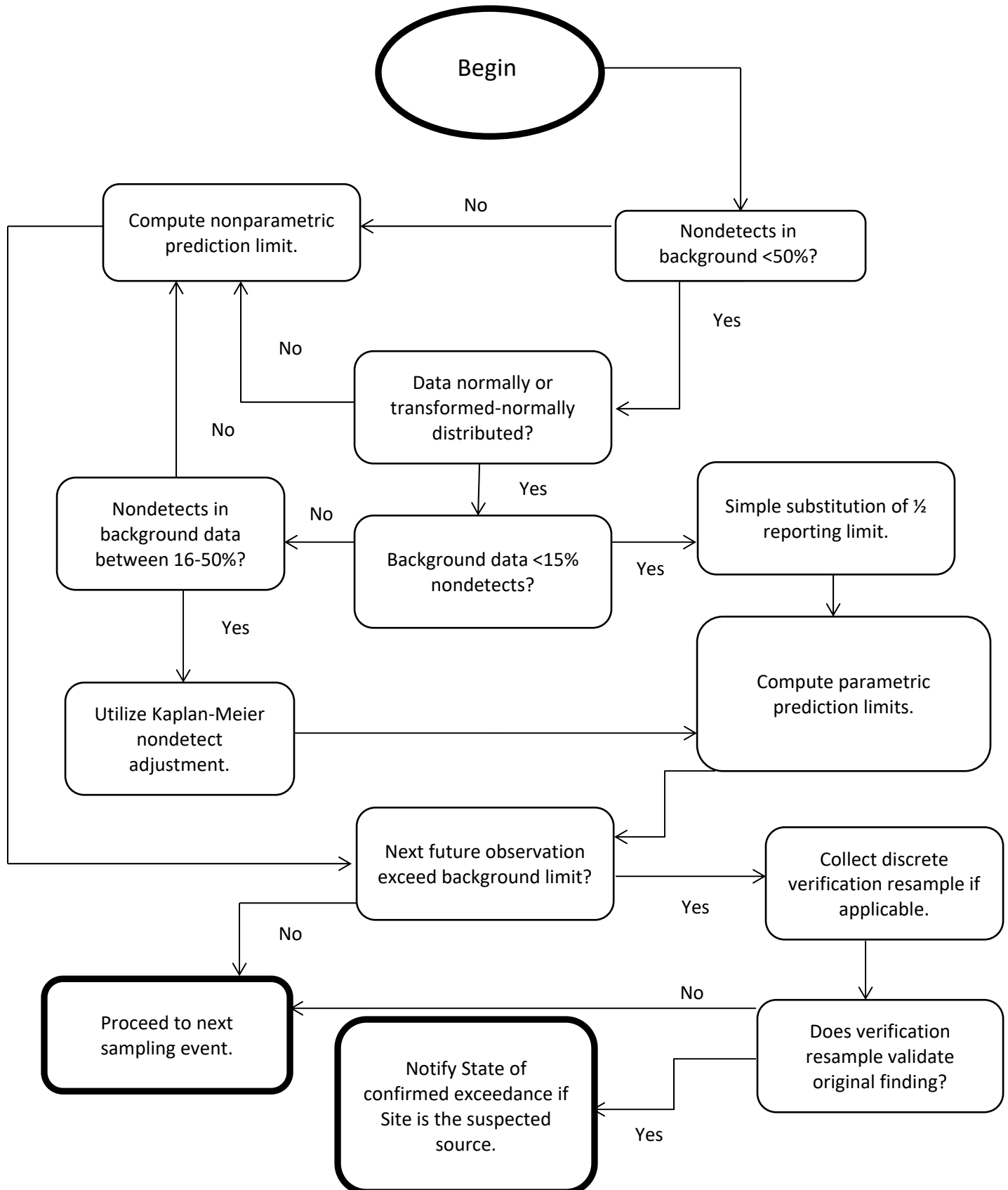


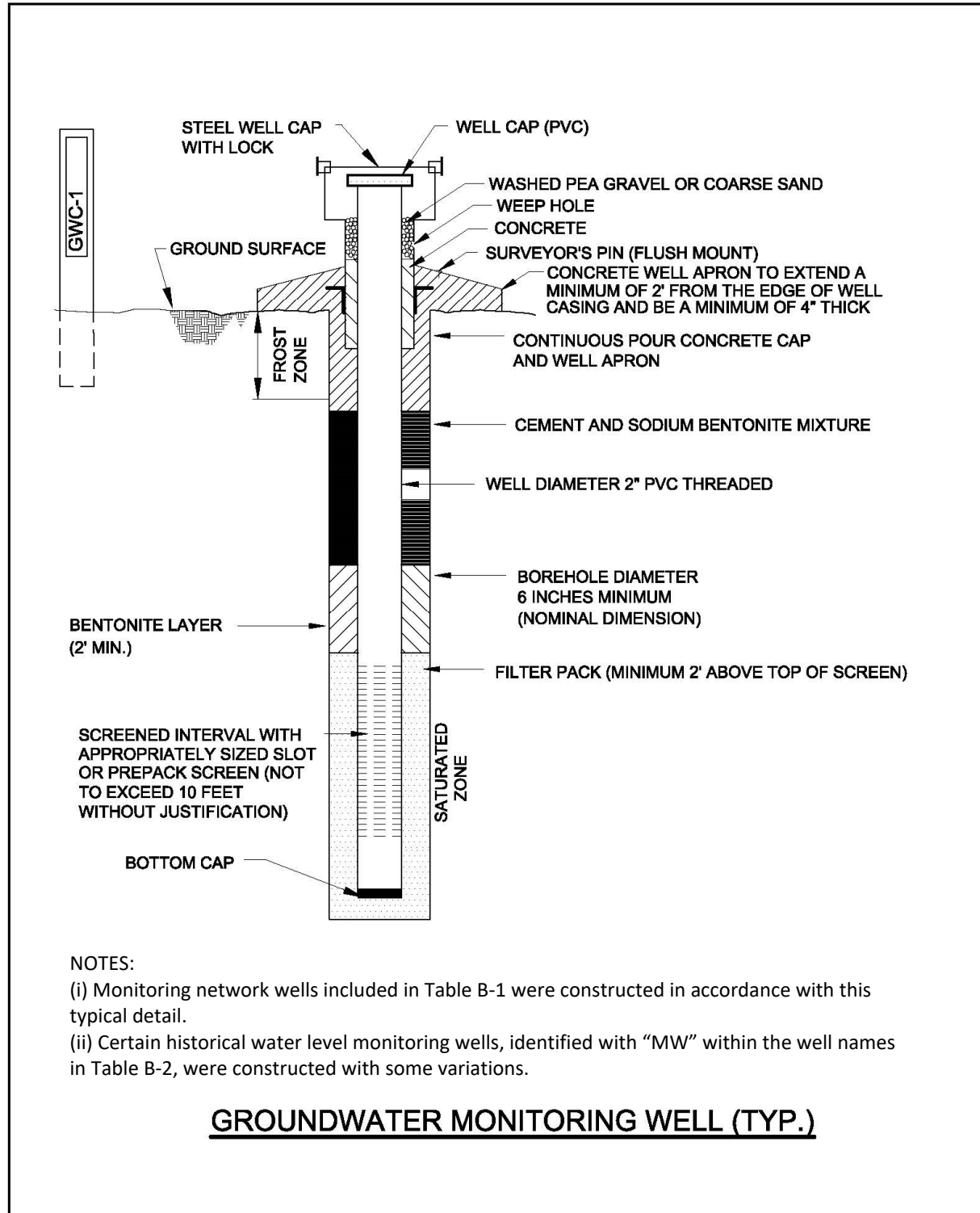
FIGURE 2. DECISION LOGIC FOR COMPUTING PREDICTION LIMITS



APPENDICES

- A. GROUNDWATER MONITORING WELL DETAILS
- B. MONITORING SYSTEM DETAILS
- C. GROUNDWATER SAMPLING PROCEDURES

A. GROUNDWATER MONITORING WELL DETAILS



B. MONITORING SYSTEM DETAILS

TABLE B-1 Monitoring Network Well Construction Details – Plant Mitchell Ash Ponds - A, 1 & 2

TABLE B-2 Groundwater Piezometer Construction Details – Plant Mitchell Ash Ponds - A, 1 & 2

FIGURE B-1A Monitoring Network Well Location Map

FIGURE B-1B Monitoring Well and Groundwater Piezometer Locations with Upper Bedrock
Potentiometric Surface Map – August 23, 2022

Attachment B1 Well Drilling Contractor Proof of Bonding

Attachment B2 Surveyor Certification

Table B-1
Monitoring Network Well Construction Details
Georgia Power Company - Plant Mitchell
Ash Ponds A, 1 & 2
Mitchell and Dougherty Counties, Georgia

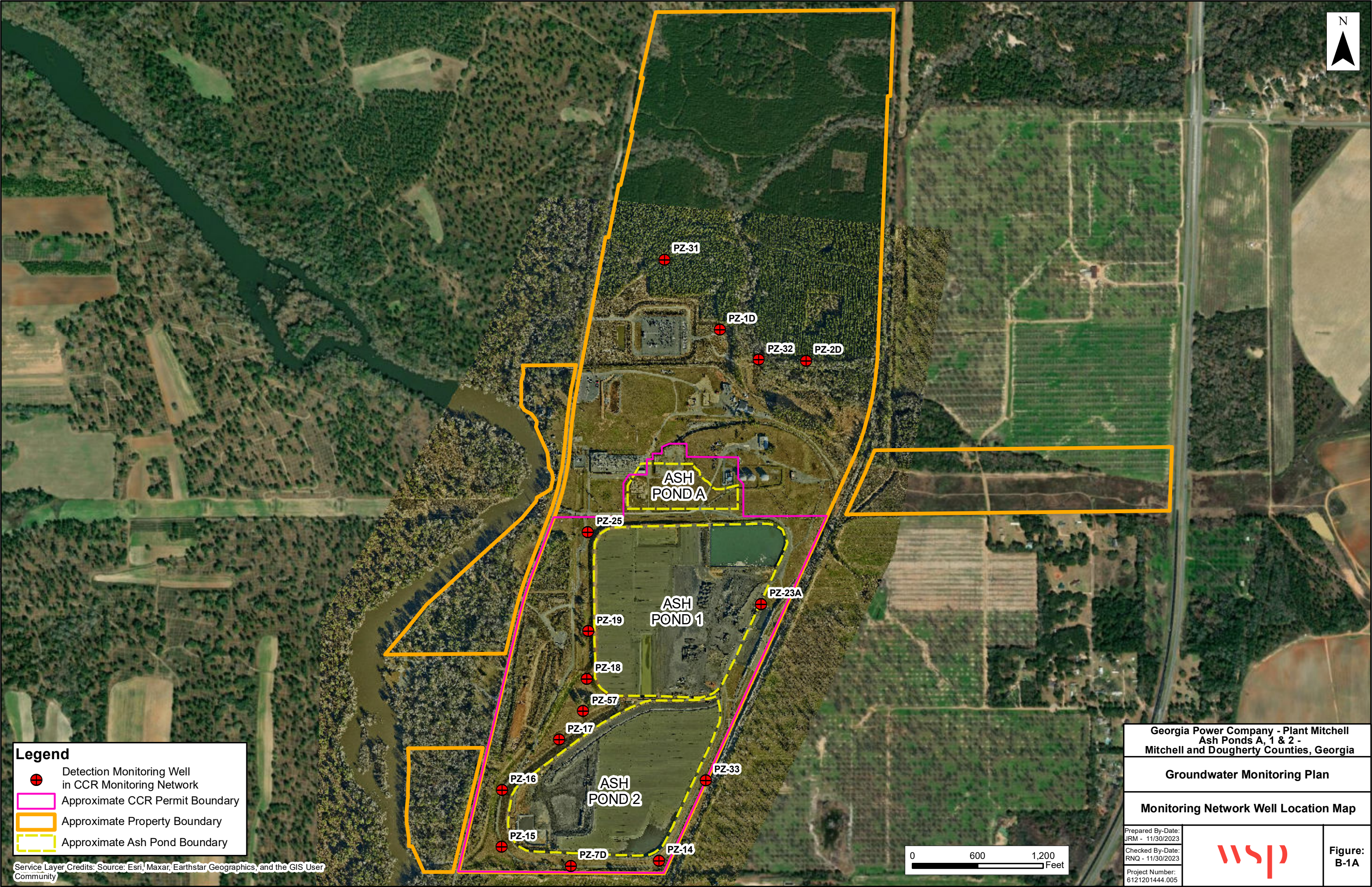
| Well Name | Installation Date | Latitude | Longitude | Northing ⁽¹⁾ | Easting ⁽¹⁾ | Ground Surface Elevation (ft NAVD88) ⁽²⁾ | Top of Casing Elevation (ft NAVD88) ⁽²⁾ | Top of Screen Elevation (ft NAVD88) ⁽³⁾ | Bottom of Screen Elevation (ft NAVD88) ⁽³⁾ | Depth to Groundwater August 23, 2022 (ft below TOC) ⁽⁴⁾ | Groundwater Elevation August 23, 2022 (ft NAVD88) ⁽²⁾ | Total Well Depth on Construction Log (ft below land surface) | Groundwater Zone Screened | Location |
|-----------|-------------------|------------|-------------|-------------------------|------------------------|---|--|--|---|--|--|--|---------------------------|--------------|
| PZ-1D | 6/11/2014 | 31.4472450 | -84.1320980 | 526353.9 | 2307362.8 | 193.44 | 196.44 | 125.8 | 115.8 | 55.16 | 141.28 | 78.0 | Bedrock | Upgradient |
| PZ-2D | 6/10/2014 | 31.4464570 | -84.1295570 | 526067.3 | 2308155.4 | 175.64 | 178.51 | 108.0 | 98.0 | 38.62 | 139.89 | 78.0 | Bedrock | Upgradient |
| PZ-7D | 6/3/2014 | 31.4336960 | -84.1364880 | 521425.1 | 2305995.3 | 170.28 | 173.08 | 123.7 | 113.7 | 35.95 | 137.13 | 57.0 | Bedrock | Downgradient |
| PZ-14 | 7/25/2016 | 31.4338270 | -84.1338940 | 521473.1 | 2306804.8 | 180.85 | 183.46 | 140.9 | 130.9 | 45.87 | 137.59 | 50.0 | Bedrock | Downgradient |
| PZ-15 | 7/23/2016 | 31.4341780 | -84.1385315 | 521600.2 | 2305357.3 | 167.38 | 170.37 | 97.4 | 87.4 | 33.60 | 136.77 | 80.0 | Bedrock | Downgradient |
| PZ-16 | 7/25/2016 | 31.4356210 | -84.1385225 | 522125.0 | 2305359.9 | 171.21 | 173.92 | 131.2 | 121.2 | 36.63 | 137.29 | 50.0 | Bedrock | Downgradient |
| PZ-17 | 7/22/2016 | 31.4368930 | -84.1368364 | 522587.9 | 2305886.7 | 170.12 | 172.91 | 120.1 | 110.1 | 35.56 | 137.35 | 60.0 | Bedrock | Downgradient |
| PZ-18 | 7/23/2016 | 31.4384260 | -84.1360169 | 523145.7 | 2306142.3 | 167.34 | 170.11 | 117.3 | 107.3 | 32.68 | 137.43 | 60.0 | Bedrock | Downgradient |
| PZ-19 | 7/13/2016 | 31.4396260 | -84.1359816 | 523582.1 | 2306153.6 | 169.40 | 172.05 | 120.4 | 110.4 | 34.47 | 137.58 | 60.0 | Bedrock | Downgradient |
| PZ-23A | 3/10/2020 | 31.4403100 | -84.1309165 | 523831.5 | 2307743.4 | 189.06 | 191.85 | 134.6 | 124.6 | 52.95 | 138.90 | 64.5 | Bedrock | Downgradient |
| PZ-25 | 7/20/2016 | 31.4421290 | -84.1359850 | 524492.6 | 2306152.0 | 168.24 | 171.14 | 118.2 | 108.2 | 32.91 | 138.23 | 60.0 | Bedrock | Downgradient |
| PZ-31 | 10/13/2016 | 31.4490120 | -84.1337190 | 526996.3 | 2306857.6 | 180.32 | 182.96 | 133.3 | 123.3 | 41.76 | 141.20 | 57.0 | Bedrock | Upgradient |
| PZ-32 | 10/13/2016 | 31.4464890 | -84.1309419 | 526078.7 | 2307723.7 | 178.19 | 180.75 | 126.2 | 116.2 | 40.70 | 140.05 | 62.0 | Bedrock | Upgradient |
| PZ-33 | 10/2/2016 | 31.4358600 | -84.1325124 | 522212.6 | 2307233.9 | 187.08 | 189.61 | 126.7 | 116.7 | 51.68 | 137.93 | 70.4 | Bedrock | Downgradient |
| PZ-57 | 11/4/2021 | 31.4376110 | -84.1361250 | 522849.9 | 2306107.5 | 166.54 | 169.35 | 107.0 | 97.0 | 32.02 | 137.33 | 70.0 | Bedrock | Downgradient |

Notes:
 (1) Coordinates are North American Datum of 1983 (NAD 83) (2011) Georgia State Plane, West Zone. Monitoring wells were re-surveyed by McKim & Creed, Inc. on June 15, 2020.
 (2) NAVD88 indicates feet (ft) in elevation referenced to the North American Vertical Datum 1988. Monitoring wells were re-surveyed by McKim & Creed, Inc. on June 15, 2020.
 (3) Screen elevations calculated using depth below land surface and ground surface elevations from the June 2020 re-survey.
 (4) feet below top of casing (TOC).

Table B-2
Groundwater Piezometer Construction Details
Georgia Power Company - Plant Mitchell
Ash Ponds A, 1 & 2
Mitchell and Dougherty Counties, Georgia

| Piezometer Name | Installation Date | Latitude | Longitude | Northing ⁽¹⁾ | Easting ⁽¹⁾ | Ground Surface Elevation (ft NAVD88) ⁽²⁾ | Top of Casing Elevation (ft NAVD88) ⁽²⁾ | Top of Screen Elevation (ft NAVD88) ⁽³⁾ | Bottom of Screen Elevation (ft NAVD88) ⁽³⁾ | Depth to Groundwater August 23, 2022 (ft below TOC) ⁽⁴⁾ | Groundwater Elevation August 23, 2022 (ft NAVD88) ⁽²⁾ | Total Piezometer Depth on Construction Log (ft below land surface) | Groundwater Zone Screened |
|-----------------|-------------------|------------|-------------|-------------------------|------------------------|---|--|--|---|--|--|--|-------------------------------|
| PZ-1S | 6/11/2014 | 31.4472540 | -84.1321180 | 526357.1 | 2307356.7 | 193.43 | 196.52 | 145.8 | 135.8 | 26.52 | 154.98 | 58.0 | Overburden (Clay) |
| PZ-2S | 6/10/2014 | 31.4464550 | -84.1295310 | 526066.7 | 2308163.4 | 175.63 | 178.61 | 131.6 | 121.6 | 23.56 | 139.92 | 54.4 | Overburden (Sandy Clay) |
| PZ-3S | 5/28/2014 | 31.4445280 | -84.1303160 | 525365.6 | 2307918.8 | 188.14 | 191.12 | 138.5 | 128.5 | 33.97 | 141.97 | 60.0 | Overburden (Sand/Clayey Sand) |
| PZ-3D | 5/28/2014 | 31.4445490 | -84.1303190 | 525373.2 | 2307918.1 | 188.08 | 190.98 | 110.5 | 100.5 | 38.26 | 139.58 | 88.0 | Bedrock |
| PZ-4S | 5/29/2014 | 31.4413020 | -84.1300410 | 524192.1 | 2308005.0 | 188.42 | 191.20 | 163.8 | 153.8 | 18.89 | 160.45 | 35.0 | Overburden (Sand/Clay) |
| PZ-4D | 5/29/2014 | 31.4413180 | -84.1300270 | 524198.2 | 2308009.5 | 188.25 | 191.10 | 142.7 | 132.7 | 41.34 | 138.99 | 56.0 | Bedrock |
| PZ-6S | 6/13/2014 | 31.4359740 | -84.1326000 | 522254.0 | 2307207.5 | 186.52 | 189.47 | 148.9 | 138.9 | 10.72 | 162.59 | 48.0 | Overburden (Clay) |
| PZ-7S | 6/3/2014 | 31.4336940 | -84.1364640 | 521424.4 | 2306002.8 | 170.10 | 173.10 | 146.5 | 136.5 | 27.22 | 138.23 | 34.0 | Overburden (Clay) |
| PZ-8S | 6/5/2014 | 31.4337380 | -84.1389820 | 521440.2 | 2305217.4 | 167.67 | 170.78 | 142.9 | 132.9 | 17.72 | 138.19 | 35.2 | Overburden (Sand) |
| PZ-8D | 6/5/2014 | 31.4337430 | -84.1390130 | 521442.1 | 2305207.9 | 167.24 | 170.35 | 100.6 | 90.6 | 25.82 | 137.60 | 77.0 | Bedrock |
| PZ-9S | 6/5/2014 | 31.4346280 | -84.1392760 | 521763.7 | 2305125.7 | 163.06 | 166.02 | 145.5 | 135.5 | 21.61 | 137.34 | 28.0 | Overburden (Sand)/Bedrock |
| PZ-9D | 6/4/2014 | 31.4346470 | -84.1392700 | 521770.9 | 2305127.5 | 163.18 | 166.16 | 126.6 | 116.6 | 21.70 | 137.42 | 47.0 | Bedrock |
| PZ-12S | 6/4/2014 | 31.4402110 | -84.1375070 | 523794.9 | 2305676.8 | 170.93 | 173.92 | 133.3 | 123.3 | 28.97 | 137.70 | 48.0 | Bedrock |
| PZ-13S | 6/6/2014 | 31.4420590 | -84.1370800 | 524467.0 | 2305810.0 | 170.23 | 173.22 | 132.6 | 122.6 | 28.11 | 138.16 | 48.0 | Overburden (Clay) |
| PZ-20 | 7/14/2016 | 31.4408440 | -84.1359810 | 524025.0 | 2306152.6 | 170.62 | 173.44 | 121.1 | 111.1 | 27.46 | 137.65 | 60.0 | Bedrock |
| PZ-21 | 7/29/2016 | 31.4425330 | -84.1334810 | 524639.5 | 2306932.0 | 177.08 | 179.84 | 117.1 | 107.1 | 31.83 | 138.53 | 70.0 | Bedrock |
| PZ-22 | 7/28/2016 | 31.4424850 | -84.1308620 | 524622.4 | 2307749.0 | 184.76 | 187.69 | 134.8 | 124.8 | 37.81 | 138.81 | 60.0 | Bedrock |
| PZ-24A | 3/6/2020 | 31.4384420 | -84.1318350 | 523151.8 | 2307445.9 | 192.25 | 194.97 | 142.3 | 132.3 | 47.17 | 138.38 | 60.0 | Bedrock |
| PZ-27 | 10/4/2016 | 31.4364880 | -84.1389250 | 522440.4 | 2305235.1 | 161.88 | 164.58 | 123.6 | 113.6 | 18.90 | 137.27 | 48.3 | Bedrock |
| PZ-28 | 10/13/2016 | 31.4379000 | -84.1385650 | 522953.9 | 2305347.3 | 163.49 | 165.96 | 126.5 | 116.5 | 20.68 | 137.39 | 47.0 | Bedrock |
| PZ-29 | 10/4/2016 | 31.4403840 | -84.1377760 | 523857.8 | 2305593.0 | 170.42 | 173.18 | 123.9 | 113.9 | 28.23 | 137.77 | 56.5 | Bedrock |
| MW-101 | 2/14/1995 | 31.4421700 | -84.1359570 | 524507.6 | 2306160.1 | 168.14 | 170.93 | 154.8 | 145.3 | 12.46 | 147.77 | 23.4 | Overburden (Sand and Clay) |
| MW-102 | 2/22/1995 | 31.4421720 | -84.1359780 | 524508.2 | 2306153.6 | 168.10 | 170.93 | 132.0 | 122.8 | 24.54 | 138.23 | 45.9 | Bedrock |
| MW-116 | 2/23/1995 | 31.4398130 | -84.1362060 | 523649.9 | 2306082.5 | 168.93 | 171.69 | 100.7 | 94.3 | 26.10 | 137.60 | 75.2 | Bedrock |
| MW-120 | 2/24/1995 | 31.4441170 | -84.1329390 | 525216.0 | 2307100.9 | 191.03 | 193.79 | 152.4 | 143.3 | 43.27 | Dry | 48.3 | Overburden (Clay)/Bedrock |

Notes:
(1) Coordinates are North American Datum of 1983 (NAD 83) (2011) Georgia State Plane, West Zone. Piezometers were re-surveyed by McKim & Creed, Inc. on June 15, 2020.
(2) NAVD88 indicates feet (ft) in elevation referenced to the North American Vertical Datum 1988. Piezometers were re-surveyed by McKim & Creed, Inc. on June 15, 2020.
(3) Screen elevations calculated using depth below land surface and ground surface elevations from the June 2020 re-survey.
(4) feet below top of casing (TOC).



Legend

- Detection Monitoring Well in CCR Monitoring Network
- Approximate CCR Permit Boundary
- Approximate Property Boundary
- Approximate Ash Pond Boundary

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

| | | |
|--|--|-----------------|
| Georgia Power Company - Plant Mitchell Ash Ponds A, 1 & 2 - Mitchell and Dougherty Counties, Georgia | | |
| Groundwater Monitoring Plan | | |
| Monitoring Network Well Location Map | | |
| Prepared By-Date: JRM - 11/30/2023 | | Figure: B-1A |
| Checked By-Date: RNQ - 11/30/2023 | | |
| Project Number: 6121201444.005 | | |

Notes:

1. Piezometers (PZ-2S and PZ-6S) screened in the Overburden were not used to generate potentiometric contours.
2. August 2022 groundwater elevations calculated using top of well casing elevations from the June 2020 re-surveying except for PZ-01R and PZ-02R which were not re-surveyed in June 2020 because construction prevented access to the wells.
3. Piezometers screened in the Overburden are shown on this map for location purposes only and were not used to generate potentiometric surface contours.
4. Piezometers PZ-01R, PZ-02R, PZ-10S, MW-111, and MW-113 are not permit wells. PZ-02R was abandoned September 12, 2023.

Legend

141.28

Groundwater Elevation (ft NAVD88)

Groundwater Elevation Well (Piezometer)
Screened in Bedrock

Detection Monitoring Well in
CCR Monitoring Network

Piezometer Screened in the Overburden

Interpreted Groundwater Flow Direction

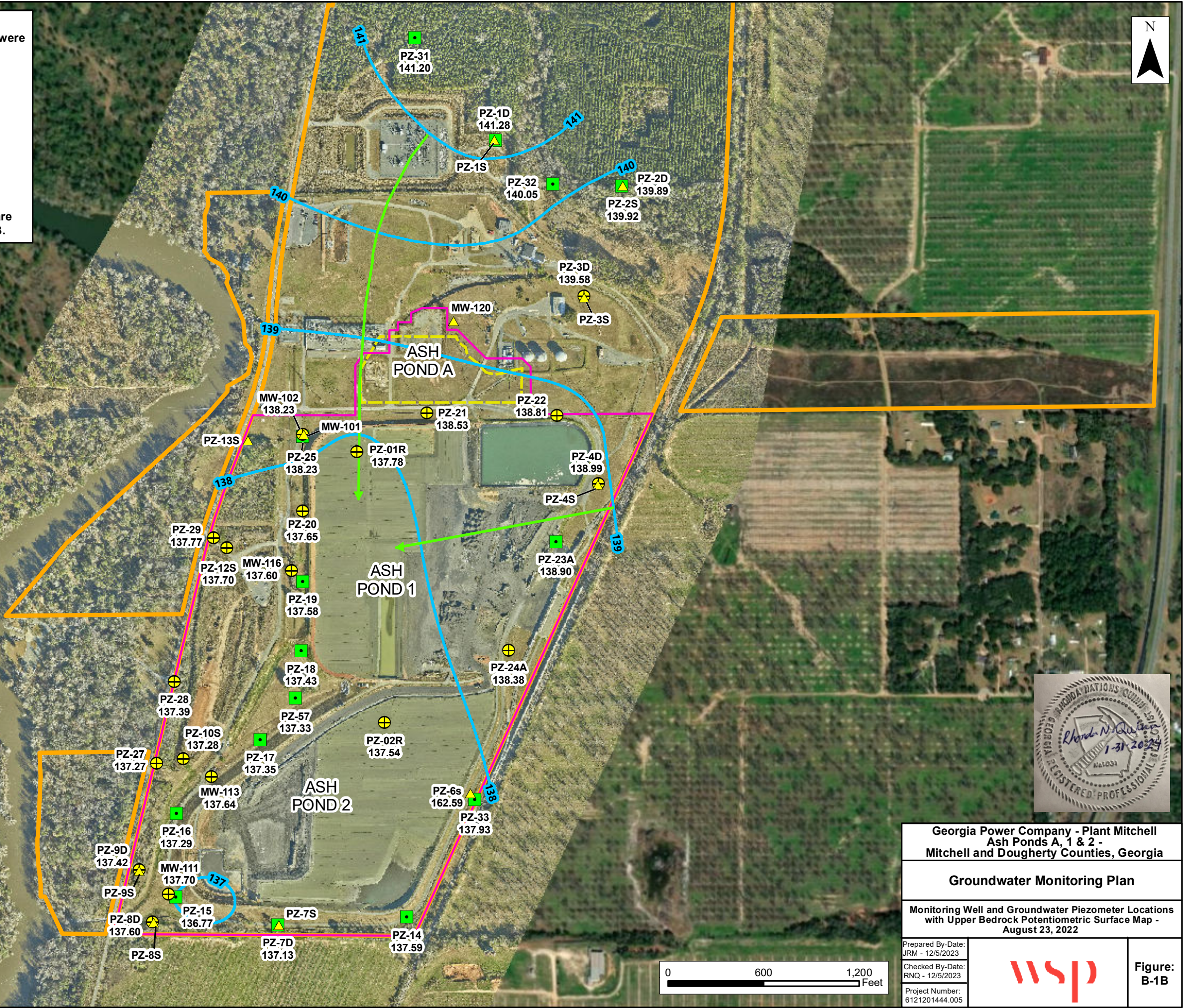
Potentiometric Surface Contour (ft NAVD88)

Approximate Property Boundary

Approximate CCR Permit Boundary

Approximate Ash Pond A Location

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Georgia Power Company - Plant Mitchell
Ash Ponds A, 1 & 2 -
Mitchell and Dougherty Counties, Georgia

Groundwater Monitoring Plan

Monitoring Well and Groundwater Piezometer Locations
with Upper Bedrock Potentiometric Surface Map -
August 23, 2022

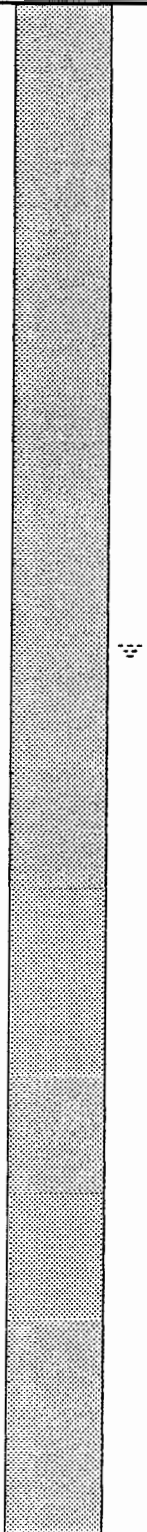
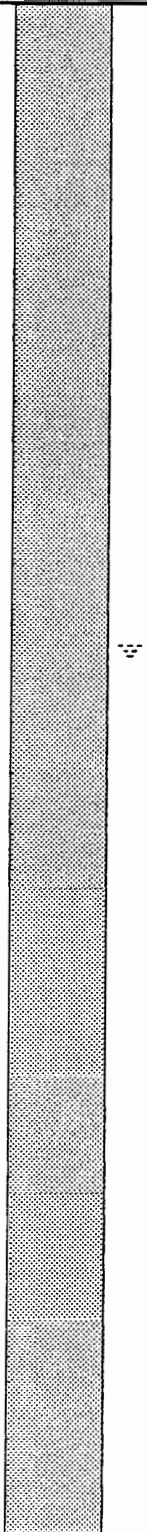
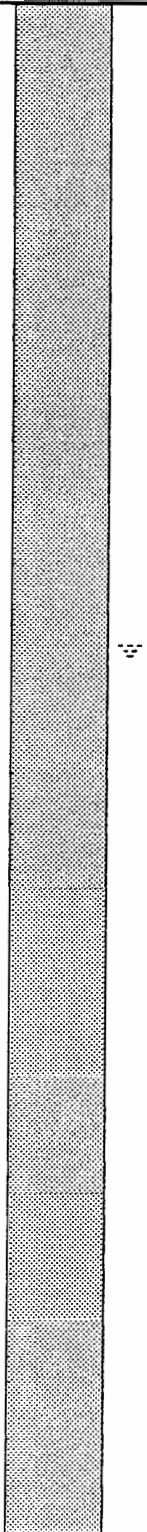
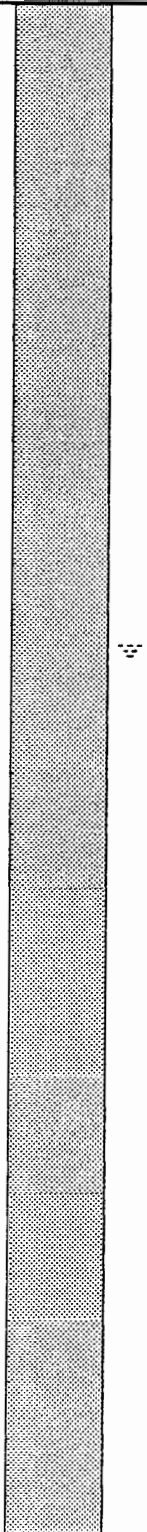
Prepared By-Date:
JRM - 12/5/2023

Checked By-Date:
RNQ - 12/5/2023

Project Number:
6121201444.005

Figure:
B-1B

TEST BORING RECORD

| ELEVATION (FEET) | DEPTH (FEET) | DESCRIPTION | WELL DIAGRAM |
|---------------------|-----------------|--|---|
| 168.1 | 1.0 | Brown silty to clayey fine SAND with roots (SM/SC) |  |
| | 1.6 | Olive gray slightly silty fine SAND (SP) | |
| 163.1 | | Mottled light gray, yellowish orange and pink sandy CLAY with increasing sand content with depth (CL) | |
| | 7.5 | | |
| 158.1 | | Yellowish orange slightly clayey fine to medium SAND with trace of coarse sand (SP) | |
| | 14.5 | | |
| 153.1 | 14.5 | Yellowish orange slightly sandy to sandy CLAY with 0.1 ft white band of sandy clay (CL) | |
| | 16.5 | | |
| 148.1 | | Banded yellowish brown and light brown silty to clayey fine SAND (SM/SC) with 0.1 ft fine gravel layers at 20.5 ft and 21.3 ft | |
| | 21.5 | | |
| 143.1 | | Red brown and dark brown CLAY (CL) with trace of coarse sand with fine limestone gravel |  |
| | 28.7 | | |
| 138.1 | | Light gray to light greenish gray slightly silty calcarious fine SAND (SP) strong cementation, shell fragments | |
| | | |  |
| 133.1 | | | |
| 123.1 | 39.5 | Light gray slightly silty calcarious fine SAND (SP) very soft |  |

REMARKS:

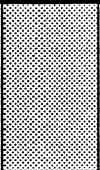
- 1) Boring advanced using 8-inch O.D. hollow stem augers with CME continuous samplers.
- 2) Boring grouted to ground surface upon completion, no soil or ground-water retained for analyses.

DRILLED BY SCS
 LOGGED BY TDM
 CHECKED BY

BORING NUMBER SB-101
 DATE STARTED 2-7-95
 DATE COMPLETED 2-7-95
 JOB NUMBER 41-4621



TEST BORING RECORD

| ELEVATION (FEET) | DEPTH (FEET) | DESCRIPTION | WELL DIAGRAM |
|---------------------|-----------------|---|--|
| 127.7 | | |  |
| | 42.0 | Light gray slightly silty calcarious fine SAND (SP) strong cementation | |
| 122.7 | 44.5 | Boring terminated at 44.50 feet | |
| 117.7 | | | |
| 112.7 | | | |
| 107.7 | | | |
| 102.7 | | | |
| 97.7 | | | |
| 92.7 | | | |
| 87.7 | | | |

REMARKS:

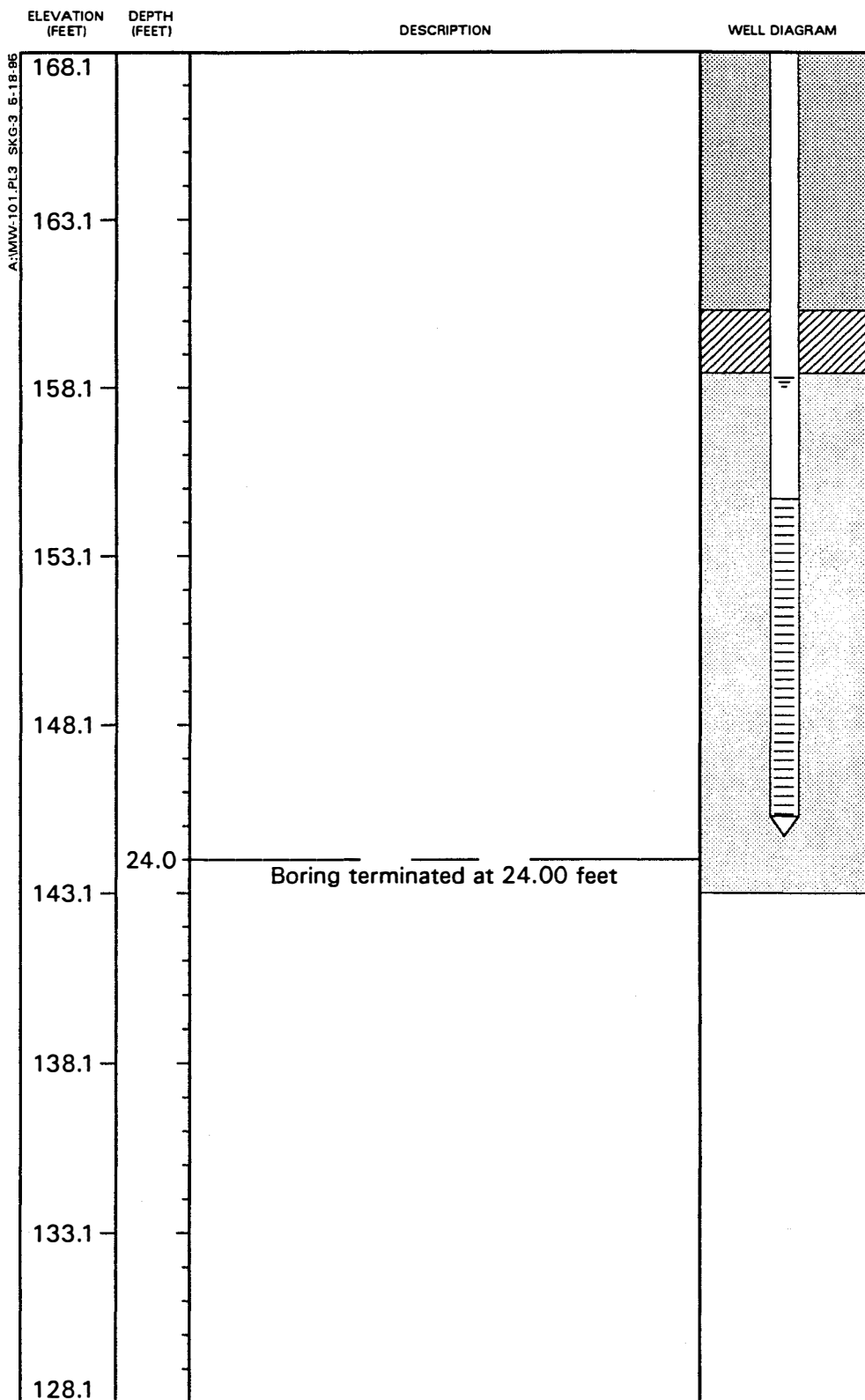
DRILLED BY SCS
LOGGED BY TDM
CHECKED BY

BORING NUMBER SB-101
DATE STARTED 2-7-95
DATE COMPLETED 2-7-95
JOB NUMBER 41-4621



TEST BORING RECORD

DATUM ELEVATION: 170.93 Ft.
 HEIGHT OF RISER: 2.79 Ft.



REMARKS:

- 1) Boring advanced using 8-inch O.D. hollow stem augers with CME continuous samplers.
- 2) Type II ground-water monitoring well installed consisting of 2-inch I.D. PVC riser and slotted screen.
- 3) Samples retained for laboratory analyses include soil samples MW-101 0-5' and a duplicate, MW-101 5-10', and ground-water sample MW-101-U and MW-100-F.

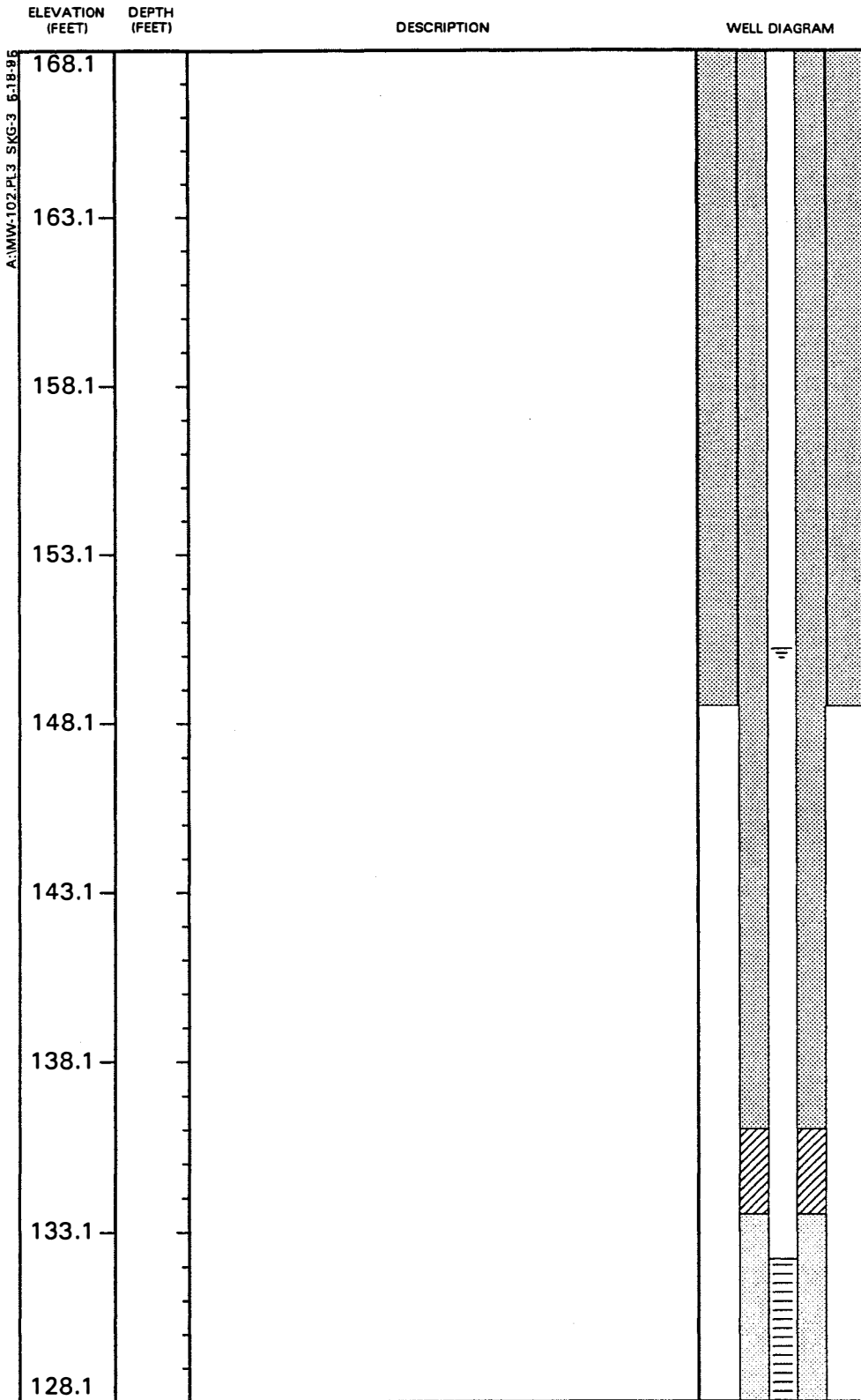
DRILLED BY SCS
 LOGGED BY TDM
 CHECKED BY TMK

BORING NUMBER MW-101
 DATE STARTED 2/14/95
 DATE COMPLETED 2/14/95
 JOB NUMBER 41/4621



TEST BORING RECORD

DATUM ELEVATION: 170.93 Ft.
 HEIGHT OF RISER: 2.83 Ft.



REMARKS:

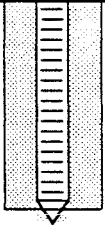
- 1) Borehole advanced to 19.5 with 10-inch O.D. hollow stem augers. A 5-inch ID PVC outer casing was installed to the 19.5 foot depth, then the borehole was advanced to 44.5 foot depth by rotary wash methods using a 4 7/8-inch roller bit.
- 2) Type III ground-water monitoring well completed with 2-inch PVC riser and slotted screen.
- 3) Samples retained for laboratory analyses include ground-water samples MW-102-U, MW-102-F and duplicate MW-100-U.

DRILLED BY SCS
 LOGGED BY TDM
 CHECKED BY TMK

BORING NUMBER MW-102
 DATE STARTED 2/14/95
 DATE COMPLETED 2/22/95
 JOB NUMBER 41-4621



TEST BORING RECORD

| ELEVATION (FEET) | DEPTH (FEET) | DESCRIPTION | WELL DIAGRAM |
|---------------------|-----------------|---------------------------------|--|
| 128.1 | | |  |
| 123.1 | 45.5 | Boring terminated at 45.50 feet | |
| 118.1 | | | |
| 113.1 | | | |
| 108.1 | | | |
| 103.1 | | | |
| 98.1 | | | |
| 93.1 | | | |
| 88.1 | | | |

REMARKS:

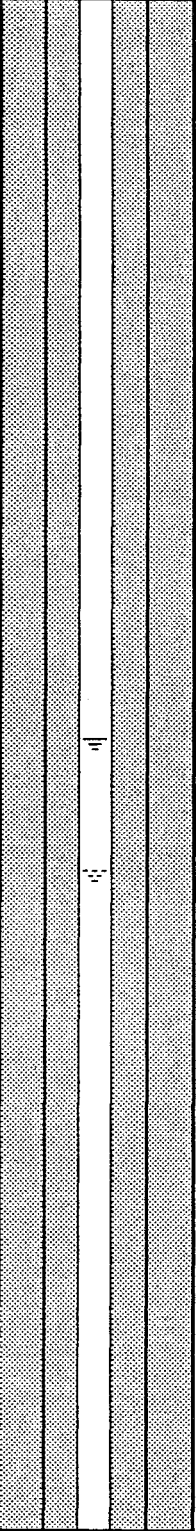
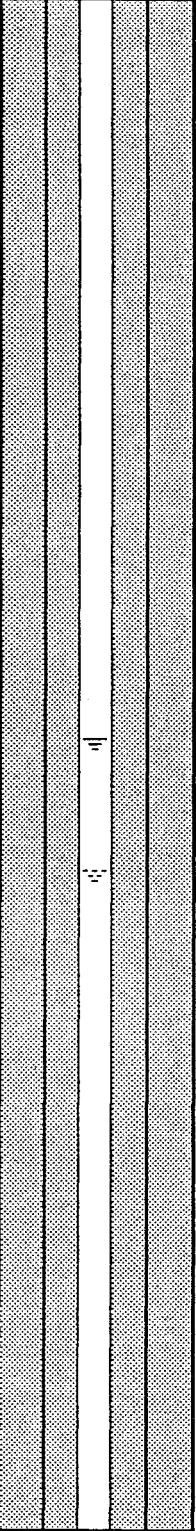
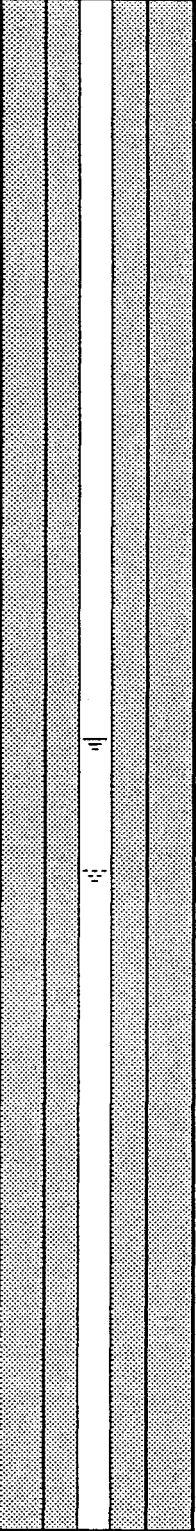
DRILLED BY SCS
LOGGED BY TDM
CHECKED BY TMK

BORING NUMBER MW-102
DATE STARTED 2/14/95
DATE COMPLETED 2/22/95
JOB NUMBER 41-4621



TEST BORING RECORD

 DATUM ELEVATION: 171.69 Ft.
 HEIGHT OF RISER: 2.76 Ft.

| ELEVATION (FEET) | DEPTH (FEET) | DESCRIPTION | WELL DIAGRAM |
|---------------------|-----------------|--|---|
| 168.9 | 0.0 | Dark brown and olive gray clayey SAND with roots (SC) |  |
| 163.9 | 6.4 | Mottled yellowish orange, gray, and red brown sandy CLAY (CL) | |
| 158.9 | 9.0 | Mottled yellowish orange and gray clayey SAND (SC) | |
| | 11.0 | Mottled yellowish orange and gray clayey SAND (SC) | |
| | 13.0 | | |
| 153.9 | | |  |
| 148.9 | | Light gray slightly silty fine SAND with trace of coarse sand (SP) | |
| 143.9 | | | |
| 138.9 | | | |
| | 31.9 | | |
| 133.9 | | Yellowish orange and red brown slightly silty fine to medium SAND with trace of coarse SAND (SP) |  |
| 128.9 | | | |

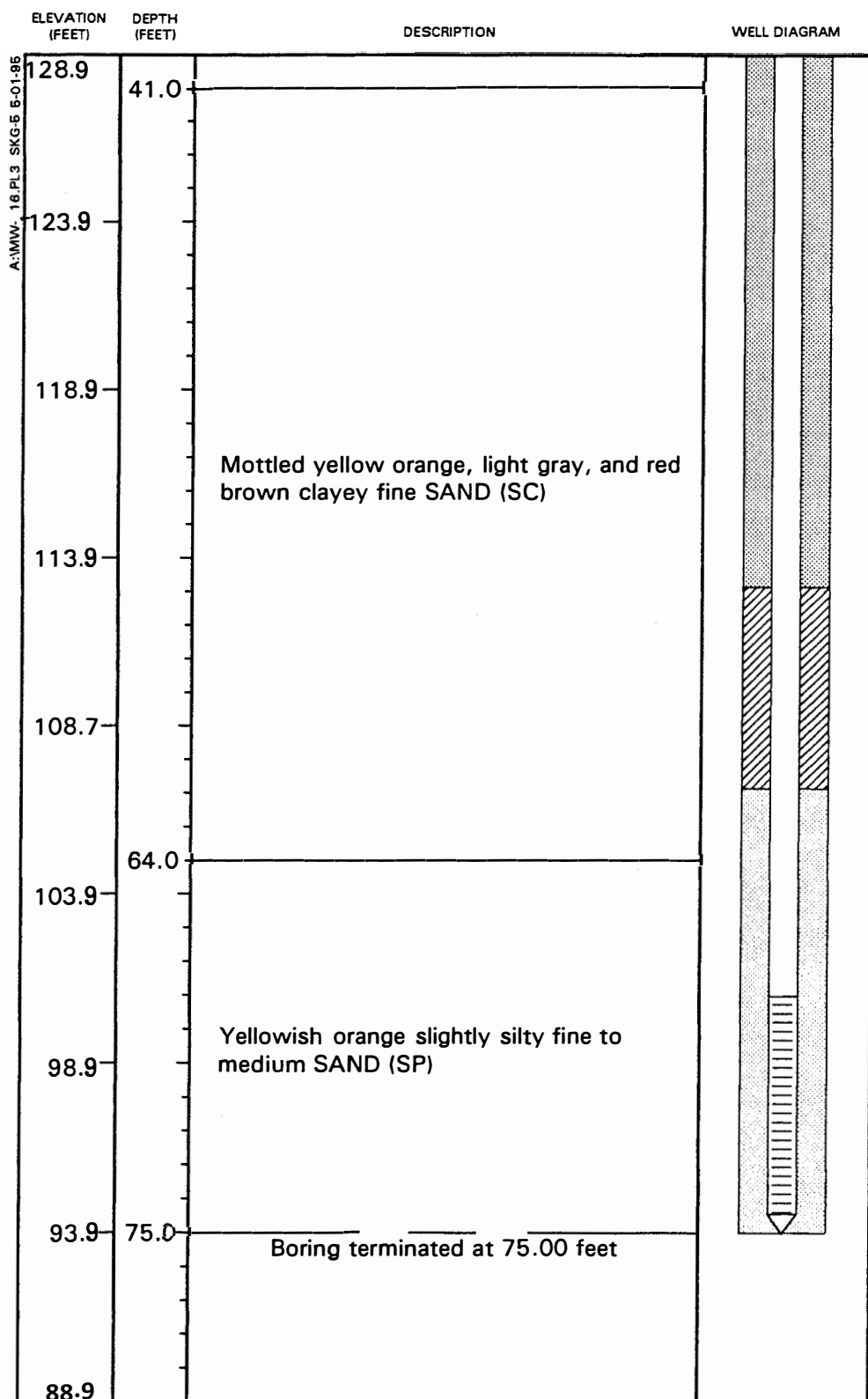
REMARKS:

- Borehole advanced to 40 foot depth with 8-inch O.D. hollow stem auger. A 5-inch ID PVC outer casing was installed to the 40 foot depth, then the boring was advanced to the 75 foot depth by rotary wash methods using a 4 7/8-inch roller bit.
- The ground-water monitoring well was completed with 2-inch ID PVC riser and slotted screen.
- Samples retained for laboratory analysis include soil sample MW-116 0-5' and ground-water samples MW-116-U and MW-116-F.

 DRILLED BY SCS
 LOGGED BY TDM
 CHECKED BY TMK

 BORING NUMBER MW-116
 DATE STARTED 2/15/95
 DATE COMPLETED 2/23/95
 JOB NUMBER 41-4621


TEST BORING RECORD



REMARKS:

DRILLED BY SCS
 LOGGED BY TDM
 CHECKED BY TMK

BORING NUMBER MW-116
 DATE STARTED 2/15/95
 DATE COMPLETED 2/23/95
 JOB NUMBER 41-4621



TEST BORING RECORD

 DATUM ELEVATION: 193.79 Ft.
 HEIGHT OF RISER: 2.95 Ft.

| ELEVATION (FEET) | DEPTH (FEET) | DESCRIPTION | WELL DIAGRAM |
|---------------------|-----------------|---|--------------|
| 191.1 | 1.0 | Brown clayey silty fine SAND | |
| 186.1 | | Red brown fine sandy clay with well rounded fine gravel (CL) | |
| 181.1 | 9.5 | Red brown, yellow orange and light gray fine sandy CLAY (CL) | |
| 176.1 | 14.0 | Dark red, light gray and light brown fine sandy CLAY (CL) | |
| 171.1 | 19.0 | Red brown, light gray and light brown clayey fine SAND (SC) | |
| | 21.5 | Red brown, light brown and yellow orange fine sandy CLAY (CL) | |
| 166.1 | 24.5 | Purple, red brown and yellow orange fine to medium sandy CLAY with well rounded gravel (CL) | |
| | 26.5 | Dark brown, black and light brown fine sandy CLAY (CL) | |
| 161.1 | 29.5 | Black, light brown and yellow orange silty CLAY (CL/CH) | |
| 156.1 | 35.0 | Yellow orange fossiliferous slightly cemented SAND (SP) | |
| | 36.0 | Black and light brown silty CLAY (CL/CH) | |
| 151.1 | | | |

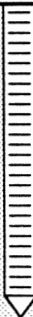
REMARKS:

- 1) Borehole advanced using 8-inch O.D. hollow stem augers with CME continuous sampler.
- 2) Type II ground-water monitoring well installed consisting of 2-inch ID PVC riser and slotted screen.
- 3) Samples retained for laboratory analysis include soil sample MW-120 0-5' and ground-water samples MW-120-U and MW-120-F.

 DRILLED BY SCS
 LOGGED BY DME
 CHECKED BY TDM

 BORING NUMBER MW-120
 DATE STARTED 2-23-95
 DATE COMPLETED 2-24-95
 JOB NUMBER 41-4621


TEST BORING RECORD

| ELEVATION (FEET) | DEPTH (FEET) | DESCRIPTION | WELL DIAGRAM |
|---------------------|-----------------|--|---|
| 151.1 | | |  |
| 146.1 | 42.5 | White fine to medium SAND. Strongly cemented and fossiliferous | |
| 141.1 | 48.5 | Boring terminated at 48.50 feet | |
| 136.1 | | | |
| 131.1 | | | |
| 126.1 | | | |
| 121.1 | | | |
| 116.1 | | | |
| 111.1 | | | |

REMARKS:

DRILLED BY SCS
LOGGED BY DME
CHECKED BY TDM

BORING NUMBER MW-120
DATE STARTED 2-23-95
DATE COMPLETED 2-24-95
JOB NUMBER 41-4621





LOG OF TEST BORING

BORING PZ-01 D

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 6/10/2014 COMPLETED 6/11/2014 SURF. ELEV. 193.44 ft. msl COORDINATES: N: 31.447245 E: -84.132098

CONTRACTOR Cascade EQUIPMENT METHOD Rotosonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING 196.44 ft msl

BORING DEPTH 78 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 46.4 ft. after 144 hrs.

NOTES

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|---|-----------------------------|---|
| | | | | | Completion: protective steel cover with bollards; 4-foot square concrete pad Surface Seal: concrete |
| 5 | | - CLAY (CL), dry, stiff, red with yellow-brown and light gray mottling | | | |
| 10 | | - CLAY (CL), dry, yellow-brown, with light gray and light red mottling | | | |
| 15 | | - silty CLAY (CL), dry to damp, pink-gray with light red mottling, somewhat plastic | | | |
| 20 | | - silty CLAY (CL), dry to damp, pink-gray with light red mottling, somewhat plastic | | | |
| 25 | | | | | |
| 30 | | - silty CLAY (CL), damp, stiff, red with light gray and yellow-brown mottling - CLAY (CL), damp to dry, red with light gray and yellow-brown mottling, few thin silty seams | | | |
| 35 | | | | | |
| 40 | | - Clayey SAND (SC), wet to damp, yellow-red with red and light gray mottling, interbedded by few fat clay seams | | | |
| 45 | | | | | |

Annular Fill:
cement-bentonite grout

(Continued Next Page)



LOG OF TEST BORING

BORING PZ-01 D
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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers
LOCATION Plant Mitchell, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - \\VALTRCFP01\X2\WSHAUGS\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|---|-----------------------------|--|
| | | | | | Completion: protective steel cover with bollards; 4-foot square concrete pad |
| | | (Con't) | | | (CONTINUED) |
| 50 | | - sandy CLAY (CL), dry, very stiff, red with light gray mottling | | | |
| | | - clayey SILT (MH), saturated, pale yellow | | | |
| | | - sandy CLAY (CH), wet, brown with black and pale brown mottling | | | |
| 55 | | - sandy CLAY (CH), wet, light gray with light red and dark red mottling, plastic, few 2-inch thick sand seams | | | Annular Fill: cement-bentonite grout |
| 60 | | - CLAY (CH), wet to damp, dark brown, plastic | | | |
| | | - clayey SAND (SC), saturated, white, gravel concretions, carbonate | | | Annular Seal: bentonite chips |
| 65 | | | | | Filter: silica filter sand |
| 70 | | - clayey SAND (SC), saturated, white, gravel concretions, carbonate | | | |
| 75 | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack |
| 80 | | Bottom of borehole at 78.0 feet. | | | Sump: 0.400000000000006 ft. |
| 85 | | | | | |
| 90 | | | | | |
| 95 | | | | | |



LOG OF TEST BORING

BORING PZ-01 S

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 6/11/2014 COMPLETED 6/11/2014 SURF. ELEV. 193.43 ft. msl COORDINATES: N:31.447254 E:-84.132118

CONTRACTOR Cascade EQUIPMENT METHOD Rotasonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING 196.52 ft msl

BORING DEPTH 58 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 29.9 ft. after 144 hrs.

NOTES

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | | | | Surface Seal: concrete |
| 5 | | - CLAY (CL), dry, red with yellow-red mottles | | | |
| 10 | | - CLAY (CL), dry, stiff, pink-gray with yellow-brown mottling | | | |
| 15 | | | | | |
| 20 | | - CLAY (CL), dry, red with yellow-brown and light gray mottling | | | Annular Fill: cement-bentonite grout |
| 25 | | - sandy CLAY (CL), damp, red-yellow and weak red with red-gray mottling | | | |
| 30 | | - sandy CLAY (CL), damp, stiff, yellow-brown with light gray mottles, somewhat plastic | | | |
| | | - clayey SAND (SC), wet, yellow-brown with red mottling, medium grained | | | |
| | | - CLAY (CL), dry, hard, light gray with yellow-brown mottling | | | |
| 35 | | - sandy CLAY (CL), dry, hard, weak red with light gray mottling | | | Annular Seal: bentonite chips |
| 40 | | - clayey SAND (SC), wet, light gray with weak red mottling | | | |
| | | - sandy CLAY (CL), damp, medium stiff, red with pale brown mottling | | | Filter: silica filter sand |
| | | - sandy CLAY (CL), damp, brown with black and white mottling | | | |
| 45 | | - sandy CLAY (CL), damp to wet, light gray with weak red and yellow- | | | |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - VALTRCFP01X2WSHAUG\$DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

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LOG OF TEST BORING

BORING PZ-01 S

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION <small>Weak Moderate Strong</small> | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|--|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | brown mottling (Con't) | | | (CONTINUED) |
| 50 | | - sandy CLAY (CH), wet, black with red-yellow mottling, plastic, some fine gravel | | | Filter: silica filter sand |
| 55 | | - CLAY (CH), damp, light gray with pale red mottling, plastic | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack |
| 60 | | Bottom of borehole at 58.0 feet. | | | Sump: 0.3999999999999999 ft. |
| 65 | | | | | |
| 70 | | | | | |
| 75 | | | | | |
| 80 | | | | | |
| 85 | | | | | |
| 90 | | | | | |
| 95 | | | | | |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - \\ALTRCFP01\X2\WSHAUGS\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ



LOG OF TEST BORING

BORING PZ-02 D

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 6/9/2014 COMPLETED 6/10/2014 SURF. ELEV. 175.64 ft. msl COORDINATES: N:31.446457 E:-84.129557

CONTRACTOR Cascade EQUIPMENT METHOD Rotosonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING 178.51 ft msl

BORING DEPTH 78 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 28.1 ft. after 120 hrs.

NOTES

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|---|-----------------------------|---|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad Surface Seal: concrete |
| 5 | | - sandy SILT (ML), dry, dark brown to brown, top soil | | | |
| | | - silty SAND (SM), dry, dark yellow-brown, fine grained | | | |
| | | - SAND (SP), dry, red, fine grained | | | |
| 10 | | - SAND (SP), dry, red, fine grained | | | |
| 15 | | - clayey SAND (SC), damp to dry, pale yellow-brown to red | | | |
| 20 | | - sandy CLAY (CL), damp, light gray with red and yellow-brown mottling, somewhat plastic | | | |
| | | - clayey SAND (SC), damp to wet, pale brown and pink, interbedded by 2-3 inch sand seams | | | |
| 25 | | - sandy CLAY (CL), damp, red with pale brown mottling | | | |
| 30 | | - CLAY (CL), dry, hard, white with red and yellow-brown mottling | | | |
| | | - CLAY (CL), damp, stiff, red with yellow-brown and light gray mottling, somewhat plastic, some sand | | | |
| | | - CLAY (CL), damp, stiff, dark red and weak red with yellow-brown mottling | | | |
| 35 | | - ---3 inch thick sand seam | | | |
| 40 | | - sandy CLAY (CL-CH), wet, brown with few red and white mottling | | | |
| 45 | | | | | |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - VALTRCFP01X2WSHAUG\$DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

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LOG OF TEST BORING

BORING PZ-02 D
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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers
LOCATION Plant Mitchell, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - \\ALTRCFP01\X2\WSHAUGS\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | (Con't) - CLAY (CH), wet, dark brown, plastic | | | (CONTINUED) |
| 50 | | - clayey SAND (SC), wet, loose, white, fine to medium grained, carbonate - CLAY (CH), brown -- interbedded with loose clayey SAND (SC), carbonate | | | |
| 55 | | - clayey SAND (SC), saturated, white, brown and pale brown, fine to medium grained, carbonate | | | Annular Fill: cement-bentonite grout |
| 60 | | - clayey SAND (SC), saturated, white, gravel concretions, carbonate | | | |
| 65 | | | | | Annular Seal: bentonite chips |
| 70 | | - clayey SAND (SC), saturated, white, gravel concretions, carbonate | | | Filter: silica filter sand |
| 75 | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack |
| 80 | | Bottom of borehole at 78.0 feet. | | | Sump: 0.400000000000006 ft. |
| 85 | | | | | |
| 90 | | | | | |
| 95 | | | | | |



LOG OF TEST BORING

BORING PZ-02 S

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 6/10/2014 COMPLETED 6/10/2014 SURF. ELEV. 175.63 ft. msl COORDINATES: N:31.446455 E:-84.129531

CONTRACTOR Cascade EQUIPMENT METHOD Rotasonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING 178.61 ft msl

BORING DEPTH 58 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 27.6 ft. after 24 hrs.

NOTES

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | | | | Surface Seal: concrete |
| 5 | | - sandy SILT (ML), dry, dark brown, top soil | | | |
| | | - SAND (SP), dry, red-yellow and pale yellow, fine grained | | | |
| 10 | | - SAND (SP), dry, red-yellow and pale yellow, fine grained | | | |
| 15 | | - sandy CLAY (CL), damp, pale brown with red and light red mottling, somewhat plastic, interbedded with few 2 to 3 inch thick sand seams | | | |
| 20 | | - sandy CLAY (CH), damp to wet, yellow-brown with red and light gray mottling, plastic, interbedded with several 2 to 3 inch thick sand seams | | | Annular Fill: cement-bentonite grout |
| 25 | | - CLAY (CL), dry, very stiff, red with light gray mottling, somewhat plastic | | | |
| 30 | | - CLAY (CL), damp, very stiff, dark red-gray with yellow-brown mottling | | | |
| 35 | | - Clayey SAND (SC), wet, red with yellow-brown mottles, medium grained | | | |
| | | - sandy CLAY (CL), damp, very stiff, red-yellow with red mottling | | | |
| 40 | | - CLAY (CH), damp, dark brown with white and pale yellow mottling | | | Annular Seal: bentonite chips |
| | | - sandy CLAY (CH), damp to wet, dark brown with white and black mottling, plastic, interbedded with sand seam | | | Filter: silica filter sand |
| 45 | | | | | |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - VALTRCFP01X2WSHAUG\$DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

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LOG OF TEST BORING

BORING PZ-02 S

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - \\ALTRCFP01\X2\WSHAUG\$\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION <small>Weak Moderate Strong</small> | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|--|-----------------------------|---|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | (Con't) | | | (CONTINUED) |
| 50 | | - sandy CLAY (CH), wet to saturated, brown with black mottling | | | |
| 55 | | | | | |
| | | - clayey SAND (SC), saturated, pale brown and white, gravel concretions, carbonate | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack Sump: 0.3999999999999999 ft. Backfill: |
| 60 | | Bottom of borehole at 58.0 feet. | | | |
| 65 | | | | | |
| 70 | | | | | |
| 75 | | | | | |
| 80 | | | | | |
| 85 | | | | | |
| 90 | | | | | |
| 95 | | | | | |



LOG OF TEST BORING

BORING PZ-03 D

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ES

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 5/27/2014 COMPLETED 5/28/2014 SURF. ELEV. 188.08 ft. msl COORDINATES: N:31.444549 E:-84.130319

CONTRACTOR Cascade EQUIPMENT METHOD Rotosonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING 190.98 ft msl

BORING DEPTH 88 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 41.3 ft. after 96 hrs.

NOTES

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - VALTRCFP01X2WSHAUG\$DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|---|-----------------------------|---|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad Surface Seal: concrete |
| 5 | | - sandy CLAY (CL), brown, dry - silty CLAY (CL), damp, yellow-red | | | |
| 10 | | - CLAY (CL), damp, dark red with red-yellow mottling, slight plasticity - CLAY (CL), damp, dark red with red-yellow mottling, slight plasticity - sandy CLAY (CL), damp, yellow-red with yellow mottling, some well rounded quartz gravel | | | |
| 15 | | | | | |
| 20 | | - clayey SAND (SC), damp, red with yellow-red and light gray mottling, coarse grained - sandy CLAY (CL), dry, red with yellow and light gray mottling | | | |
| 25 | | - CLAY (CL), dry, light gray with red and yellow mottling | | | |
| 30 | | - CLAY (CL), dry, very stiff, weak red with light gray and yellow mottling, slight plasticity | | | |
| 35 | | - clayey SAND (SC), saturated, weak red with pale brown and yellow mottling, fine to medium grained | | | |
| 40 | | - clayey SAND (SC), wet to saturated, weak red and pale brown with light gray mottling, fine to medium grained | | | |
| 45 | | | | | Annular Fill: cement-bentonite grout |

(Continued Next Page)



LOG OF TEST BORING

BORING PZ-03 D

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ES

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - \\ALTRCFP01\X2\WSHAU\G\$DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | (Con't) | | | (CONTINUED) |
| 50 | | - SAND (SP), saturated, red with light gray mottling, fine to medium grained, some clay - clayey SAND (SC), saturated, red-gray, fine to coarse grained | | | |
| 55 | | - sandy CLAY (CL), wet, red and red-brown with yellow mottling, somewhat plastic - SAND (SP), wet, red and pale red-brown, trace clay, fine to medium grained | | | |
| 60 | | - SAND (SP), wet to saturated, brown with pale red mottles, fine to medium grained | | | Annular Fill: cement-bentonite grout |
| 65 | | - sandy CLAY (CL), wet, brown with white mottling, moderately plastic | | | |
| 70 | | - SAND (SP), wet to saturated, yellow-brown, some clay - sandy CLAY (CH), wet, brown, plastic, interbedded with 2 to 3 inch thick sand seams | | | |
| 75 | | - clayey SAND (SC), saturated, white, gravel concretions, carbonate | | | Annular Seal: bentonite chips |
| 80 | | - clayey SAND (SC), saturated, white, gravel concretions, carbonate | | | Filter: silica filter sand |
| 85 | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack |
| 90 | | Bottom of borehole at 88.0 feet. | | | Sump: 0.400000000000006 ft. |
| 95 | | | | | |



LOG OF TEST BORING

BORING PZ-03 S

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ES

 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

 PROJECT Ash Pond Piezometers

 LOCATION Plant Mitchell, Georgia

 DATE STARTED 5/28/2014 COMPLETED 5/28/2014 SURF. ELEV. 188.14 ft. msl COORDINATES: N:31.444528 E:-84.130316

 CONTRACTOR Cascade EQUIPMENT _____ METHOD Rotosonic

 DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY _____ TOP OF CASING 191.12 ft msl

 BORING DEPTH 63 ft. GROUND WATER DEPTH: DURING _____ COMP. _____ DELAYED 36.6 ft. after 96 hrs.

NOTES _____

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|---|-----------------------------|---|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad Surface Seal: concrete |
| 5 | | - clayey SILT (ML), dark brown, top soil - CLAY (CL), dry to damp, red with dark yellow-brown mottling, some well rounded quartz gravel | | | |
| 10 | | - silty CLAY (CL), dry, red with yellow-brown mottling, trace well rounded quartz gravel | | | |
| 15 | | - sandy CLAY (CL), dry, red with yellow-brown and light gray mottling, trace well rounded quartz gravel | | | |
| 20 | | - sandy CLAY (CL), dry, hard, red and dark red with light gray and yellow mottling | | | |
| 25 | | | | | |
| 30 | | - CLAY (CH), damp to wet, very stiff, red with yellow mottling, plastic | | | |
| 35 | | - sandy CLAY (CL), damp, hard, red, then dark red with light gray mottling | | | |
| 40 | | - clayey SAND (SC), wet to saturated, weak red with pale brown mottling, fine to medium grained | | | |
| 45 | | - sandy CLAY (CL), damp, hard, weak red with light gray mottling | | | |
| | | | | | Annular Fill: cement-bentonite grout |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - VALTRCFP01X2WSHAUG\$DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

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BORING PZ-03 S

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - \\ALTRCFP01\X2\WSHAUG\$\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | (Con't) | | | (CONTINUED) |
| 50 | | - clayey SAND (SC), wet, weak red and pale brown with light gray mottling, fine to medium grained | | | Annular Seal: bentonite chips |
| | | - clayey SAND (SC), saturated, weak red and red with light gray mottling, fine to medium grained | | | Filter: silica filter sand |
| 55 | | - SAND (SP), saturated, red and yellow-red, fine to medium grained, interbedded with sandy CLAY | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack |
| 60 | | - clayey SAND (SC), saturated, yellow, fine to medium grained | | | Sump: 0.3999999999999999 ft. |
| | | - sandy CLAY (CH), wet, brown with white mottles | | | Backfill: Silica Sand |
| 65 | | Bottom of borehole at 63.0 feet. | | | |
| 70 | | | | | |
| 75 | | | | | |
| 80 | | | | | |
| 85 | | | | | |
| 90 | | | | | |
| 95 | | | | | |



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BORING PZ-04 D

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ES

 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

 PROJECT Ash Pond Piezometers

 LOCATION Plant Mitchell, Georgia

 DATE STARTED 5/29/2014 COMPLETED 5/29/2014 SURF. ELEV. 188.25 ft. msl COORDINATES: N:31.441318 E:-84.130027

 CONTRACTOR Cascade EQUIPMENT _____ METHOD Rotosonic

 DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY _____ TOP OF CASING 191.10 ft msl

 BORING DEPTH 58 ft. GROUND WATER DEPTH: DURING _____ COMP. _____ DELAYED 43.2 ft. after 96 hrs.

NOTES _____

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | | | | Surface Seal: concrete |
| 5 | | - clayey GRAVEL (GC), road bed fill - clayey SILT (ML), dry, dark brown, buried top soil - gravelly CLAY (CL), dry, red, slight plasticity | | | |
| 10 | | - sandy CLAY (CL), dry, hard, red-brown with yellow-red mottling | | | |
| 15 | | - CLAY (CL), dry, hard, red with light gray and yellow-red mottling | | | |
| 20 | | - sandy CLAY (CL), dry, hard, weak red with white mottling | | | Annular Fill: cement-bentonite grout |
| 25 | | - clayey SAND (SC), dry, dark red and weak red with yellow mottling, medium to coarse grained - sandy CLAY (CL), dry, hard, dark red and weak red with white mottling, silt | | | |
| 30 | | - clayey GRAVEL (GC), pale yellow, weathered chert gravel - sandy CLAY (CL), dry, hard, dark brown and weak red | | | |
| 35 | | - clayey GRAVEL (GC), pale yellow, weathered chert gravel - sandy CLAY (CL), dry, hard, dark brown and weak red with yellow mottling | | | |
| 40 | | - sandy CLAY (CL), dry, hard, dark brown and weak red with yellow mottling | | | |
| 45 | | - CLAY (CH), damp, very stiff, plastic, - clayey SAND (SC), wet, white, gravel concretions, carbonate | | | Annular Seal: bentonite chips Filter: |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - \\ALTRCFP01\X2\WSHAU\G\$DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

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 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - \\ALTRCFP01\X2\WSHAUG\$\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | (Con't) | | | (CONTINUED) |
| 50 | | - clayey SAND (SC), saturated, white, gravel concretions, carbonate | | | silica filter sand |
| 55 | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack |
| | | | | | Sump: 0.3999999999999999 ft. |
| | | | | | Backfill: Silica Sand |
| 60 | | Bottom of borehole at 58.0 feet. | | | |
| 65 | | | | | |
| 70 | | | | | |
| 75 | | | | | |
| 80 | | | | | |
| 85 | | | | | |
| 90 | | | | | |
| 95 | | | | | |



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BORING PZ-04 S

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 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 5/29/2014 COMPLETED 5/29/2014 SURF. ELEV. 188.42 ft. msl COORDINATES: N:31.4413002 E:-84.130041

CONTRACTOR Cascade EQUIPMENT METHOD Rotosonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING 191.20 ft msl

BORING DEPTH 38 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 12.3 ft. after 96 hrs.

NOTES

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | | | | Surface Seal: concrete |
| 5 | | - clayey GRAVEL (GC), dark brown and white, road bed fill | | | |
| | | - clayey SILT (ML), dry, dark brown | | | |
| | | - gravelly CLAY (CL), dry, red with red-yellow mottling | | | |
| 10 | | - sandy CLAY (CL), dry, hard, red and dark red with red-yellow mottling | | | |
| 15 | | - CLAY (CL), dry, red and dark red with yellow and white mottling | | | Annular Fill: cement-bentonite grout |
| 20 | | - CLAY (CL), dry, red and dark red with yellow and white mottling | | | |
| 25 | | - clayey SAND (SC), wet, dark red, medium to coarse grained | | | Annular Seal: bentonite chips |
| | | - sandy CLAY (CL), wet, hard, dark red with white mottling | | | Filter: silica filter sand |
| | | - clayey SAND (SC), wet to saturated, weathered chert gravel, coarse grained | | | |
| 30 | | - CLAY (CL), hard, dark red | | | Standpipe: 2" OD PVC (SCH 40) |
| | | - sandy CLAY (CL), dry, hard, brown with yellow-brown mottling | | | Screen: 10 ft; pre-pack |
| 35 | | - sandy CLAY (CL), dry, hard, dark brown with yellow-brown mottling | | | Sump: 0.3999999999999999 ft. |
| | | | | | Backfill: Silica Sand |
| 40 | | Bottom of borehole at 38.0 feet. | | | |
| 45 | | | | | |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:36 - \\ALTRCFP01\X2\WSHAUGS\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ



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 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 6/12/2014 COMPLETED 6/13/2014 SURF. ELEV. 186.52 ft. msl COORDINATES: N:31.435974 E:-84.132600

CONTRACTOR Cascade EQUIPMENT METHOD Rotosonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING 189.47 ft msl

BORING DEPTH 58 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 9.1 ft. after 96 hrs.

NOTES

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | | | | Surface Seal: concrete |
| 5 | | - clayey SILT (ML), dark brown, top soil - silty CLAY (CL), dry, very stiff, yellow-brown with red-yellow mottling | | | |
| 10 | | - clayey SAND (SC), damp, pale yellow-brown, red mottling, fine grained, cohesive - silty CLAY (CL), dry, very stiff, light gray with pale brown and yellow-red mottling, some sand | | | |
| 15 | | | | | |
| 20 | | - CLAY (CL), dry to damp, very stiff, yellow-brown with light gray mottling, somewhat plastic - clayey SAND (SC), damp, red-yellow, fine grained - CLAY (CL), dry, hard, light gray with red and yellow-brown mottling | | | Annular Fill: cement-bentonite grout |
| 25 | | | | | |
| 30 | | - CLAY (CL), dry, hard, light gray with red and yellow-brown mottling, somewhat plastic | | | |
| 35 | | | | | Annular Seal: bentonite chips |
| 40 | | - CLAY (CH), saturated, plastic, pale yellow-brown, chert bed with fossil shell casts (1 ft. thick) | | | Filter: silica filter sand |
| 45 | | - CLAY (CL), damp, stiff, yellow-brown with red mottles, somewhat plastic | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:37 - VALTRCFP01X2WSHAUG\$DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | (Con't) | | | (CONTINUED) |
| 50 | | - CLAY (CH), saturated, plastic, pale yellow-brown, chert bed with fossil shell casts (1 ft. thick) | | | |
| | | - CLAY (CH), saturated, red-yellow, plastic, some chert gravel with fossil shell casts, | | | |
| | | - clayey SAND (SC), saturated, white, gravel concretions, carbonate | | | |
| 55 | | | | | Sump: 0.400000000000006 ft. |
| | | | | | Backfill: Bentonite Chips |
| 60 | | Bottom of borehole at 58.0 feet. | | | |
| 65 | | | | | |
| 70 | | | | | |
| 75 | | | | | |
| 80 | | | | | |
| 85 | | | | | |
| 90 | | | | | |
| 95 | | | | | |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:37 - \\ALTRCFP01\X2\WSHAUG\$\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ



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BORING PZ-07 D

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 6/2/2014 COMPLETED 6/3/2014 SURF. ELEV. 170.28 ft. msl COORDINATES: N:31.433696 E:-84.136488

CONTRACTOR Cascade EQUIPMENT METHOD Rotosonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING: 173.08 ft msl

BORING DEPTH 67 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 28.6 ft. after 168 hrs.

NOTES

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|---|-----------------------------|---|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad Surface Seal: concrete |
| 5 | | - sandy CLAY, red-brown, then SAND, fill | | | |
| 10 | | - SAND (SP), dry, red-yellow, fine grained, fill | | | |
| | | - sandy CLAY (CL), dry, hard, gray with yellow-brown and weak red mottles | | | |
| | | - SAND (SP), damp, pink-gray and pale brown, fine grained | | | |
| 15 | | - silty CLAY (CL), dry, gray with yellow-brown mottles | | | |
| | | - CLAY (CL), dry, very stiff, light gray with dark red and yellow mottling | | | |
| | | - sandy CLAY (CL), dry to damp, stiff, light gray with yellow-brown and dark red mottling | | | |
| 20 | | | | | |
| 25 | | | | | Annular Fill: cement-bentonite grout |
| 30 | | - silty CLAY (CL), damp, red with yellow-brown mottling | | | |
| 35 | | - clayey SAND (SC), saturated, light gray, gravel concretions, carbonate | | | |
| 40 | | - gravelly sand (SW), saturated, pale yellow and pale brown, gravel concretions, clay, carbonate | | | |
| 45 | | | | | Annular Seal: bentonite chips |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:37 - VALTRCFP01X2WSHAUG\$DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

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BORING PZ-07 D

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:37 - \\ALTRCFP01\X2\WSHAUGS\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|---|-----------------------------|--|
| | | (Con't) | | | Completion: protective steel cover; 4-foot square concrete pad |
| 50 | | - gravelly sand (SW), saturated, pale yellow and pale brown, gravel concretions, clay, carbonate | | | (CONTINUED) |
| 55 | | | | | Filter: silica filter sand |
| 60 | | - clayey SAND (SC), saturated, loose, very pale brown, gravel concretions, carbonate | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft, pre-pack |
| 65 | | | | | Sump:0.3999999999999999 ft. |
| | | | | | Backfill:Silica Sand |
| | | Bottom of borehole at 67.0 feet. | | | |
| 70 | | | | | |
| 75 | | | | | |
| 80 | | | | | |
| 85 | | | | | |
| 90 | | | | | |
| 95 | | | | | |



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BORING PZ-07 S

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 6/3/2014 COMPLETED 6/3/2014 SURF. ELEV. 170.10 ft. msl COORDINATES: N:31.433694 E:-84.136464

CONTRACTOR Cascade EQUIPMENT METHOD Rotosonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING 173.10 ft msl

BORING DEPTH 38 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 28.3 ft. after 168 hrs.

NOTES

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | | | | Surface Seal: concrete |
| 5 | | - silty CLAY, damp, yellow-red, - SAND, dry, white, fine grained, fill - CLAY, dry, red-brown and gray, fill | | | |
| 10 | | - Silty CLAY (CL), dry, very stiff, light gray with gray-red mottling - SAND (SP), dry to damp, yellow-brown, fine grained | | | |
| 15 | | - sandy CLAY (CH), wet, soft, yellow-red, plastic - sandy CLAY (CL), dry, hard, gray with red mottling - clayey SAND (SC), damp, gray with yellow-brown mottling, fine to medium grained - SAND (SP), wet, very pale brown with yellow-brown mottles | | | Annular Fill: cement-bentonite grout |
| 20 | | - sandy CLAY (CL), dry, very stiff, brown-yellow with light gray mottles - sandy CLAY (CL), dry, hard, red with light gray and yellow-brown mottling | | | Annular Seal: bentonite chips Filter: silica filter sand |
| 25 | | - CLAY (CH), wet, yellow-red, plastic | | | |
| 30 | | - CLAY (CH), wet to saturated, yellow-red, plastic | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack |
| 35 | | - gravelly SAND (SW), saturated, pale brown, some clay, carbonate | | | Sump: 0.3999999999999999 ft. |
| 40 | | Bottom of borehole at 38.0 feet. | | | Backfill: Bentonite Chips |
| 45 | | | | | |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:37 - VALTRCFP01X2WSHAUG\$DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ



LOG OF TEST BORING

BORING PZ-08 D

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 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 6/5/2014 COMPLETED 6/5/2014 SURF. ELEV. 167.24 ft. msl COORDINATES: N:31.433743 E:-84.139013

CONTRACTOR Cascade EQUIPMENT METHOD Rotasonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING: 170.35 ft msl

BORING DEPTH 77 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 26.4 ft. after 120 hrs.

NOTES

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|---|-----------------------------|---|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad Surface Seal: concrete |
| 5 | | - sandy CLAY (CL), dry, dark yellow-brown to dark brown, fill | | | |
| | | - sandy CLAY (CL), dry, yellow-red fill | | | |
| 10 | | - SAND (SP), dry, yellow-red, fine to medium grained | | | |
| 15 | | - silty CLAY (CL), damp, yellow-brown with light gray mottling, somewhat plastic | | | |
| 20 | | - clayey SAND (SC), damp, yellow-brown with red and light gray mottling, somewhat plastic | | | |
| | | - SAND (SP), damp to wet, brown-yellow with pale yellow mottling, fine to medium grained | | | |
| 25 | | - sandy CLAY (CL), damp, dark yellow-brown, interbedded with 6 inch thick sand seam | | | |
| 30 | | - CLAY (CH), damp, red-yellow with weak red mottling, plastic | | | |
| 35 | | | | | |
| 40 | | - CLAY (CH), damp, red-yellow, occasional chert gravel, plastic, 3 inch thick sand seam | | | |
| 45 | | - 3 inch thick sand seam | | | |

 Annular Fill:
cement-bentonite grout

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BORING PZ-08 D

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:37 - \\ALTRCP01\X2\WSHAUGS\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION <small>Weak Moderate Strong</small> | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|--|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | - clayey SAND (SC), saturated, very pale brown, gravel concretions, carbonate (Con't) | | | (CONTINUED) |
| 50 | | - clayey SAND (SC), saturated, very pale brown to white, gravel concretions, carbonate | | | |
| 55 | | | | | Annular Fill: cement-bentonite grout |
| 60 | | - clayey SAND (SC), saturated, very loose, very pale brown to white, gravel concretions, carbonate | | | |
| 65 | | | | | Annular Seal: bentonite chips |
| | | | | | Filter: silica filter sand |
| 70 | | - gravelly SAND (SW), saturated, white, some clay, carbonate | | | |
| 75 | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack |
| | | | | | Sump: 0.4000000000000006 ft. |
| | | Bottom of borehole at 77.0 feet. | | | |
| 80 | | | | | |
| 85 | | | | | |
| 90 | | | | | |
| 95 | | | | | |



LOG OF TEST BORING

BORING PZ-08 S

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

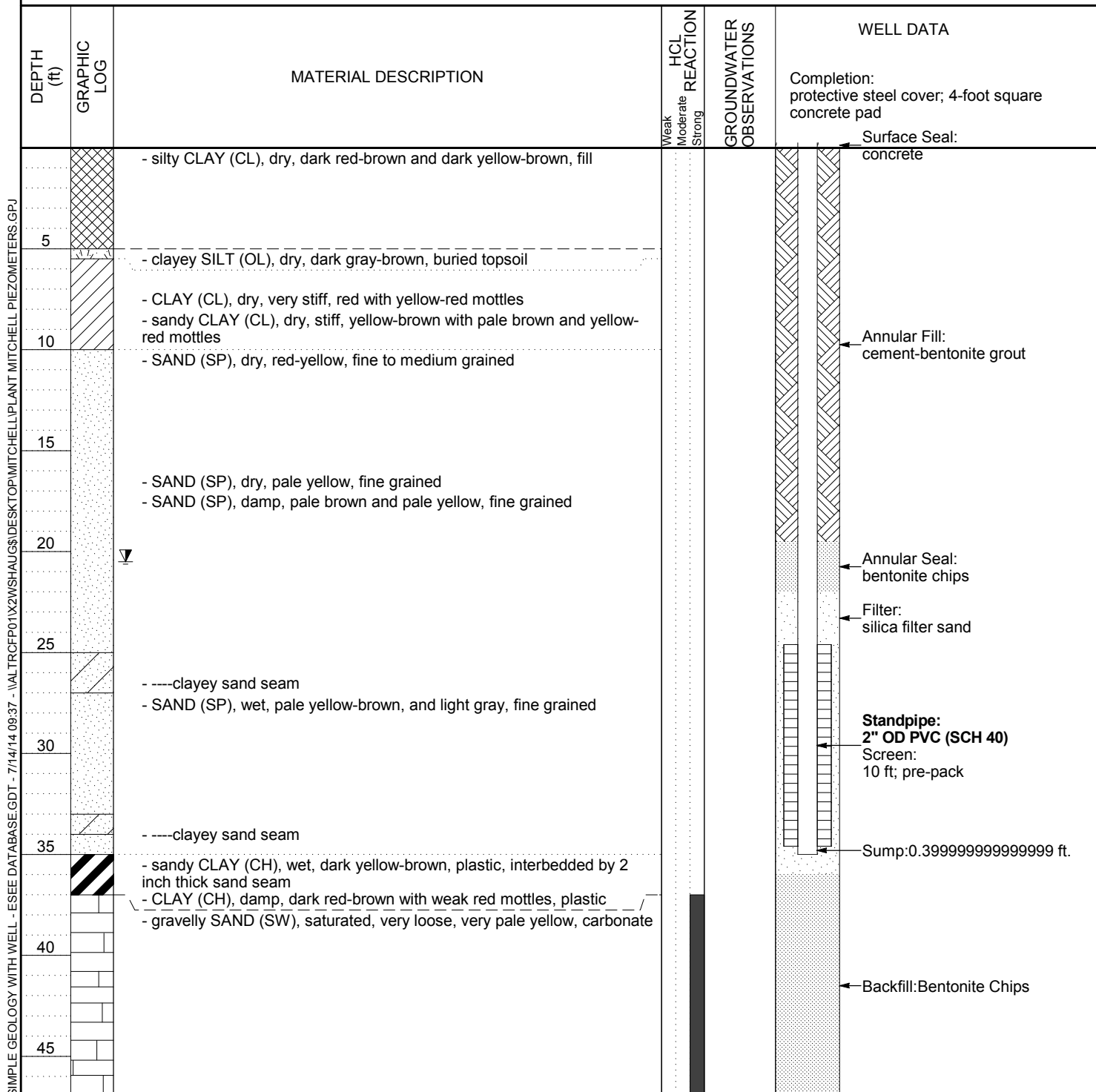
DATE STARTED 6/5/2014 COMPLETED 6/5/2014 SURF. ELEV. 167.67 ft. msl COORDINATES: N:31.433738 E:-84.138982

CONTRACTOR Cascade EQUIPMENT METHOD Rotosonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING: 170.78 ft msl

BORING DEPTH 47 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 20.5 ft. after 120 hrs.

NOTES



Bottom of borehole at 47.0 feet.

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:37 - \\ALTRCFP01\X2\WSHAUGS\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ



LOG OF TEST BORING

BORING PZ-09 D

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 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 6/4/2014 COMPLETED 6/4/2014 SURF. ELEV. 163.18 ft. msl COORDINATES: N:31.434647 E:-84.139270

CONTRACTOR Cascade EQUIPMENT METHOD Rotosonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING: 166.16 ft msl

BORING DEPTH 48 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 22.9 ft. after 144 hrs.

NOTES

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | | | | Surface Seal: concrete |
| 5 | | - sandy CLAY (CL), dry, yellow-brown to light yellow-brown | | | |
| 10 | | - clayey SAND (SC), dry, light yellow-brown - SAND (SP), dry, red-yellow, fine grained - SAND (SP), dry, red-yellow, fine to medium grained | | | |
| 15 | | | | | |
| 20 | | - SAND (SW), wet, red-yellow, fine to medium grained, some gravel - clayey SAND (SC), saturated, very pale yellow to white, gravel concretions | | | |
| 25 | | | | | |
| 30 | | - clayey SAND (SC), saturated, very pale yellow to white, gravel concretions | | | |
| 35 | | | | | |
| 40 | | - clayey SAND (SC), saturated, very pale yellow to white, gravel concretions | | | |
| 45 | | | | | |
| | | | | | Annular Fill: cement-bentonite grout |
| | | | | | Annular Seal: bentonite chips Filter: silica filter sand |
| | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack |
| | | | | | Sump: 0.399999999999999 ft. |

Bottom of borehole at 48.0 feet.

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:37 - VALTRCFP01X2WSHAUG\$DESKTOP\MITCHELL\PLANT MITCHELL\PIEZOMETERS.GPJ



LOG OF TEST BORING

BORING PZ-09 S

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ES

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

DATE STARTED 6/4/2014 COMPLETED 6/5/2014 SURF. ELEV. 163.06 ft. msl COORDINATES: N:31.434628 E:-84.139276

CONTRACTOR Cascade EQUIPMENT METHOD Rotosonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING: 166.02 ft

BORING DEPTH 28 ft. GROUND WATER DEPTH: DURING COMP. msl DELAYED 22.5 ft. after 120 hrs.

NOTES

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 7/14/14 09:37 - \\ALTRCP01\X2\WSHAUGS\DESKTOP\MITCHELL\PLANT MITCHELL PIEZOMETERS.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|---|-----------------------------|--|
| | | | | | Completion: protective steel cover; 4-foot square concrete pad |
| | | | | | Surface Seal: concrete |
| 5 | | - sandy CLAY (CL), dry, yellow-brown and light brown | | | |
| | | - clayey SAND (SC), dry, light yellow-brown, fine to medium grained | | | |
| | | - SAND (SP), dry, red-yellow, fine to medium grained | | | Annular Fill: cement-bentonite grout |
| 10 | | - SAND (SP), wet to saturated, red-yellow, fine to coarse grained | | | |
| 15 | | | | | Annular Seal: bentonite chips |
| | | | | | Filter: silica filter sand |
| 20 | | - SAND (SP), wet to saturated, red-yellow, fine to coarse grained | | | |
| | | - clayey SAND (SC), saturated, very pale brown to white, gravel concretions, carbonate | | | |
| 25 | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack |
| | | | | | Sump: 0.3999999999999999 ft. |
| 30 | | Bottom of borehole at 28.0 feet. | | | |
| 35 | | | | | |
| 40 | | | | | |
| 45 | | | | | |



LOG OF TEST BORING

BORING PZ-12 S

PAGE 1 OF 1

ES

 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

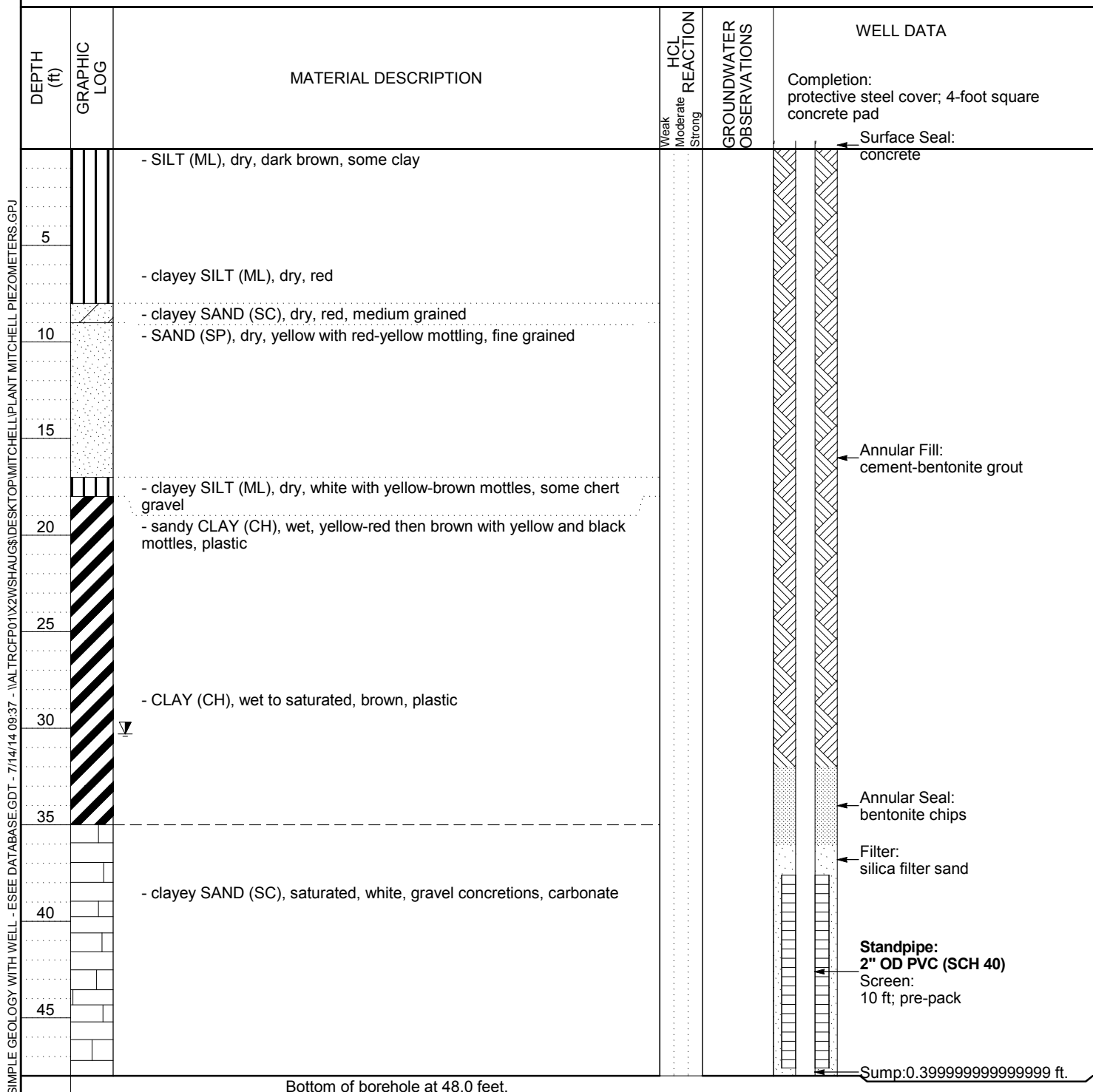
DATE STARTED 6/4/2014 COMPLETED 6/4/2014 SURF. ELEV. 170.93 ft. msl COORDINATES: N:31.440211 E:-84.137507

CONTRACTOR Cascade EQUIPMENT METHOD Rotosonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING: 173.92 ft msl

BORING DEPTH 48 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 30.3 ft. after 144 hrs.

NOTES





LOG OF TEST BORING

BORING PZ-13 S

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ES

 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Ash Pond Piezometers

LOCATION Plant Mitchell, Georgia

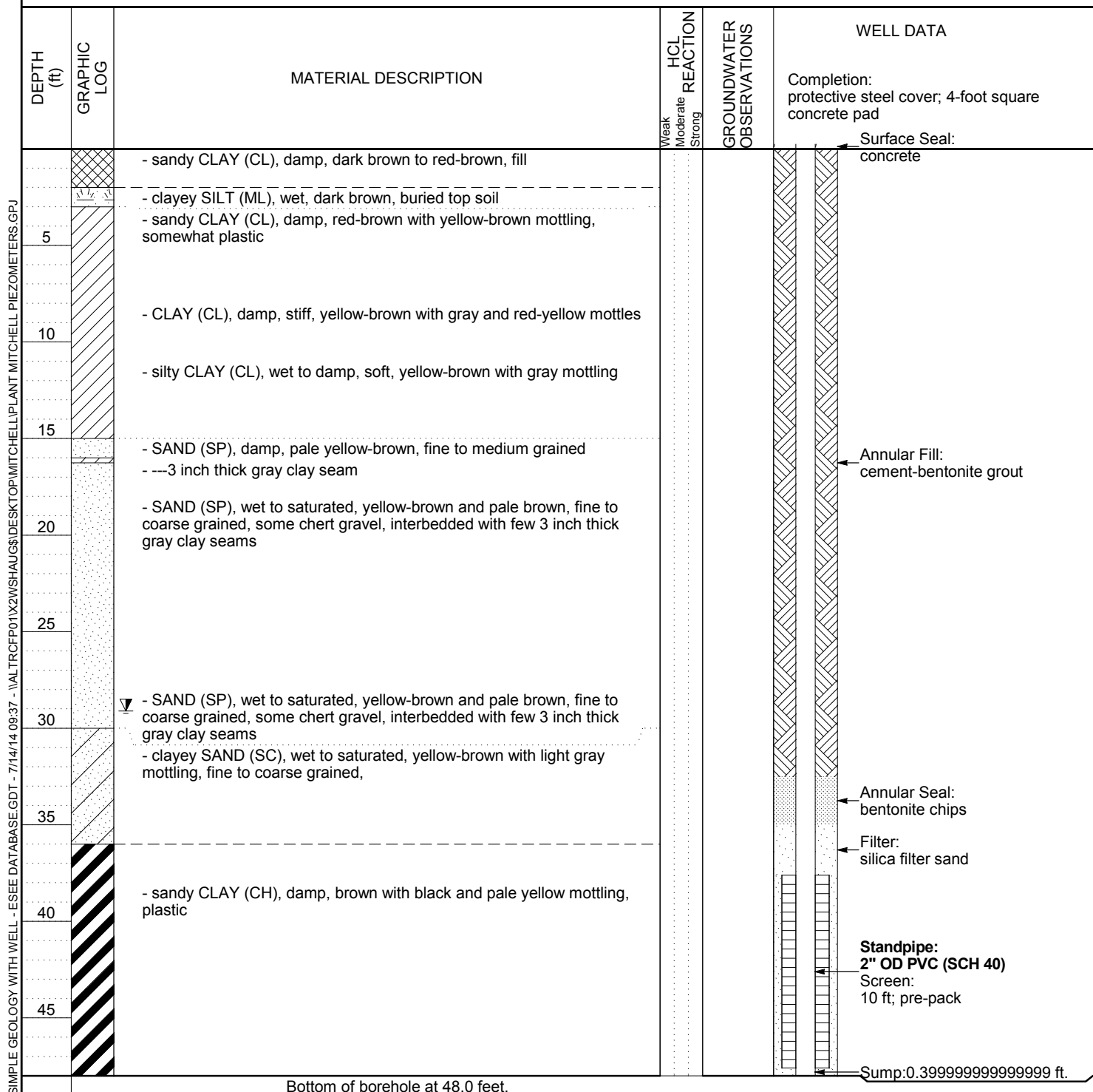
DATE STARTED 6/6/2014 COMPLETED 6/6/2014 SURF. ELEV. 170.23 ft. msl COORDINATES: N:31.442059 E:-84.137080

CONTRACTOR Cascade EQUIPMENT METHOD Rotasonic

DRILLED BY T. Ardito LOGGED BY W. Shaughnessy CHECKED BY TOP OF CASING: 173.22 ft msl

BORING DEPTH 48 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 29.1 ft. after 72 hrs.

NOTES





LOG OF TEST BORING

BORING PZ-14

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 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

DATE STARTED 7/25/2016 COMPLETED 7/25/2016 SURF. ELEV. 180.85 ft msl COORDINATES: N:31.433827 E:-84.133892

CONTRACTOR Cascade Drilling, LP EQUIPMENT 100C DB320 METHOD Sonic Drilling with 4 in. barrel

DRILLED BY Jeremy John LOGGED BY Daniel Morris* CHECKED BY TOP OF CASING: 183.46 ft msl

BORING DEPTH 50 ft bgs GROUND WATER DEPTH: DURING 35 ft bgs COMP. 43.07 ft bgs DELAYED 15 days

NOTES Southeast corner of Pond B, *Samples logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|---|----------------|---|-----------------------------|---|--------------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| 5 | | - sandy CLAY (CL), reddish brown, fill | 175.9 | | | Annular Fill: Cement-Bentonite Grout | |
| 10 | | - CLAY (CL), fine sand, hard, mottled white and reddish brown, dry | | | | | |
| 15 | | | | | | | |
| 20 | | - as above; moist | 160.9 | | | | |
| 25 | | | | | | | |
| 30 | | - sandy CLAY (CL), coarse sand, wet - CLAY (CL), reddish brown, still, moist, low plasticity | 153.4 152.4 | | | | |
| 35 | | | 145.4 | | | Annular Seal: 3/8" bentonite pellets (non-coated) | 147.9 (33.0) |
| 40 | | - SAND (SP), white, calcareous, loose, fossiliferous, saturated fossillites | | | | Filter: silica filter sand | 142.9 (38.0) 140.9 |

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SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PIANT MITCHELL\SOUTHERN COMPANY.GPJ



LOG OF TEST BORING

BORING PZ-14

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6122160170.01

 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PIANT MITCHELL\PIANT MITCHELL.SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV | HCL Weak Moderate Strong REACTION | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|----------------------------------|-------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| | | (Cont.) | | | | | (40.0) |
| 45 | | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack | |
| 50 | | | 130.9 | | | | |
| | | Bottom of borehole at 50.0 feet. | | | | | |
| 55 | | | | | | | |
| 60 | | | | | | | |
| 65 | | | | | | | |
| 70 | | | | | | | |
| 75 | | | | | | | |
| 80 | | | | | | | |
| 85 | | | | | | | |



LOG OF TEST BORING

BORING PZ-15

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 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

DATE STARTED 7/23/2016 COMPLETED 7/23/2016 SURF. ELEV. 167.38 ft msl COORDINATES: N:31.434178 E:-84.138534

CONTRACTOR Cascade Drilling, LP EQUIPMENT 100C DB320 METHOD Sonic Drilling with 4 in. barrel

DRILLED BY Jeremy John LOGGED BY Daniel Morris* CHECKED BY TOP OF CASING: 170.37 ft msl

BORING DEPTH 80 ft bgs GROUND WATER DEPTH: DURING 32.45 ft bgs COMP. 34.19 ft bgs DELAYED 17 days

NOTES *Samples logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|--|-------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| 5 | | - silty SAND (SM), reddish brown, fill, dry | | | | Annular Fill: Cement-Bentonite Grout | |
| 10 | | - sandy CLAY (CL), mottled maroon and white, MnO staining | 161.4 | | | | |
| 15 | | - chalky SANDSTONE, white, with brown chert nodules | 153.4 | | | | |
| | | - fat CLAY (CL), pebble sized rounded chert fragments | 152.4 | | | | |
| 20 | | | | | | | |
| | | - NO RECOVERY | 144.9 | | | | |
| 25 | | | 142.4 | | | | |
| | | - SAND (SP), tan, rounded and subrounded pebbles, calcareous, medium-coarse grained, moist | 139.9 | | | | |
| 30 | | - SAND (SP), tan, calcareous, fine grained, moist | | | | | |
| | | | 134.9 | | | | |
| 35 | | - fat CLAY (CL), with pebbles, wet | | | | Annular Seal: 3/8" bentonite chips | 135.4 (32.0) |
| 40 | | | 127.4 | | | | |

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SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PIANT MITCHELL\PIANT MITCHELL.SOUTHERN COMPANY.GPJ



LOG OF TEST BORING

BORING PZ-15

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE_FIOCA\DESKTOP\PIANT MITCHELL\PIANT MITCHELL - SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | ELEV. (DEPTH) |
|---------------|----------------|--|-------|---|-----------------------------|--|------------------|
| | | - as above | | | | Completion: Protective casing set in concrete pad | |
| 45 | | | | | | Annular Seal: 3/8" bentonite chips | |
| 50 | | | | | | | |
| 55 | | | | | | | |
| 60 | | | | | | | |
| 65 | | - clayey SAND (SC), calcareous, fossiliferous, large calcarenite fragments | 102.4 | | | Annular Seal: 3/8" bentonite pellets (non-coated) | 102.9 (64.5) |
| 70 | | - as above; with increasing cementation | 97.4 | | | Filter: silica filter sand | 100.4 (67.0) |
| 75 | | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack | 97.4 (70.0) |
| 80 | | Bottom of borehole at 80.0 feet. | 87.4 | | | | |
| 85 | | | | | | | |



LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

DATE STARTED 7/24/2016 COMPLETED 7/25/2016 SURF. ELEV. 171.21 ft msl COORDINATES: N:31.435621 E:-84.138525

CONTRACTOR Cascade Drilling, LP EQUIPMENT 100C DB320 METHOD Sonic Drilling with 4 in. barrel

DRILLED BY Jeremy John LOGGED BY Daniel Morris* CHECKED BY TOP OF CASING: 173.92 ft msl

BORING DEPTH 50 ft bgs GROUND WATER DEPTH: DURING 35 ft bgs COMP. 34.04 ft bgs DELAYED 15 days

NOTES *Samples logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|---|-------|---|-----------------------------|---|--------------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| 5 | | - sandy CLAY (CL), fill, reddish brown | 166.2 | | | Annular Fill: Cement-Bentonite Grout | |
| 10 | | - clayey SAND (SC), white and reddish brown, firm, mottled, fine to medium, | | | | | |
| 15 | | | | | | | |
| 20 | | - as above, moist, more plasticity | 151.2 | | | | |
| 25 | | | | | | | |
| 30 | | - CLAY (CL), reddish brown, stiff, moist, low plasticity | 141.2 | | | | |
| 35 | | - SAND (SP), white, calcareous, fine to coarse sand, saturated | 136.2 | | | Annular Seal: 3/8" bentonite pellets (non-coated) | 138.2 (33.0) |
| 40 | | | | | | Filter: silica filter sand | 133.2 (38.0) 131.2 |

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SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE\FIOCA\DESKTOP\PIANT MITCHELL\SOUTHERN COMPANY.GPJ



LOG OF TEST BORING

BORING PZ-16

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 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PLANT MITCHELL\PLANT MITCHELL\SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV | HCL Weak Moderate Strong REACTION | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|----------------------------------|-------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| | | (Cont.) | | | | (CONTINUED) | (40.0) |
| 45 | | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack | |
| 50 | | | 121.2 | | | | |
| | | Bottom of borehole at 50.0 feet. | | | | | |
| 55 | | | | | | | |
| 60 | | | | | | | |
| 65 | | | | | | | |
| 70 | | | | | | | |
| 75 | | | | | | | |
| 80 | | | | | | | |
| 85 | | | | | | | |



LOG OF TEST BORING

BORING PZ-17

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

DATE STARTED 7/22/2016 COMPLETED 7/22/2016 SURF. ELEV. 170.12 ft msl COORDINATES: N:31.436893 E:-84.136835

CONTRACTOR Cascade Drilling, LP EQUIPMENT 100C DB320 METHOD Sonic Drilling with 4 in. barrel

DRILLED BY Jeremy John LOGGED BY Daniel Morris* CHECKED BY TOP OF CASING: 172.91 ft msl

BORING DEPTH 60 ft bgs GROUND WATER DEPTH: DURING 32.5 ft bgs COMP. 32.67 ft bgs DELAYED 18 days

NOTES Approximately 260' South of MW-115, *Samples logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL Weak Moderate Strong REACTION | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|---|-------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| 5 | | - silty SAND (SM), reddish brown, fill, dry | | | | Annular Fill: Cement-Bentonite Grout | |
| 10 | | | 159.1 | | | | |
| 15 | | - well graded SAND (SP), tan, moist | | | | | |
| | | | 154.1 | | | | |
| | | - clayey SAND (SC), tan, moist | | | | | |
| 20 | | | 151.1 | | | | |
| | | - clayey SAND (SC), red and tan interbedded layers, moist | | | | | |
| 25 | | | | | | | 144.6 (25.5) |
| | | | | | | Annular Seal: 3/8" bentonite chips | |
| 30 | | - fat CLAY (CL), gray, wet | 141.1 | | | | |
| | | | 139.1 | | | | |
| | | - clayey SAND (SC), calcareous, calcite and silica cemented | | | | | |
| 35 | | | | | | | |
| 40 | | | 130.1 | | | | 130.1 |

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LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PIANT MITCHELL\PIANT MITCHELL SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV | HCL Weak Moderate Strong REACTION | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|---|-------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| | | - as above | | | | (CONTINUED) | (40.0) |
| 45 | | | | | | Annular Seal: 3/8" bentonite pellets (non-coated) | 125.6 (44.5) |
| 50 | | - as above; with increasing cementation | 120.1 | | | Filter: silica filter sand | 120.1 (50.0) |
| 55 | | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack | |
| 60 | | Bottom of borehole at 60.0 feet. | 110.1 | | | | |
| 65 | | | | | | | |
| 70 | | | | | | | |
| 75 | | | | | | | |
| 80 | | | | | | | |
| 85 | | | | | | | |



LOG OF TEST BORING

BORING PZ-18

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 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

DATE STARTED 7/22/2016 COMPLETED 7/23/2016 SURF. ELEV. 167.34 ft msl COORDINATES: N:31.438426 E:-84.136015

CONTRACTOR Cascade Drilling, LP EQUIPMENT 100C DB320 METHOD Sonic Drilling with 4 in. barrel

DRILLED BY Jeremy John LOGGED BY Daniel Morris* CHECKED BY TOP OF CASING: 170.11 ft msl

BORING DEPTH 60 ft bgs GROUND WATER DEPTH: DURING 31.8 ft bgs COMP. 29.53 ft bgs DELAYED 17 days

NOTES Approximately 300' Northwest of MW-115, Southeast of berm, *Samples logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|---|----------------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| 5 | | - sandy CLAY (CL), reddish brown, fill | | | | Annular Fill: Cement-Bentonite Grout | |
| 10 | | - well graded SAND (SW), loose, fine to medium grained, moist | 158.3 | | | | |
| 15 | | | | | | | |
| 20 | | - clayey SAND (SC), moist, | 147.3 | | | | |
| 25 | | - sandy CLAY, HP fines, moist | 142.3 | | | | |
| 30 | | - NO RECOVERY | 137.3 | | | | |
| 35 | | | | | | Annular Seal: 3/8" bentonite chips | 136.3 (31.0) |
| 40 | | - sandy CLAY, white, calcareous | 128.3 127.3 | | | | |

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LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE\FIOCA\DESKTOP\PIANT MITCHELL\PIANT MITCHELL - SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV | HCL Weak Moderate Strong REACTION | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|---|-------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| | | - as above; fossiliferous, cobbles of calcarenite | | | | (CONTINUED) | |
| 45 | | - as above; saturated | 122.3 | | | Annular Seal: 3/8" bentonite chips | 122.3 (45.0) |
| 50 | | | | | | Annular Seal: 3/8" bentonite pellets (non-coated) | 119.3 (48.0) |
| 55 | | | | | | Filter: silica filter sand | 117.3 (50.0) |
| 60 | | | 107.3 | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack | |
| | | Bottom of borehole at 60.0 feet. | | | | | |
| 65 | | | | | | | |
| 70 | | | | | | | |
| 75 | | | | | | | |
| 80 | | | | | | | |
| 85 | | | | | | | |



LOG OF TEST BORING

BORING PZ-19

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 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

DATE STARTED 7/13/2016 COMPLETED 7/13/2016 SURF. ELEV. 169.40 ft msl COORDINATES: N:31.439626 E:-84.135979

CONTRACTOR Cascade Drilling, LP EQUIPMENT Terrasonic 150 METHOD Sonic Drilling with 4 in. barrel

DRILLED BY Alan Blackwell LOGGED BY Andrew Smits* CHECKED BY TOP OF CASING: 172.05 ft msl

BORING DEPTH 60 ft bgs GROUND WATER DEPTH: DURING 27.5 ft bgs COMP. 32.12 ft bgs DELAYED 27 days

NOTES West side of Pond A, approximately 6' west of the toe of slope of berm, *Samples logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|--|-------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| | | - well graded SAND with silt (SW-SM), yellow red (5 Y 5/6), damp to moist, fine to medium grained, NP-LP fines, trace clay | 167.4 | | | Annular Fill: Cement-Bentonite Grout | |
| | | - well graded SAND with clay (SW-SC), yellow red (5 Y 5/6), moist to damp, medium grained, trace gravel, LP fines | 167.9 | | | | |
| 5 | | - NO RECOVERY | | | | | |
| 10 | | - well graded SAND (SW), variegated red (5 Y 5/6 - 2.5 YR 3/6), damp, medium grained, NP fines, trace silt, trace gravel | 159.4 | | | | |
| 15 | | - clayey SAND (SC), variegated red and orange (2.5 YR), loose, damp to dry, trace gravel, LP to MP fines | 155.4 | | | | |
| | | - fat CLAY (CH), pink, white, and yellow mottled (NR 8/2), MnO staining, hard, moist, HP fines | 153.4 | | | | |
| | | - NO RECOVERY | 151.9 | | | | |
| 20 | | - fat CLAY (CH), pink and white, mottled, MnO staining, hard to soft, moist | 149.4 | | | | |
| 25 | | - clayey SAND (SC), white (2.5 YR 8/1), calcareous, weak to moderate cementation, carbonate, mud-sized calcareous matrix with calcite and silica cement, detrital material with fossil fragments | 143.9 | | | | |
| 30 | | | | | | Annular Seal: 3/8" bentonite chips | 142.4 (27.0) |
| 35 | | | | | | | |
| 40 | | | | | | | |

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LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PLANT MITCHELL\PLANT MITCHELL\SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV | Weak Moderate Strong | HCL REACTION | GROUNDWATER OBSERVATIONS | WELL DATA | ELEV. (DEPTH) |
|---------------|----------------|----------------------------------|-------|----------------------------|-----------------|-----------------------------|--|------------------|
| | | (Cont.) | | | | | Completion: Protective casing set in concrete pad | |
| 45 | | - strong cementation | 123.4 | | | | Annular Seal: 3/8" bentonite pellets (non-coated) | 127.4 (42.0) |
| 50 | | | | | | | Filter: silica filter sand | 122.4 (47.0) |
| 55 | | | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack | 120.4 (49.0) |
| 60 | | Bottom of borehole at 60.0 feet. | 109.4 | | | | | 110.4 (59.0) |
| 65 | | | | | | | | |
| 70 | | | | | | | | |
| 75 | | | | | | | | |
| 80 | | | | | | | | |
| 85 | | | | | | | | |



LOG OF TEST BORING

BORING PZ-20

PAGE 1 OF 2

6122160170.01

 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

DATE STARTED 7/13/2016 COMPLETED 7/14/2016 SURF. ELEV. 170.62 ft msl COORDINATES: N:31.440844 E:-84.135981

CONTRACTOR Cascade Drilling, LP EQUIPMENT Terrasonic 150 METHOD Sonic Drilling with 4 in. barrel

DRILLED BY Alan Blackwell LOGGED BY Andrew Smits* CHECKED BY TOP OF CASING: 173.44 ft msl

BORING DEPTH 60 ft bgs GROUND WATER DEPTH: DURING 34.5 ft bgs COMP. 33.29 ft bgs DELAYED 26 days

NOTES West side of Pond A, approximately 6' west from toe of slope of berm, *Samples logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|---|-------|---|-----------------------------|---|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| 5 | | - clayey SAND (SC), dark red brown (2.5 YR 3/4), damp, with roots and organics, trace gravel, fine to medium sand | | | | Annular Fill: Cement-Bentonite Grout | |
| | | | 162.1 | | | | |
| 10 | | - NO RECOVERY | 160.6 | | | | |
| | | - well graded SAND (SW), variegated red and yellow (7.5 YR), interbedded with gravel, | | | | | |
| | | | 157.6 | | | | |
| 15 | | - sandy CLAY (CL), banded gray, red and orange (7.5 YR), increasing sand with depth, fine to medium grained, dense, moist | 155.6 | | | | |
| | | - NO RECOVERY | | | | | |
| 20 | | | 150.6 | | | | |
| | | - clayey SAND (SC), calcareous, white to red-yellow (7.5 YR), trace gravel, weakly cemented, moist | | | | | |
| | | | 147.6 | | | | |
| 25 | | - layered CLAY (CL) and clayey SAND (SC), white and gray (7.5 YR), moist to wet calcareous | 146.6 | | | | |
| | | - NO RECOVERY | | | | | |
| 30 | | | 140.6 | | | | 140.6 (30.0) |
| | | - clayey SAND (SC), pale red to pink (10 R), fine to medium grained, wet | | | | Annular Seal: 3/8" bentonite pellets (non-coated) | |
| | | | 138.6 | | | | |
| 35 | | - clayey SAND (SC), white to pink (10 R), friable to indurated, wet, fossil fragments, shell fragments, | | | | | |
| 40 | | | | | | | |

(Continued Next Page)



LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE\FIOCA\DESKTOP\PIANT MITCHELL\PIANT MITCHELL - SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|----------------------------------|-------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| | | (Cont.) - same as above | | | | | |
| 45 | | | | | | Annular Seal: 3/8" bentonite chips | 128.6 (42.0) |
| 50 | | | | | | Filter: silica filter sand | 123.6 (47.0) |
| 55 | | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack | 121.1 (49.5) |
| 60 | | | 110.6 | | | | 111.1 |
| | | Bottom of borehole at 60.0 feet. | | | | | |
| 65 | | | | | | | |
| 70 | | | | | | | |
| 75 | | | | | | | |
| 80 | | | | | | | |
| 85 | | | | | | | |



LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

DATE STARTED 7/29/2016 **COMPLETED** 7/29/2016 **SURF. ELEV.** 177.08 ft msl **COORDINATES:** N:31.442533 E:-84.133481

CONTRACTOR Cascade Drilling, LP **EQUIPMENT** 100C DB320 **METHOD** Sonic Drilling with 4 in. barrel

DRILLED BY Bill Lindsey **LOGGED BY** Daniel Morris* **CHECKED BY** _____ **TOP OF CASING:** 179.84 ft msl

BORING DEPTH 70 ft bgs **GROUND WATER DEPTH: DURING** 45 ft bgs **COMP.** 38.6 ft bgs **DELAYED** 11 days

NOTES North side of Pond A, *Samples logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|--|----------------|--|-------|---|-----------------------------|--|---|
| | | | | | | | Completion: Protective casing set in concrete pad | |
| | | | | | | | | ELEV. (DEPTH) |
| 5 | | | - sandy SILT (ML), reddish brown, loose, fill, dry | | | | | Annular Fill: Cement-Bentonite Grout |
| 10 | | | - sandy SILT (ML), interbedded red and greenish gray layers, medium stiff, MnO staining, dry | 168.1 | | | | |
| 15 | | | | | | | | |
| 20 | | | - CLAY (CL), mottled gray and red, stiff, MnO staining, dry | 160.8 | | | | |
| 25 | | | | | | | | |
| 30 | | | - as above, moist, HP fines | 152.1 | | | | |
| 35 | | | | | | | | |
| 40 | | | | | | | | |

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LOG OF TEST BORING

BORING PZ-21

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6122160170.01

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PLANT MITCHELL\PLANT MITCHELL - SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | ELEV. (DEPTH) |
|---------------|----------------|---|-------|---|-----------------------------|--|------------------------------------|
| | | (Cont.) | | | | Completion: Protective casing set in concrete pad | |
| 45 | | - as above; calcareous, strong reaction to HCL, wet | 132.1 | | ▽ | Annular Fill: Cement-Bentonite Grout | 133.1 (44.0) |
| 50 | | - SAND, calcareous, white, rock fragments, cemented, wet | 128.1 | | | Annular Seal: 3/8" bentonite chips | |
| 55 | | | | | | Annular Seal: 3/8" bentonite pellets (non-coated) | 124.1 (53.0) |
| 60 | | - as above; with increasing cementation and fossiliferous | 117.1 | | | Filter: silica filter sand | 119.1 (58.0) 117.1 (60.0) |
| 65 | | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack | |
| 70 | | Bottom of borehole at 70.0 feet. | 107.1 | | | | |
| 75 | | | | | | | |
| 80 | | | | | | | |
| 85 | | | | | | | |



LOG OF TEST BORING

BORING PZ-22

PAGE 1 OF 2

6122160170.01

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

DATE STARTED 7/28/2016 COMPLETED 7/28/2016 SURF. ELEV. 184.76 ft msl COORDINATES: N:31.442485 E:-84.130862

CONTRACTOR Cascade Drilling, LP EQUIPMENT 100C DB320 METHOD Sonic Drilling with 4 in. barrel

DRILLED BY Bill Lindsey LOGGED BY Daniel Morris* CHECKED BY TOP OF CASING: 187.69 ft msl

BORING DEPTH 60 ft bgs GROUND WATER DEPTH: DURING 50 ft bgs COMP. 45.83 ft bgs DELAYED 12 days

NOTES *Samples logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|---|-------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| 5 | | - silty SAND (SM), fill, loose, dry | | | | Annular Fill: Cement-Bentonite Grout | |
| 10 | | - CLAY (CL), reddish brown (5 YR 4/0) with gray mottling, slightly moist, low plasticity MnO staining | 174.8 | | | | |
| 15 | | | | | | | |
| 20 | | - sandy CLAY (CL), loose, MnO staining | 164.8 | | | | |
| 25 | | | | | | | |
| 30 | | | | | | | |
| 35 | | - CLAY (CL), reddish brown, fine, MnO staining, HP fines | 149.8 | | | Annular Seal: 3/8" bentonite chips | 154.6 (30.0) |
| 40 | | | | | | | |

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PIPLANT MITCHELL\PIPLANT MITCHELL.SOUTHERN COMPANY.GPJ

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LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PIANT MITCHELL\PIANT MITCHELL SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|----------------------------------|-------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| | | (Cont.) | | | | (CONTINUED) | |
| 45 | | - SAND (SP), white, calcareous | 139.8 | | | Annular Seal: 3/8" bentonite chips | 141.8 (43.0) |
| | | | | | | Annular Seal: 3/8" bentonite pellets (non-coated) | |
| 50 | | | | | | Filter: silica filter sand | 136.8 (48.0) |
| 55 | | | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack | 134.8 (50.0) |
| 60 | | | 124.8 | | | | |
| | | Bottom of borehole at 60.0 feet. | | | | | |
| 65 | | | | | | | |
| 70 | | | | | | | |
| 75 | | | | | | | |
| 80 | | | | | | | |
| 85 | | | | | | | |



LOG OF TEST BORING









BORING PZ-23A

PAGE 1 OF 2

61621170611

PROJECT Plant Mitchell - GeotechLOCATION Albany, GADATE STARTED 3/9/2020 COMPLETED 3/10/2020 SURF. ELEV. 189.06 ft msl COORDINATES: N:31.44031 W:84.13088CONTRACTOR SCS Field Services EQUIPMENT _____ METHOD Hollow Stem AugerDRILLED BY SM LOGGED BY FM CHECKED BY NJMBORING DEPTH 70 ft bgs GROUND WATER DEPTH: DURING _____ COMP. _____ DELAYED 40.11 ft after 14 daysNOTES Top of casing elevation: 191.85 ft msl.

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE GDT - 5/15/20 13:03 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\PLANT MITCHELL PZ-23-PZ-24.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | ELEV. (DEPTH) |
|---------------|---|--|-------|---|-----------------------------|-----------|-------------------------------|
| 5 |  | -SAND (SC), red, clayey, moist | | | | | Annular Fill: Cement Grout |
| 10 |  | | | | | | |
| 15 |  | -CLAY (CL), mottled gray and red, stiff, moist | 175.6 | | | | |
| 20 |  | | | | | | |
| 25 |  | | | | | | |
| 30 |  | | | | | | |
| 35 |  | | | | | | |
| 40 |  | | | | | | |

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LOG OF TEST BORING

BORING PZ-23A

PAGE 2 OF 2

61621170611

PROJECT Plant Mitchell - Geotech

LOCATION Albany, GA

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | ELEV. (DEPTH) |
|---------------|----------------|---|-------|---|-----------------------------|---|------------------|
| | | (Cont.) | | | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad | |
| 45 | | -CLAY (CL), mottled gray and red, stiff, moist | | | | Annular Fill: Cement Grout | 143.6 (45.5) |
| 50 | | -LIMESTONE, white, fine-medium grained, very weathered, moist | 141.1 | | | Annular Seal: Bentonite Pellets | 138.4 (50.7) |
| 55 | | | | | | Filter: Silica Filter Sand | 134.6 (54.5) |
| 60 | | | | | | Filter: Silica Filter Sand | |
| 65 | | | | | | Stand Pipe: 2" OD PVC (SCH 40) | |
| 70 | | | 119.1 | | | Screen: 10 feet of 0.01-inch slotted 2" OD PVC (SCH 40) | |
| | | Bottom of borehole at 70.0 feet. | | | | | |
| 75 | | | | | | | |
| 80 | | | | | | | |
| 85 | | | | | | | |





LOG OF TEST BORING

BORING PZ-24A

PAGE 1 OF 2

61621170611

PROJECT Plant Mitchell - Geotech

LOCATION Albany, GA

DATE STARTED 3/3/2020 COMPLETED 3/6/2020 SURF. ELEV. 192.25 ft msl COORDINATES: N:31.438442 W:84.131835

CONTRACTOR SCS Field Services EQUIPMENT METHOD Hollow Stem Auger

DRILLED BY SM LOGGED BY ML CHECKED BY NJM

BORING DEPTH 61 ft bgs GROUND WATER DEPTH: DURING COMP. DELAYED 45.26 after 18 days

NOTES Top of casing elevation: 194.97 ft msl.

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE GDT - 5/14/20 18:02 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\PLANT MITCHELL PZ-23-PZ-24.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | ELEV. (DEPTH) |
|---------------|----------------|--|-------|---|-----------------------------|-----------|-------------------------------|
| 5 | | -HYDROVAC, no description obtained | | | | | Annular Fill: Cement Grout |
| 10 | | | 182.3 | | | | |
| 15 | | -CLAY (CL), reddish brown, stiff, with silty sand, moist | | | | | |
| 20 | | | | | | | |
| 25 | | | | | | | |
| 30 | | | | | | | |
| 35 | | | | | | | |
| 40 | | | | | | | |

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LOG OF TEST BORING

BORING PZ-24A

PAGE 2 OF 2

61621170611

PROJECT Plant Mitchell - Geotech

LOCATION Albany, GA

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | ELEV. (DEPTH) |
|----------------------------------|----------------|--|-------|---|-----------------------------|---|------------------|
| | | (Cont.) | | | | | |
| | | -CLAY (CL), reddish brown, stiff, with silty sand, moist | | | | Annular Fill: Cement Grout | 150.3 (42.0) |
| 45 | | | 148.3 | | | Annular Seal: Bentonite Pellets | |
| | | -LIMESTONE, white, fine-medium grained, very weathered | | | | | 145.3 (47.0) |
| 50 | | | | | | Filter: Silica Filter Sand | 142.3 (50.0) |
| 55 | | | | | | Filter : Silica Filter Sand | |
| | | | | | | Stand Pipe: 2" OD PVC (SCH 40) | |
| 60 | | | | | | Screen: 10 feet of 0.01-inch slotted 2" OD PVC (SCH 40) | |
| | | | 131.3 | | | | |
| Bottom of borehole at 61.0 feet. | | | | | | | |
| 65 | | | | | | | |
| 70 | | | | | | | |
| 75 | | | | | | | |
| 80 | | | | | | | |
| 85 | | | | | | | |





LOG OF TEST BORING

BORING PZ-25

PAGE 1 OF 2

6122160170.01

 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

DATE STARTED 7/19/2016 COMPLETED 7/20/2016 SURF. ELEV. 168.24 ft msl COORDINATES: N:31.442129 E:-84.135983

CONTRACTOR Cascade Drilling, LP EQUIPMENT 100C DB320 METHOD Sonic Drilling with 4 in. barrel

DRILLED BY Jeremy John LOGGED BY Daniel Morris* CHECKED BY TOP OF CASING: 171.14 ft msl

BORING DEPTH 60 ft bgs GROUND WATER DEPTH: DURING 31.7 ft bgs COMP. 30.36 ft bgs DELAYED 20 days

NOTES Northwest side of Pond A, *Samples logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|---|-------|---|-----------------------------|---|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| 5 | | - clayey SAND (SC), reddish brown, fill, moist | | | | Annular Fill: Cement-Bentonite Grout | |
| 10 | | | 158.2 | | | | |
| 15 | | - well graded SAND (SW), reddish brown | | | | | |
| 20 | | - sandy CLAY (CL), banded gray and red, moist | 153.2 | | | | |
| 25 | | - clayey SAND (SC), calcareous, with gravel | 148.2 | | | Annular Seal: 3/8" bentonite pellets (non-coated) | |
| 30 | | - NO RECOVERY | 143.2 | | | | |
| 35 | | - clayey SAND (SC), pink, very moist | 138.2 | | | | |
| 40 | | - clayey SAND (SC), white, fossiliferous, calcareous, wet | 133.2 | | | | 133.2 (35.0) |
| | | | 128.2 | | | | 128.2 |

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SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PIANT MITCHELL\SOUTHERN COMPANY.GPJ



LOG OF TEST BORING

BORING PZ-25

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6122160170.01

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, Georgia

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 12/12/16 12:47 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PIANT MITCHELL\PIANT MITCHELL - SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA | |
|---------------|----------------|---|-------|---|-----------------------------|--|------------------|
| | | | | | | Completion: Protective casing set in concrete pad | ELEV. (DEPTH) |
| | | - as above | | | | (CONTINUED) | |
| 45 | | - as above; with increasing cementation | 123.2 | | | Annular Seal: 3/8" bentonite chips | (40.0) |
| 50 | | | | | | | 120.2 (48.0) |
| 55 | | | | | | Filter: silica filter sand | 118.2 (50.0) |
| 60 | | | 108.2 | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack | |
| | | Bottom of borehole at 60.0 feet. | | | | | |
| 65 | | | | | | | |
| 70 | | | | | | | |
| 75 | | | | | | | |
| 80 | | | | | | | |
| 85 | | | | | | | |



LOG OF TEST BORING

BORING PZ-27

PAGE 1 OF 2

6122160170.01

 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

DATE STARTED 10/4/2016 COMPLETED 10/4/2016 SURF. ELEV. 161.88 ft msl COORDINATES: N:31.436488 E:-84.138925

CONTRACTOR Southern Company Services EQUIPMENT CME-558 HSA METHOD Hollow Stem Auger

DRILLED BY Donald Wildman LOGGED BY F. Mayila* CHECKED BY TOP CASING ELEV. 164.58 ft msl

BORING DEPTH 47 ft bgs GROUNDWATER DEPTH: DURING 26 ft bgs COMP. 26.5 ft bgs DELAYED 28.86 ft.; 2 days

NOTES *Sample logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | GROUNDWATER | SAMPLE TYPE NUMBER | BLOW COUNTS (N-VALUE)/ RECOVERY % (RQD %) | HCL REACTION Weak Moderate Strong | WELL DATA | ELEV. (DEPTH) |
|---------------|----------------|---|--------|-------------|-----------------------|---|---|--|------------------|
| | | - silty SAND (SM), dark brown (7.5 YR 3/3), medium dense, dry | | | SS -1 | 8-12-14 (26) | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad | 160.97 (0.5) |
| 5 | | - silty CLAY (CL), light brown (7.5 YR 6.3), mottled, moist, very stiff | 158.38 | | SS -2 | 8-9-10 (19) | | Annular Fill: Cement-Bentonite Grout | |
| | | - SAND (SP), reddish yellow (7.5 YR 7.6), medium to coarse, moist, sub-angular fine gravel, medium dense | 155.88 | | SS -3 | 6-11-13 (24) | | | |
| 10 | | - same as above | | | SS -4 | 10-11-9 (20) | | | |
| 15 | | - clayey SAND (SC), yellowish red (5 YR 5/6), fine, medium dense, moist | 148.38 | | SS -5 | 18-8-7 (15) | | | |
| 20 | | - SAND (SP), brown (7.5 YR 4/3), medium dense | 143.38 | | SS -6 | 6-8-5 (13) | | | |
| | | - LIMESTONE, white (5 YR 8/1), stiff to medium stiff, moist to wet | 142.88 | | | | | | |
| 25 | | - same as above, with rock fragments | | | SS -7 | 2-4-8 (12) | | Annular Seal: 3/8" bentonite chips | 136.28 (25.6) |
| 30 | | - same as above | | | SS -8 | 2-8-8 (16) | | Annular Seal: 3/8" bentonite chips | 131.28 (30.6) |
| 35 | | - same as above | | | SS -9 | 3-2-5 (7) | | Filter: silica filter sand | 126.28 (35.6) |
| 40 | | - same as above | | | SS -10 | 4-5-7 (12) | | | 123.58 (38.3) |
| | | | | | | | | | 121.47 |

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SIMPLE GEO W/ WELL AND SPT - ESSE2012DATABASE GDT - 4/2/18 12:31 - C:\USERS\WACKENZIE\FIOCADESKTOP\PROJECTS\PLANT MITCHELL\PLANT MITCHELL - SOUTHERN COMPANY.GPJ



LOG OF TEST BORING

BORING PZ-27

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6122160170.01

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | GROUNDWATER | SAMPLE TYPE NUMBER | BLOW COUNTS (N-VALUE)/ RECOVERY % (RQD %) | HCL REACTION Weak Moderate Strong | WELL DATA | ELEV. (DEPTH) |
|---------------|----------------|---|--------|-------------|-----------------------|---|---|--|------------------|
| | | (Cont.) | | | | | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad | |
| 45 | | - same as above | | | SS -11 | 9-9-2 (11) | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack with end cap | |
| | | | 114.88 | | | | | | |
| 50 | | - Casing fell under own weight to 48.3 ft bgs when place in borehole. Total well depth = 48.3 ft Bottom of borehole at 47.0 feet. | | | | | | | |
| 55 | | | | | | | | | |
| 60 | | | | | | | | | |
| 65 | | | | | | | | | |
| 70 | | | | | | | | | |
| 75 | | | | | | | | | |
| 80 | | | | | | | | | |
| 85 | | | | | | | | | |

SIMPLE GEO W/ WELL AND SPT - ESEE2012DATABASE GDT - 4/2/18 12:31 - C:\USERS\IMACKENZIE\FIOCADESKTOP\PROJECTS\PLANT MITCHELL\PLANT MITCHELL_SOUTHERN COMPANY.GPJ



LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

DATE STARTED 10/13/2016 COMPLETED 10/13/2016 SURF. ELEV. 163.49 ft msl COORDINATES: N:31.437900 E:-84.138565

CONTRACTOR Cascade Drilling, LP EQUIPMENT 100C DB320 METHOD Sonic Drilling with 4 in. barrel

DRILLED BY T. Ardito LOGGED BY F. Mayila* CHECKED BY TOP CASING ELEV. 165.96 ft msl

BORING DEPTH 47 ft bgs GROUNDWATER DEPTH: DURING 23 ft bgs COMP. 24.9 ft bgs DELAYED 27.2 ft.; 0.5 days

NOTES *Sample logged by geologist employed by Amec Foster Wheeler

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 4/2/18 12:31 - C:\USERS\MACKENZIE\FIOCA\DESKTOP\PROJECTS\PLANT MITCHELL\PLANT MITCHELL.SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|--------|---|-----------------------------|---|
| | | | | | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad ELEV. (DEPTH) |
| 5 | | - silty CLAY (CL), pale brown (10 YR 6/3) to light yellowish brown (10 YR 6/4), decreasing silty content w/ depth, moist | 158.49 | | | Annular Fill: Cement-Bentonite Grout |
| | | - silty SAND (SM), very pale brown (10 YR 7/3) to dark brown (7.5 YR 4/6) | 156.49 | | | |
| 10 | | - silty CLAY (CL), pale brown (10 YR 6/3) to light yellowish brown (10 YR 6/4), decreasing silty content w/ depth, moist | | | | |
| 15 | | - same as above, stringers of sand | 146.49 | | | |
| | | - some gravel/rock fragments | 145.49 | | | |
| 20 | | - LIMESTONE, yellow (10 YR 8/8), weathered, hard, large fragments intermixed with gravelly fragments, wet | | | | |
| | | - LIMESTONE, white (10 YR 8/1), weathered, with rock fragments throughout sample, pieces up to 3", wet | | | | |
| 25 | | | | | | |
| | | | 136.49 | | | |
| 30 | | - LIMESTONE, white (10 YR 8/1), weathered, with rock fragments throughout sample core | | | | |
| | | | | | | |
| 35 | | | | | | |
| | | | | | | |
| 40 | | | | | | |

(Continued Next Page)



LOG OF TEST BORING

BORING PZ-28

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6122160170.01

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV | Weak Moderate Strong | HCL REACTION | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|----------------------------------|--------|----------------------------|-----------------|-----------------------------|---|
| | | (Cont.) | | | | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad |
| | | - same as above | | | | | ELEV. (DEPTH) |
| 45 | | | 116.49 | | | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack with end cap |
| | | Bottom of borehole at 47.0 feet. | | | | | |
| 50 | | | | | | | |
| 55 | | | | | | | |
| 60 | | | | | | | |
| 65 | | | | | | | |
| 70 | | | | | | | |
| 75 | | | | | | | |
| 80 | | | | | | | |
| 85 | | | | | | | |



LOG OF TEST BORING

BORING PZ-29

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6122160170.01

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

DATE STARTED 10/3/2016 COMPLETED 10/4/2016 SURF. ELEV. 170.42 ft msl COORDINATES: N:31.440384 E:-84.137776

CONTRACTOR Southern Company Services EQUIPMENT CME-558 HSA METHOD Hollow Stem Auger

DRILLED BY Donald Wildman LOGGED BY F. Mayila* CHECKED BY TOP CASING ELEV. 173.18 ft msl

BORING DEPTH 55 ft bgs GROUNDWATER DEPTH: DURING 33 ft bgs COMP. 34 ft bgs DELAYED 37.38 ft.; 2 days

NOTES *Sample logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | GROUNDWATER SAMPLE TYPE NUMBER | BLOW COUNTS (N-VALUE)/ RECOVERY % (RQD %) | HCL REACTION Weak Moderate Strong | WELL DATA |
|---------------|----------------|--|--------------------------------------|---|---|--|
| | | | | | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad |
| | | | | | | ELEV. (DEPTH) |
| | | | | | | 169.54 (0.5) |
| 5 | | - silty CLAY (CL), strong brown (7.5 YR 4/6), very stiff to hard | SS -1 | 13-8-10 (18) | | Annular Fill: Cement-Bentonite Grout |
| | | - same as above, very dense | SS -2 | 20-25-32 (57) | | |
| | | - same as above, reddish yellow (7.5 YR 6/8), dense | SS -3 | 19-19-23 (42) | | |
| 10 | | - clayey SAND (SC), pinkish gray (7.5 YR 6/2) to light brown (7.5 YR 6/3), medium grained, medium dense, moist | SS -4 | 6-11-14 (25) | | |
| | | | | | | |
| 15 | | - SAND (SP), very pale brown (10 YR 7/4), fine to medium increasing fine gravel at 14.5', medium dense | SS -5 | 8-11-10 (21) | | |
| | | | | | | |
| 20 | | - clayey SAND (SC), very pale brown (10 YR 7/4), fine, medium dense | SS -6 | 4-6-6 (12) | | |
| | | | | | | |
| 25 | | - clayey SILT (ML), very pale brown (10 YR 7/4) to yellow (10 YR 8/6), fine quartz gravel, 1" round claystone? in toe of spoon, very dense | SS -7 | 50/4" (50+) | | |
| | | | | | | |
| 30 | | - fat CLAY (CH), yellowish brown (10 YR 8/4) to reddish brown, soft | SS -8 | 2-1-2 (3) | | |
| | | | | | | |
| 35 | | - same as above, reddish yellow (7.5 YR 7/8) | SS -9 | 0-2-1 (3) | | Annular Seal: 3/8" bentonite chips |
| | | | | | | |
| 40 | | - same as above, 6" SAND layer at 38.5', light brown (7.5 YR | SS -10 | 1-2-1 (3) | | |
| | | | | | | 130.92 |

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SIMPLE GEO W/ WELL AND SPT - ESEE2012DATABASE GDT - 4/2/18 12:31 - C:\USERS\MACKENZIE\FIOCADESKTOP\PROJECTS\PLANT MITCHELL\PLANT MITCHELL - SOUTHERN COMPANY.GPJ



LOG OF TEST BORING

BORING PZ-29

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6122160170.01

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | GROUNDWATER | SAMPLE TYPE NUMBER | BLOW COUNTS (N-VALUE)/ RECOVERY % (RQD %) | HCL REACTION Weak Moderate Strong | WELL DATA | ELEV. (DEPTH) |
|---------------|----------------|--|--------|-------------|--------------------------|---|---|--|------------------|
| | | 6/3), with some rock fragments (Cont.) | | | | | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad | 130.92 |
| 45 | | - same as above, strong brown (7.5 YR 4/6), MnO nodules, very soft - LIMESTONE, white (7.5 YR 8/1), weathered, very soft | 125.92 | | SS -11 | 0-0-0 (0) | | Annular Seal: 3/8" bentonite chips | (39.5) |
| 50 | | - weathered LIMESTONE with rock fragments, strong brown (7.5 YR 4/6) to white (7.5 YR 8/1), very soft - LIMESTONE, white (7.5 YR 8/1), weathered, very soft | | | SS -12 | 1-0-0 (0) | | Filter: silica filter sand | 125.92 (44.5) |
| 55 | | - Casing fell under own weight to 56.5 ft bgs when placed in borehole. Total well depth = 56.5 ft. Bottom of borehole at 55.0 feet. | 115.42 | | SS -13 | 0 (0) | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack with end cap | 123.92 (46.5) |
| 60 | | | | | | | | | |
| 65 | | | | | | | | | |
| 70 | | | | | | | | | |
| 75 | | | | | | | | | |
| 80 | | | | | | | | | |
| 85 | | | | | | | | | |

SIMPLE GEO W/ WELL AND SPT - ESSE2012DATABASE GDT - 4/2/18 12:31 - C:\USERS\WACKENZIE\FIOCADESKTOP\PROJECTS\PLANT MITCHELL\PLANT MITCHELL COMPANY.GPJ



LOG OF TEST BORING

BORING PZ-31

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6122160170.01

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

DATE STARTED 10/12/2016 COMPLETED 10/13/2016 SURF. ELEV. 180.32 ft msl COORDINATES: N:31.449012 E:-84.137718

CONTRACTOR Sonic Drilling with 4 in. barrel EQUIPMENT METHOD Hollow Stem Auger

DRILLED BY LOGGED BY Cascade Drilling, LP CHECKED BY 100C DB320 TOP CASING ELEV. 182.96 ft msl

BORING DEPTH 57 ft bgs GROUNDWATER DEPTH: DURING 35 ft bgs COMP. 32 ft bgs DELAYED 43.46 ft.; 5 days

NOTES *Sample logged by geologist employed by Amec Foster Wheeler

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 4/2/18 12:31 - C:\USERS\MACKENZIE\FIOCA\DESKTOP\PROJECTS\PLANT MITCHELL\PLANT MITCHELL.SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|--------|---|-----------------------------|---|
| 5 | | - silty CLAY (CL), red (2.5 YR 6/8), beige mottling, very stiff, damp | | | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad ELEV. (DEPTH) |
| 10 | | - same as above, gray (7.5 YR 6/1) mottling | | | | Annular Fill: Cement-Bentonite Grout |
| 15 | | - same as above, layer of chert (2") at 15', white (2.5 YR 7/1) | | | | |
| 20 | | - CLAY (CL), dark brown (2.5 YR 3/4) to reddish brown (2.5 YR 5/4), mottled, stiff | 163.32 | | | |
| 25 | | | 154.82 | | | |
| 30 | | - same as above, soft | | | | |
| 35 | | - weathered LIMESTONE, white (2.5 YR 7/1), weathered with rock fragments/gravel carbonate, very moist | 148.32 | | ▼ | Annular Seal: 3/8" bentonite chips |
| 40 | | - same as above, wet | | | ▽ | |
| | | | | | | 148.32 (32.0) |
| | | | | | | 140.32 |

(Continued Next Page)



LOG OF TEST BORING

BORING PZ-31

PAGE 2 OF 2

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 4/2/18 12:31 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PROJECTS\PLANT MITCHELL\PLANT MITCHELL - SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|----------------------------------|--------|---|-----------------------------|---|
| | | (Cont.) | | | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad |
| | | | | | | ELEV. (DEPTH) |
| | | | | | | Annular Seal: (40.0) |
| | | | | | | 3/8" bentonite chips |
| | | | | | | 135.32 |
| 45 | | - same as above | | | | (45.0) |
| | | | | | | Filter: silica filter sand 133.32 |
| | | | | | | (47.0) |
| 50 | | | | | | Standpipe: 2" OD PVC (SCH 40) |
| | | | | | | Screen: 10 ft; pre-pack with end cap |
| 55 | | | | | | |
| | | | 123.32 | | | |
| | | Bottom of borehole at 57.0 feet. | | | | |
| 60 | | | | | | |
| | | | | | | |
| 65 | | | | | | |
| | | | | | | |
| 70 | | | | | | |
| | | | | | | |
| 75 | | | | | | |
| | | | | | | |
| 80 | | | | | | |
| | | | | | | |
| 85 | | | | | | |
| | | | | | | |



LOG OF TEST BORING

BORING PZ-32

PAGE 1 OF 2

6122160170.01

 SOUTHERN COMPANY SERVICES, INC.
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

DATE STARTED 10/12/2016 COMPLETED 10/13/2016 SURF. ELEV. 178.19 ft msl COORDINATES: N:31.446489 E:-84.130941

CONTRACTOR Sonic Drilling with 4 in. barrel EQUIPMENT METHOD Hollow Stem Auger

DRILLED BY LOGGED BY Cascade Drilling, LP CHECKED BY 100C DB320 TOP CASING ELEV. 180.75 ft msl

BORING DEPTH 62 ft bgs GROUNDWATER DEPTH: DURING 25 ft bgs COMP. 23 ft bgs DELAYED 42 ft.; 4 days

NOTES *Sample logged by geologist employed by Amec Foster Wheeler

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 4/2/18 12:31 - C:\USERS\MACKENZIE\FIOCA\DESKTOP\PROJECTS\PLANT MITCHELL\PLANT MITCHELL.SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|--|--------|---|-----------------------------|---|
| | | | | | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad ELEV. (DEPTH) |
| 5 | | - silty SAND (SM), red (10 R 5/8) to reddish yellow (5 YR 7.8), loose, damp | | | | Annular Fill: Cement-Bentonite Grout |
| 10 | | - same as above, consolidated, very hard | | | | |
| 15 | | - clayey SILT (ML), transitioning to stiff silty CLAY (CL), consolidated very hard | 166.69 | | | |
| 20 | | - CLAY (CL), red (10 R 4/8) with white mottling, stiff, moist | 161.19 | | | |
| 25 | | - clayey, weathered LIMESTONE, yellowish brown (10 YR 5/6) | 154.19 | | | |
| 30 | | - CLAY (CL), yellow (10 YR 7/6), stiff, moist | 151.19 | | | |
| 35 | | - weathered LIMESTONE, very pale brown (10 YR 7/4), with rock fragments/gravel concretions, wet | 146.19 | | | |
| 40 | | - LIMESTONE, gray, very hard rock, highly pourous with fossils | 141.19 | | | |

(Continued Next Page)



LOG OF TEST BORING

BORING PZ-32

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6122160170.01

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 4/2/18 12:31 - C:\USERS\MACKENZIE.FIOCA\DESKTOP\PROJECTS\PLANT MITCHELL\PLANT MITCHELL SOUTHERN COMPANY.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | HCL REACTION Weak Moderate Strong | GROUNDWATER OBSERVATIONS | WELL DATA |
|---------------|----------------|---|--------|---|-----------------------------|---|
| | | | | | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad |
| | | (Cont.) | 137.19 | | | ELEV. (DEPTH) |
| | | - weathered LIMESTONE, pale brown | 135.19 | | | Annular Fill: Cement-Bentonite Grout |
| 45 | | - fat CLAY (CH), reddish brown (5 YR 4/4), some gravel, stiff | | | | 133.69 (44.5) |
| | | | 130.19 | | | Annular Seal: 3/8" bentonite pellets (coated) |
| 50 | | - weathered LIMESTONE, white, with gravel/rock fragments, wet | | | | 128.19 (50.0) |
| | | | | | | Filter: silica filter sand |
| | | | | | | 126.19 (52.0) |
| 55 | | | | | | Standpipe: 2" OD PVC (SCH 40) |
| | | | | | | Screen: 10 ft; pre-pack with end cap |
| | | | 121.19 | | | |
| | | - NOT SAMPLED | | | | |
| 60 | | | | | | |
| | | | 116.19 | | | |
| | | Bottom of borehole at 62.0 feet. | | | | |
| 65 | | | | | | |
| | | | | | | |
| 70 | | | | | | |
| | | | | | | |
| 75 | | | | | | |
| | | | | | | |
| 80 | | | | | | |
| | | | | | | |
| 85 | | | | | | |
| | | | | | | |



LOG OF TEST BORING

BORING PZ-33

PAGE 1 OF 2

6122160170.01

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

DATE STARTED 10/1/2016 COMPLETED 10/2/2016 SURF. ELEV. 187.08 ft msl COORDINATES: N:31.435860 E:-84.132516

CONTRACTOR Southern Company Services EQUIPMENT CME-558 HSA METHOD Hollow Stem Auger

DRILLED BY Donald Wildman LOGGED BY F. Mayila* CHECKED BY TOP CASING ELEV. 189.61 ft msl

BORING DEPTH 71 ft bgs GROUNDWATER DEPTH: DURING 52.2 ft bgs COMP. 52.2 ft bgs DELAYED NM

NOTES *Sample logged by geologist employed by Amec Foster Wheeler

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | GROUNDWATER | SAMPLE TYPE NUMBER | BLOW COUNTS (N-VALUE)/ RECOVERY % (RQD %) | HCL REACTION Weak Moderate Strong | WELL DATA |
|---------------|----------------|--|--------|-------------|-----------------------|---|---|--|
| | | - clayey and silty SAND (SC/SM), brownish yellow (10 YR 6/8), loose at surface, with COAL, medium dense to dense | | | SS -1 | 8-8-10 (18) | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad |
| 5 | | - same as above, dark yellowish brown (10 YR 4/6) | | | SS -2 | 13-16-17 (33) | | Annular Fill: Cement-Bentonite Grout |
| | | - same as above, yellowish brown (10 YR 4/6), no coal, medium dense | | | SS -3 | 7-8-9 (17) | | |
| 10 | | | | | SS -4 | 13-12-13 (25) | | |
| 15 | | - CLAY (CL), pale brown (10 YR 6/3) to reddish brown (2.5 YR 4/4), very stiff to stiff | 173.58 | | SS -5 | 45-8-9 (17) | | |
| 20 | | - same as above, 2" layer SAND with clay, some gravel | | | SS -6 | 6-6-7 (13) | | |
| 25 | | - same as above, strong brown (2.5 YR 5/8), isolated rock fragments, (no HCl reaction) stiff | | | SS -7 | 2-4-5 (9) | | |
| 30 | | | | | SS -8 | 4-6-14 (20) | | |
| 35 | | - same as above, 2" layer gravel pieces/rock fragments (no HCL reaction), stiff | | | SS -9 | 5-6-8 (14) | | |
| 40 | | - same as above, 39-40' - MnO nodules, with some rock | | | SS -10 | 2-2-3 (5) | | |

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SIMPLE GEO W/ WELL AND SPT - ESEE2012DATABASE GDT - 4/2/18 12:31 - C:\USERS\IMACKENZIE\FIOCADESKTOP\PROJECTS\PLANT MITCHELL\PLANT MITCHELL.SOUTHERN COMPANY.GPJ



LOG OF TEST BORING

BORING PZ-33

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6122160170.01

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Mitchell

LOCATION Albany, GA

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | ELEV. | GROUNDWATER | SAMPLE TYPE NUMBER | BLOW COUNTS (N-VALUE)/ RECOVERY % (RQD %) | HCL REACTION Weak Moderate Strong | WELL DATA | ELEV. (DEPTH) |
|---------------|----------------|---|--------|-------------|--------------------------|---|---|--|------------------|
| | | fragments (no HCL reaction, medium stuff (Cont.) | | | | | | Completion: Protective casing set in concrete pad; 2-foot square concrete pad | |
| 45 | | - CLAY (CL), dark brown (7.5 YR 3/3), few gravel, MnO stains, stiff | | | SS -11 | 2-3-3 (6) | | Annular Fill: Cement-Bentonite Grout | |
| 50 | | - LIMESTONE, white (10 YR 8/1), weathered, wet at 50', rock fragments, very stiff to stiff | 138.58 | | SS -12 | 7-12-13 (25) | | | |
| 55 | | - same as above | | | SS -13 | 5-6-7 (13) | | Annular Seal: 3/8" bentonite pellets (coated) | 129.38 (52.7) |
| 60 | | - same as above | | | SS -14 | 6-7-9 (16) | | Filter: silica filter sand | 129.38 (57.7) |
| 65 | | - same as above | | | SS -15 | 6-11-10 (21) | | Standpipe: 2" OD PVC (SCH 40) Screen: 10 ft; pre-pack with end cap | 126.68 (60.4) |
| 70 | | | 116.08 | | | | | | 116.68 |
| | | Bottom of borehole at 71.0 feet. | | | | | | Formation Collapse to 70.4 ft. | |
| 75 | | | | | | | | | |
| 80 | | | | | | | | | |
| 85 | | | | | | | | | |

SIMPLE GEO W/ WELL AND SPT - ESEE2012DATABASE GDT - 4/2/18 12:31 - C:\USERS\MACKENZIE\FIOCADESKTOP\PROJECTS\PLANT MITCHELL\PLANT MITCHELL COMPANY.GPJ


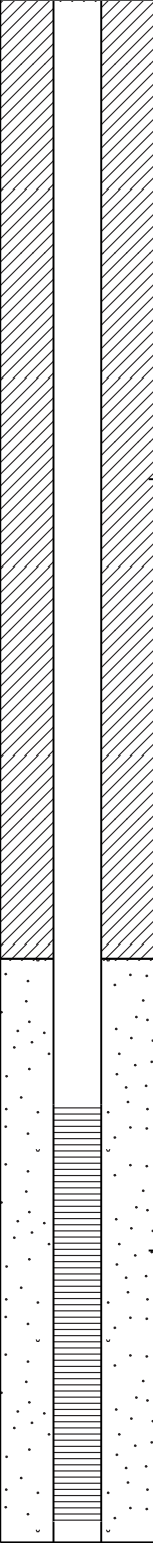









PZ-57 BORING LOG

| | | |
|--|--|---|
| PROJECT NUMBER 6122160170 | DRILLING COMPANY Cascade Drilling | COORDINATES N , E |
| PROJECT NAME Plant Mitchell | DRILLER C. Franklin | COORD SYS Ga State Plane West (NAD 83) |
| CLIENT Georgia Power | RIG TYPE/ METHOD TSI CC150/ SONIC | COMPLETION Stick-up w/ protective casing |
| ADDRESS 5200 Radium Springs Rd, Albany GA | DRILL CASING DIA. 6-in override & 4-in core | SURFACE ELEVATION 166.54 ft NAVD 88 |
| LOCATION Ash Pond 2 | BORING DEPTH 70.0 ft | WELL TOC 169.35 ft NAVD 88 |

| | |
|--|---|
| COMMENTS Start drilling on 11/2/2021 and complete drilling on 11/3/2021. Well construction completed on 11/4/2021 with installation of well cover and concrete pad. | LOGGED BY A. Shoredits CHECKED BY R. Quinn |
|--|---|

| Depth (ft) | Samples | Sample Run (Recovery) | Graphic Log | Material Description | USCS | Well Diagram | Elevation (ft) |
|------------|---------|-----------------------|-------------|--|-------|--------------|----------------|
| 2 | 0-10 | #1 (100%) | | Hand auger utility clearance | SP | | 166 |
| 4 | | | | 0-3 ft SAND with trace silt, black, medium dense, moist, top soil | | | 164 |
| 6 | | | | 3-10 ft CLAY with sand and silt, brown/tan/yellow/grey, medium stiff, medium plasticity, moist | CL-SC | | 162 |
| 8 | | | | | | | 160 |
| 10 | | | | | | | 158 |
| 12 | 10-20 | #2 (95%) | | Sandy CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | | | 156 |
| 14 | | | | CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | | | 154 |
| 16 | | | | CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | | | 152 |
| 18 | | | | CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | | | 150 |
| 20 | | | | CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | | | 148 |
| 22 | 20-30 | #3 (79%) | | Sandy CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | CL | | 146 |
| 24 | | | | CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | CH | | 144 |
| 26 | | | | CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | | | 142 |
| 28 | | | | CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | | | 140 |
| 30 | | | | CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | | | 138 |
| 32 | 30-40 | #4 (85%) | | CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | CH | | 136 |
| | | | | CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | SC | | |
| | | | | CLAY, tan/grey/yellow, medium stiff, medium plasticity, moist, medium to fine grained sand | CL-SC | | 134 |

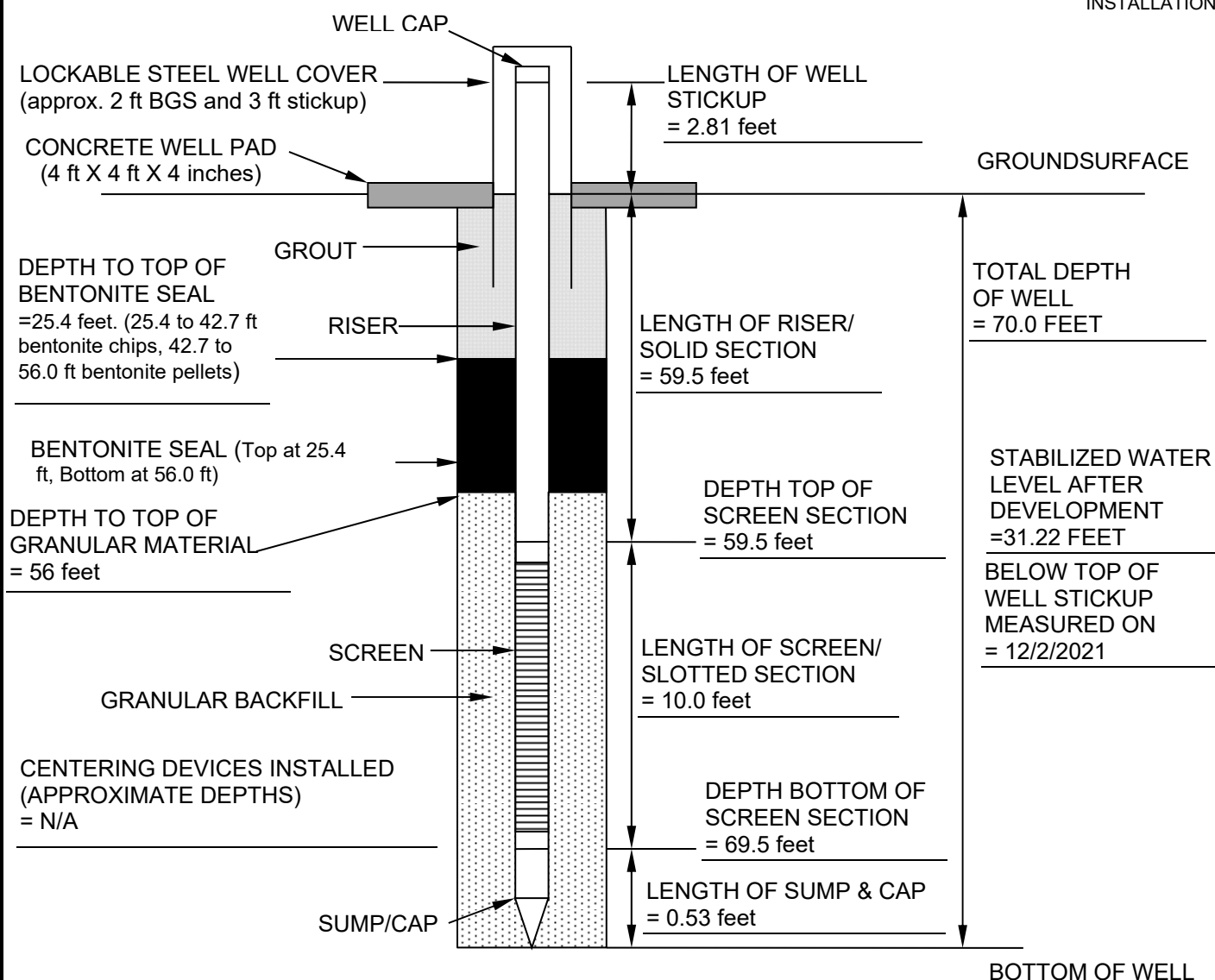
| Depth (ft) | Samples | Sample Run (Recovery) | Graphic Log | Material Description | USCS | Well Diagram | Elevation (ft) |
|------------|---------|-----------------------|---|---|-------|--|----------------|
| 34 | | |  | Calcareous rock lens, white, dry, trace sand and clay | - |  | 132 |
| 36 | | |  | Clayey SAND, red/brown, medium dense, moist | SC | | 130 |
| 38 | | |  | CLAY, blue/grey, very soft, low plasticity, sticky | CL | | 128 |
| 40 | 40-50 | #5 |  | Clayey SAND, dark grey/brown, medium dense, moist, clay and sand mixture | SC-CL | | 126 |
| 42 | | (80%) | | 43.3-43.6 ft clay lens | | | 124 |
| 44 | | |  | Calcareous rock mixed in with clays, dark grey/white, wet | - | | 122 |
| 46 | | |  | Consolidated fossiliferous limestone, white, wet, porous, fizzes with hydrochloric acid | | Bentonite seal (chips 25.4-42.7 ft, pellets 42.7-56 ft) | 120 |
| 48 | | | | Weathered rock clay lenses throughout from 50-70 ft | | | 118 |
| 50 | 50-60 | #6 | | | | | 116 |
| 52 | | (64%) | | | | | 114 |
| 54 | | | | | | | 112 |
| 56 | | |  | | | Sand filter pack and pre-pack screen | 110 |
| 58 | | | | | | | 108 |
| 60 | 60-70 | #7 | | | | | 106 |
| 62 | | (100%) | | | | | 104 |
| 64 | | | | | | | 102 |
| 66 | | |  | | | | 100 |
| 68 | | | | | | | 98 |
| 70 | | | | Boring terminated in bedrock at 70.0 feet | | | 96 |
| 72 | | | | | | | |

WELL INSTALLATION RECORD

| | |
|--|--|
| JOB NAME Plant Mitchell Ash Pond 2 | PROJECT NO. 6122-16-0170 |
| WELL NUMBER PZ-57 | INSTALLATION DATE 11/4/2021 |
| LOCATION* NORTH: 522849.92 EAST: 2306107.52 | GROUND ELEV: 166.54 feet NAVD88 |
| WOOD FIELD REPRESENTATIVE A. Shoredits | DRILLER/ CONTRACTOR Cascade |
| GRANULAR BACKFILL MATERIAL #1 Silica Filter Sand | DRILLING TECHNIQUE Rotosonic |
| SCREEN MATERIAL 2-inch I.D. Flush Joint Slotted PVC (Sch. 40) | BOREHOLE DIAMETER ± 6.5 inch |
| SLOT SIZE 0.010-inch Machine Cut | REFERENCE POINT** ELEVATION* 169.35 ft NAVD88 |
| RISER MATERIAL 2-inch I.D. Flush joint Solid PVC (Sch. 40) | LOCK TYPE/KEY CODE Master |

* Preliminary-Final location/elevation to be determined by As-Built Survey
 ** Reference point is notch cut in the top of PVC casing

NOTE: NOT TO SCALE, ALL DEPTHS RECORDED ARE
 RELATIVE TO EXISTING GROUND SURFACE AT TIME OF
 INSTALLATION



wood.

Notes:
 Sand – 7 bags of #1 sand (2 for prepack)
 Bentonite – 2 buckets 3/8" coated pellets for bedrock plug; 5 bags of 3/8" chips added to depth above groundwater depth
 Grout – 2 bags of bentonite mix with ~40 gals water

Review: RNQ Date: 12/6/2021

Well Installation Record

PZ-57

ATTACHMENT B1

WELL DRILLING CONTRACTOR PROOF OF BONDING

Southern Company Services, Inc.
64 Perimeter Center East
Atlanta, Georgia 30346
Telephone (404) 393-0650



June 23, 1994

Mr. Michael Laitta
State of Georgia - Environmental Protection Department
Room 400
19 Martin Luther King, Jr. Drive
Atlanta, GA 30334

RE: Southern Company Services, Inc.
Water Well Contractors & Drillers Performance Bond

Dear Mr. Laitta:

Please find enclosed a renewal of the captioned bond. If you have any questions or need further information, please call me at (404)668-3274. Thank you.

Sincerely,

A handwritten signature in dark ink, which appears to read "Dean Jobko", is written over the typed name and title.

Dean Jobko
Sr. Risk Management Analyst

DMB300

cc: Alan Garrard

PERFORMANCE BOND FOR WATER WELL CONTRACTORS

BOND #4993104

AND DRILLERS

WATER WELL CONTRACTOR OR DRILLER

KNOW ALL MEN BY THESE PRESENTS.

That we SOUTHERN COMPANY SERVICES, INC., as Principal, and SAFECO INSURANCE COMPANY OF AMERICA, as Surety, are held and firmly bound unto the Director of the Environmental Protection Division ("Director"), Department of Natural Resources, State of Georgia and his successor or successors in office, as Obligees, in the full sum of TEN THOUSAND & No/100 Dollars (\$10,000.00), for the payment of which well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, the Water Well Standards Act of 1983 (Ga. Laws 1983, p. 1192) (the "Act") requires that water well contractors and drillers file performance bonds with the Director to ensure compliance with the Act; and

WHEREAS, the above bound principal is subject to the terms and provisions of said Act.

NOW, THEREFORE, the conditions of this obligation are such that if the above bound Principal shall fully and faithfully perform the duties and in all things comply with the procedures and standards set forth in the Act as now or hereafter amended, and the rules and regulations promulgated pursuant thereto, including but not limited to the correction of any violation of such procedures and standards upon discovery, irrespective of whether such discovery is made before completion of any well subject to this bond, then this obligation shall be void; otherwise of full force and effect.

And Surety, for value received, agrees that no amendment to existing laws, rules or regulations, or adoption of new laws, rules or regulations shall in any way discharge its obligation on this bond, and does hereby waive notice of any such amendment, adoption, or modification.

This bond shall be effective from date of issuance or, in the case of a water well contractor, date of licensure and shall continue in effect until terminated by expiration, mutual agreement or cancellation upon 60 days written notice to Principal and Obligees; provided that the rights of the Obligees and beneficiaries under this bond which arose prior to such termination shall continue.

Unless sooner terminated, this bond shall terminate June 30, 1997.

IN WITNESS WHEREOF the Principal and Surety have caused these presents to be duly signed and sealed, this 19th day of May, 1994.

SOUTHERN COMPANY SERVICES, INC.
Principal, By: [Signature] (L.S.)
Title: Vice President & Secretary

Approved as to sufficiency
and accepted:

Environmental Protection
Division,

Department of Natural
Resources

SAFECO INSURANCE COMPANY OF AMERICA
Surety, By: [Signature]
Sandra J. Mathis, Attorney-in-Fact



POWER
OF ATTORNEY

SAFECO INSURANCE COMPANY OF AMERICA
GENERAL INSURANCE COMPANY OF AMERICA
HOME OFFICE: SAFECO PLAZA
SEATTLE, WASHINGTON 98185

No. 4363

KNOW ALL BY THESE PRESENTS:

That **SAFECO INSURANCE COMPANY OF AMERICA** and **GENERAL INSURANCE COMPANY OF AMERICA**, each a Washington corporation, does each hereby appoint
*****C. A. DRIVER; DEANNA L. FULTON; SANDRA J. MATHIS; EDWARD L. MITCHELL, Atlanta, Georgia*****

its true and lawful attorney(s)-in-fact, with full authority to execute on its behalf fidelity and surety bonds or undertakings and other documents of a similar character issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, **SAFECO INSURANCE COMPANY OF AMERICA** and **GENERAL INSURANCE COMPANY OF AMERICA** have each executed and attested these presents

this 26th day of October, 19 93.

CERTIFICATE

Extract from the By-Laws of **SAFECO INSURANCE COMPANY OF AMERICA**
and of **GENERAL INSURANCE COMPANY OF AMERICA**:

"Article V, Section 13. - FIDELITY AND SURETY BONDS . . . the President, any Vice President, the Secretary, and any Assistant Vice President appointed for that purpose by the officer in charge of surety operations, shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the company in the course of its business . . . On any instrument making or evidencing such appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the company, the seal, or a facsimile thereof, may be impressed or affixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."

Extract from a Resolution of the Board of Directors of **SAFECO INSURANCE COMPANY OF AMERICA**
and of **GENERAL INSURANCE COMPANY OF AMERICA** adopted July 28, 1970.

"On any certificate executed by the Secretary or an assistant secretary of the Company setting out,

- (i) The provisions of Article V, Section 13 of the By-Laws, and
- (ii) A copy of the power-of-attorney appointment, executed pursuant thereto, and
- (iii) Certifying that said power-of-attorney appointment is in full force and effect,

the signature of the certifying officer may be by facsimile, and the seal of the Company may be a facsimile thereof."

I, R. A. Pierson, Secretary of **SAFECO INSURANCE COMPANY OF AMERICA** and of **GENERAL INSURANCE COMPANY OF AMERICA**, do hereby certify that the foregoing extracts of the By-Laws and of a Resolution of the Board of Directors of these corporations, and of a Power of Attorney issued pursuant thereto, are true and correct, and that both the By-Laws, the Resolution and the Power of Attorney are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of said corporation

this 19th day of May, 19 94.

CONTINUATION
CERTIFICATE

SAFECO Insurance Company of America

, Surety upon

a certain Bond No. **4993104**

dated effective **June 30, 1987**
(MONTH-DAY-YEAR)

on behalf of **Southern Company Services, Inc.**
(PRINCIPAL)

and in favor of **Georgia - Dept. of Natural Resources**
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on **June 30, 2014**
(MONTH-DAY-YEAR)

and ending on **June 30, 2015**
(MONTH-DAY-YEAR)

Amount of bond **\$10,000.00**

Description of bond **Water Well Contractors & Drillers**

Premium: **\$100.00**

PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.

Signed and dated on **April 09, 2014**
(MONTH-DAY-YEAR)

SAFECO Insurance Company of America

By 
D-Ann Kleidosty, Attorney-In-Fact

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6125754

First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America are corporations duly organized under the laws of the State of New Hampshire (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Chaun M. Wilson; D-Ann Kleidosty; Gary D. Eklund; Sharon J. Potts; Sylvia M. Ogle; Tracey D. Watson; William G. Moody

all of the city of Atlanta, state of GA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 15th day of May, 2013.



First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss
COUNTY OF KING

On this 15th day of May, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-law and Authorizations of First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, which are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS - Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 9th day of April, 2014.



By: David M. Carey
David M. Carey, Assistant Secretary

To confirm the validity of this Power of Attorney call
1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

COPY

Bond Number K08315607

Performance Bond For Water Well Contractors And Drillers

Name of Water Well Contractor or Driller Michael C. Rice/Cascade Drilling, L.P.

Know All Men By These Present

That we Michael C. Rice/Cascade Drilling, L.P. AND ANY AND ALL EMPLOYEES, OFFICERS AND PARTNERS, as Principal, and Westchester Fire Insurance Company as Surety, are held and firmly bound unto the Director of the Environmental Protection Division (Director), Department of Natural Resources, State of Georgia and his or her Successor or Successors in office, as Obligee, in the full sum of **TWENTY THOUSAND AND NO/00 DOLLARS (\$20,000.00)** for the payment of which will and truly to be made, we bind ourselves, our heir, administrators, successors and assigns, jointly and severally, by the present.

WHEREAS, the WATER WELL STANDARDS ACT OF 1985 (Ga. Laws 1985, p. 1192) (the "ACT") requires that water well contractors and drillers file performance bonds with the director to ensure compliance with the ACT; and WHEREAS the above bound PRINCIPAL is subject to the terms and provisions of said ACT. NOW, THEREFORE, the conditions of this obligation are such that if the above bound PRINCIPAL shall fully and faithfully perform the duties and in all things comply with the procedures and standards set forth in the ACT as now and hereafter amended, and the rules and regulations promulgated pursuant thereto, including but not limited to the correction of any violation of such procedures and standards upon discovery, irrespective of whether such discovery is made before completion of any well subject to this bond, then this obligation shall be void; otherwise of full force and effect.

And Surety, for value received, agrees that no amendment to existing laws, rules or regulations, or adoption of new laws, rules or regulations shall in anyway discharge its obligation on this bond, and does hereby waive notice of any such amendment, adoption or modification.

This bond shall be effective from date of issuance and shall continue in effect until terminated by expiration, mutual agreement or cancellation upon sixty (60) days written notice to Principal and Obligee; provided that the rights of the obligee and beneficiaries under this bond which arose prior to such termination shall continue.

The bond is effective 9/20/13 and unless sooner terminated, this bond shall terminate June 30, 2015. In Witness Whereof the Principal and Surety have caused these present to be duly signed and sealed, this 20th day of, September 20 13.

Michael C. Rice/Cascade Drilling, L.P.

PRINCIPAL, BY _____ (L.S.) TITLE: _____
Westchester Fire Insurance Company

SURETY BY: Roxana Palacios
Roxana Palacios, Attorney-in-Fact

GEORGIA REGISTERED AGENT N/A SEAL:

Revised December 2012

CLIENT'S COPY

SURETY BOND CONTINUATION CERTIFICATE

TO: State of Georgia
Division of Environmental Protection
2 Martin Luther King Jr. Drive SE
Suite 1252
Atlanta, GA 30334

To be attached to and form a part of: Performance Bond for Well Contractors and Drillers

Principal on the Bond: Michael C. Rice/Cascade Drilling, L.P.

Surety Bond Number: K08315607

Bond Amount: Twenty Thousand and 00/100 Dollars (\$20,000.00)

In consideration of the agreed premium charged for this bond, it is understood and agreed that the following change shall be made to this obligation:

[x] CONTINUATION CERTIFICATE

This certificate extends the life of the bond to June 30, 2017. It is executed upon the express condition that the surety's liability under said bond, together with this and all previous continuation certificates, shall not be cumulative and shall in no event exceed the amount specifically set forth in said bond or any existing certificate changing the amount of said bond.

Signed, sealed and dated this 26th day of May , 2015 .

Westchester Fire Insurance Company

By: Katie Snider

Katie Snider, Attorney-in-Fact

Surety of Record: Westchester Fire Insurance Company
436 Walnut Street
Philadelphia, PA 19106
Phone: (415) 547-4513

Agent of Record: Kibble & Prentice, a USI Company
601 Union Street, Suite 1000
Seattle, WA 98101
Phone: (206) 441-6300

SURETY RIDER

To be attached to and form a part of

Bond No. 800031223

Type of

Bond: Performance Bond for Water Well Contractors

dated

effective June 30, 2017
(MONTH-DAY-YEAR)

executed by Michael C. Rice/Cascade Drilling, L.P.
(PRINCIPAL)

. as Principal,

and by Atlantic Specialty Insurance Company

. as Surety,

in favor of State of Georgia
(OBLIGEE)

in consideration of the mutual agreements herein contained the Principal and the Surety hereby consent to changing

Coverage under the bond to include:
Michael Coleman

Nothing herein contained shall vary, alter or extend any provision or condition of this bond except as herein expressly stated.

This rider

is effective December 21, 2017
(MONTH-DAY-YEAR)

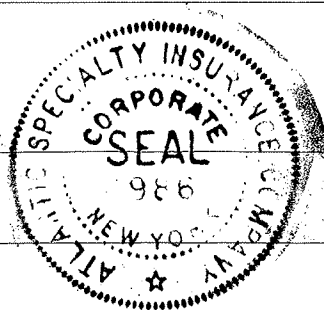
Signed and Sealed December 21, 2017
(MONTH-DAY-YEAR)

Michael C. Rice/Cascade Drilling, L.P.
(PRINCIPAL)

By: _____
(PRINCIPAL)

Atlantic Specialty Insurance Company

By: Elizabeth R. Hahn
Elizabeth R. Hahn, Attorney-in-Fact





Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Deanna M. French, Jill A. Wallace, Susan B. Larson, Elizabeth R. Hahn, Jana M. Roy, Scott McGilvray, Mindee L. Rankin, Ronald J. Lange, John R. Claeys, Roger Kaltenbach, Guy Armfield, Scott Fisher**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **sixty million dollars (\$60,000,000)** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this eighth day of December, 2014.

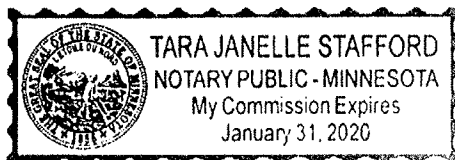


STATE OF MINNESOTA
HENNEPIN COUNTY

By

Paul J. Brehm, Senior Vice President

On this eighth day of December, 2014, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.

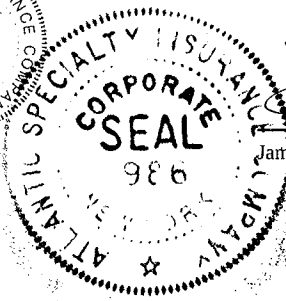


Notary Public

I, the undersigned, Assistant Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 21 day of December, 2017

This Power of Attorney expires
October 1, 2019



James G. Jordan, Assistant Secretary

COPY

CONTINUATION
CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

a certain Bond No. **800031223**

dated effective June 30, 2017
(MONTH-DAY-YEAR)

on behalf of Michael C. Rice and Cascade Drilling, L.P., any and all employees, officers and partners
(PRINCIPAL)

and in favor of State of Georgia
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on June 30, 2019
(MONTH-DAY-YEAR)

and ending on June 30, 2021
(MONTH-DAY-YEAR)

Amount of bond Thirty Thousand and Zero/100 (\$30,000.00)

Description of bond Water Well Contractor Performance Bond

Premium: \$1,200.00

PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.

Signed and dated on May 9, 2019
(MONTH-DAY-YEAR)
Atlantic Specialty Insurance Company

By _____
Attorney-in-Fact Elizabeth R. Hahn

Parker, Smith & Feek, Inc.
Agent

2233 112th Ave NE Bellevue, WA 98004
Address of Agent

(425) 709-3600
Telephone Number of Agent

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Deanna M. French, Susan B. Larson, Elizabeth R. Hahn, Jana M. Roy, Scott McGilvray, Mindee L. Rankin, Ronald J. Lange, John R. Claeys, Roger Kaltenbach, Guy Armfield, Scott Fisher, Andrew P. Larsen, Nicholas Fredrickson**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **sixty million dollars (\$60,000,000)** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-sixth day of October, 2017.

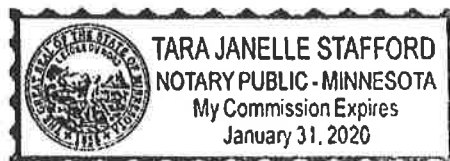
STATE OF MINNESOTA
HENNEPIN COUNTY



By

Paul J. Brehm, Senior Vice President

On this twenty-sixth day of October, 2017, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.



Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 9 day of May 2019

This Power of Attorney expires
October 1, 2019



Christopher V. Jerry, Secretary



Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Deanna M. French, Susan B. Larson, Elizabeth R. Hahn, Jana M. Roy, Scott McGilvray, Mindee L. Rankin, Ronald J. Lange, John R. Claeys, Roger Kaltenbach, Guy Armfield, Scott Fisher, Andrew P. Larsen, Nicholas Fredrickson, William M. Smith, Derek Sabo, Charla M. Boadle**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **unlimited** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-seventh day of April, 2020.

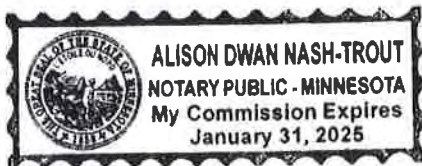
STATE OF MINNESOTA
HENNEPIN COUNTY



By

Paul J. Brehm, Senior Vice President

On this twenty-seventh day of April, 2020, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.

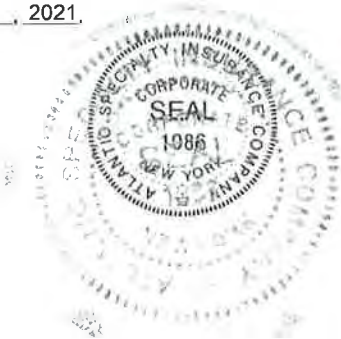


Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 12 day of April, 2021.

This Power of Attorney expires
January 31, 2025



Kara Barrow, Secretary

CONTINUATION
CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

a certain Bond No. 800033976

dated effective 09/27/2017
(MONTH-DAY-YEAR)

on behalf of Ricky Davis / Cascade Drilling, L.P.
(PRINCIPAL)

and in favor of Department of Natural Resources, State of Georgia
(OBLIGEE)

Issued on 9/27/2017
Expires on 6/30/2021
Renewed on 4/12/2021
Expires on 6/30/2023

does hereby continue said bond in force for the further period

beginning on 06/30/2021
(MONTH-DAY-YEAR)

and ending on 06/30/2023
(MONTH-DAY-YEAR)

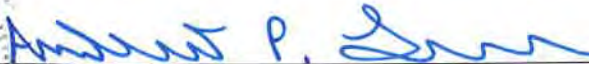
Amount of bond Thirty Thousand and 00/100 Dollars (\$30,000.00)

Description of bond Performance Bond for Water Well Contractors

PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.

Signed and dated on April 12th, 2021
(MONTH-DAY-YEAR)

Atlantic Specialty Insurance Company

By 
Attorney-in-Fact Andrew P. Larsen

Parker, Smith & Feek, Inc.

Agent
2233 112th Ave NE Bellevue, WA 98004
Address of Agent

425-709-3600
Telephone Number of Agent

ATTACHMENT B2

SURVEYOR CERTIFICATION



ENGINEERS

SURVEYORS

PLANNERS

Date: June 15, 2020

To: Gregory Wrenn
Project Manager
Wood Environment & Infrastructure Solutions, Inc.
dreynolds@charah.com

From: Robert Patten
Geomatics Project Manager
McKim & Creed, Inc.
bpatten@mckimcreed.com

RE: Plant Mitchell Monitoring Well Locations

Horizontal grid coordinates were established with eGPS VRS/RTK system, using a Trimble R8 Model 3 GPS/GNSS receiver and a Trimble S6 robotic total station, to achieve +/-0.25' accuracy. Horizontal positions are referenced to the Georgia state plane west zone in US Survey Feet, NAD 83(2011).

Vertical coordinates were established with differential leveling, using a Trimble Dini Digital level. All vertical traverses achieved 0.01' or less closure. Vertical positions are referenced to NAVD88.

Georgia State Plane West Zone (NAD 83/2011), NAVD88

| STRUCTURE | NORTH | EAST | ELEVATION | LOCATION |
|-----------|----------|-----------|-----------|----------|
| MW101 | 524508.4 | 2306160.1 | 168.14 | CONC |
| MW101 | 524507.6 | 2306160.1 | 170.93 | TOP |
| MW102 | 524508.6 | 2306153.7 | 168.10 | CONC |
| MW102 | 524508.2 | 2306153.6 | 170.93 | TOP |
| MW103 | 524613.2 | 2307329.2 | 184.92 | CONC |
| MW103 | 524612.5 | 2307329.1 | 187.78 | TOP |
| MW107 | 521570.7 | 2306881.0 | 182.89 | CONC |
| MW107 | 521570.4 | 2306881.4 | 185.71 | TOP |
| MW108 | 521562.1 | 2306874.9 | 182.75 | CONC |
| MW108 | 521561.7 | 2306874.5 | 185.47 | TOP |
| MW110 | 521613.4 | 2305313.3 | 165.19 | CONC |
| MW110 | 521612.9 | 2305312.7 | 167.86 | TOP |
| MW111 | 521618.5 | 2305309.6 | 165.28 | CONC |
| MW111 | 521618.2 | 2305308.8 | 168.06 | TOP |
| MW112 | 522352.7 | 2305571.6 | 171.76 | CONC |
| MW112 | 522353.4 | 2305571.0 | 174.56 | TOP |
| MW113 | 522356.8 | 2305578.8 | 171.88 | CONC |
| MW113 | 522357.4 | 2305578.4 | 174.61 | TOP |
| MW114 | 522835.9 | 2306072.8 | 166.30 | CONC |
| MW114 | 522836.2 | 2306072.5 | 169.11 | TOP |

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Sugar Hill, GA 30518

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770.962.4126 (fax)

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| | | | | |
|-------|----------|-----------|--------|------|
| MW115 | 522836.8 | 2306080.7 | 166.23 | CONC |
| MW115 | 522837.4 | 2306080.2 | 169.05 | TOP |
| MW116 | 523649.8 | 2306081.8 | 168.93 | CONC |
| MW116 | 523649.9 | 2306082.5 | 171.69 | TOP |
| MW117 | 523643.6 | 2306082.2 | 168.84 | CONC |
| MW117 | 523643.7 | 2306082.7 | 171.66 | TOP |
| MW118 | 525264.3 | 2307346.6 | 192.11 | CONC |
| MW118 | 525264.1 | 2307346.3 | 194.82 | TOP |
| MW119 | 525320.5 | 2307088.2 | 191.60 | CONC |
| MW119 | 525320.7 | 2307088.8 | 194.49 | TOP |
| MW120 | 525216.0 | 2307100.3 | 191.03 | CONC |
| MW120 | 525216.0 | 2307100.9 | 193.79 | TOP |
| MW121 | 524618.6 | 2307325.7 | 184.80 | CONC |
| MW121 | 524618.0 | 2307325.5 | 187.96 | TOP |
| MW122 | 524088.4 | 2306092.1 | 169.44 | CONC |
| MW122 | 524088.5 | 2306092.8 | 172.09 | TOP |
| MW123 | 524096.4 | 2306094.0 | 169.39 | CONC |
| MW123 | 524096.4 | 2306094.7 | 172.01 | TOP |
| PZ01D | 526354.6 | 2307362.9 | 193.44 | NAIL |
| PZ01D | 526353.9 | 2307362.8 | 196.44 | TOP |
| PZ01S | 526357.7 | 2307356.9 | 193.43 | CONC |
| PZ01S | 526357.1 | 2307356.7 | 196.52 | TOP |
| PZ02D | 526068.1 | 2308155.8 | 175.64 | NAIL |
| PZ02D | 526067.3 | 2308155.4 | 178.51 | TOP |
| PZ02S | 526067.5 | 2308163.4 | 175.63 | NAIL |
| PZ02S | 526066.7 | 2308163.4 | 178.61 | TOP |
| PZ03D | 525373.1 | 2307919.2 | 188.08 | NAIL |
| PZ03D | 525373.2 | 2307918.1 | 190.98 | TOP |
| PZ03S | 525365.7 | 2307919.8 | 188.14 | NAIL |
| PZ03S | 525365.6 | 2307918.8 | 191.12 | TOP |
| PZ04D | 524197.9 | 2308010.3 | 188.25 | NAIL |
| PZ04D | 524198.2 | 2308009.5 | 191.10 | TOP |
| PZ04S | 524191.6 | 2308005.8 | 188.42 | NAIL |
| PZ04S | 524192.1 | 2308005.0 | 191.20 | TOP |
| PZ06S | 522253.8 | 2307208.2 | 186.52 | NAIL |
| PZ06S | 522254.0 | 2307207.5 | 189.47 | TOP |
| PZ07D | 521425.8 | 2305995.1 | 170.28 | NAIL |
| PZ07D | 521425.1 | 2305995.3 | 173.08 | TOP |
| PZ07S | 521425.1 | 2306002.6 | 170.10 | NAIL |

| | | | | |
|-------|----------|-----------|--------|------|
| PZ07S | 521424.4 | 2306002.8 | 173.10 | TOP |
| PZ08D | 521443.1 | 2305207.8 | 167.24 | NAIL |
| PZ08D | 521442.1 | 2305207.9 | 170.35 | TOP |
| PZ08S | 521440.6 | 2305217.1 | 167.67 | NAIL |
| PZ08S | 521440.2 | 2305217.4 | 170.78 | TOP |
| PZ09D | 521770.5 | 2305128.4 | 163.18 | NAIL |
| PZ09D | 521770.9 | 2305127.5 | 166.16 | TOP |
| PZ09S | 521763.5 | 2305126.8 | 163.06 | NAIL |
| PZ09S | 521763.7 | 2305125.7 | 166.02 | TOP |
| PZ10S | 522465.8 | 2305400.7 | 172.64 | NAIL |
| PZ10S | 522465.8 | 2305401.6 | 175.63 | TOP |
| PZ11S | 523113.1 | 2305530.7 | 188.71 | NAIL |
| PZ11S | 523112.9 | 2305532.1 | 191.69 | TOP |
| PZ12S | 523794.3 | 2305676.1 | 170.93 | NAIL |
| PZ12S | 523794.9 | 2305676.8 | 173.92 | TOP |
| PZ13S | 524467.4 | 2305809.3 | 170.23 | NAIL |
| PZ13S | 524467.0 | 2305810.0 | 173.22 | TOP |
| PPZ14 | 521473.8 | 2306804.2 | 180.85 | CONC |
| PZ14 | 521473.1 | 2306804.8 | 183.46 | TOP |
| PZ15 | 521600.8 | 2305357.9 | 167.38 | NAIL |
| PZ15 | 521600.2 | 2305357.3 | 170.37 | TOP |
| PZ16 | 522124.7 | 2305360.7 | 171.21 | NAIL |
| PZ16 | 522125.0 | 2305359.9 | 173.92 | TOP |
| PZ17 | 522587.2 | 2305887.2 | 170.12 | NAIL |
| PZ17 | 522587.9 | 2305886.7 | 172.91 | TOP |
| PZ18 | 523145.3 | 2306141.8 | 167.34 | NAIL |
| PZ18 | 523145.7 | 2306142.3 | 170.11 | TOP |
| PZ19 | 523582.0 | 2306152.7 | 169.40 | NAIL |
| PZ19 | 523582.1 | 2306153.6 | 172.05 | TOP |
| PZ20 | 524025.1 | 2306152.0 | 170.62 | NAIL |
| PZ20 | 524025.0 | 2306152.6 | 173.44 | TOP |
| PZ21 | 524638.7 | 2306932.3 | 177.08 | NAIL |
| PZ21 | 524639.5 | 2306932.0 | 179.84 | TOP |
| PZ22 | 524622.8 | 2307749.0 | 184.76 | NAIL |
| PZ22 | 524622.4 | 2307749.0 | 187.69 | TOP |
| PZ23 | 523830.4 | 2307743.0 | 189.06 | NAIL |
| PZ23 | 523831.5 | 2307743.4 | 191.85 | TOP |
| PZ24 | 523152.3 | 2307444.7 | 192.25 | NAIL |
| PZ24 | 523151.8 | 2307445.9 | 194.97 | TOP |

| | | | | |
|------|----------|-----------|--------|------|
| PZ25 | 524492.7 | 2306151.3 | 168.24 | CONC |
| PZ25 | 524492.6 | 2306152.0 | 171.14 | TOP |
| PZ26 | 521462.8 | 2305041.2 | 163.94 | NAIL |
| PZ26 | 521463.1 | 2305040.7 | 166.70 | TOP |
| PZ27 | 522440.6 | 2305234.0 | 161.88 | NAIL |
| PZ27 | 522440.4 | 2305235.1 | 164.58 | TOP |
| PZ28 | 522954.2 | 2305346.4 | 163.49 | NAIL |
| PZ28 | 522953.9 | 2305347.3 | 165.96 | TOP |
| PZ29 | 523856.9 | 2305592.7 | 170.42 | NAIL |
| PZ29 | 523857.8 | 2305593.0 | 173.18 | TOP |
| PZ31 | 526997.0 | 2306857.3 | 180.32 | NAIL |
| PZ31 | 526996.3 | 2306857.6 | 182.96 | TOP |
| PZ32 | 526077.8 | 2307723.5 | 178.19 | NAIL |
| PZ32 | 526078.7 | 2307723.7 | 180.75 | TOP |
| PZ33 | 522212.3 | 2307235.0 | 187.08 | NAIL |
| PZ33 | 522212.6 | 2307233.9 | 189.61 | TOP |
| PZ42 | 521458.8 | 2304662.3 | 142.61 | NAIL |
| PZ42 | 521459.1 | 2304661.2 | 145.66 | TOP |
| PZ46 | 523954.9 | 2305276.3 | 166.50 | CONC |
| PZ46 | 523954.3 | 2305276.0 | 166.79 | TOP |
| PZ47 | 523464.1 | 2305254.4 | 164.46 | CONC |
| PZ47 | 523464.4 | 2305254.9 | 164.08 | TOP |
| PZ50 | 522463.3 | 2305061.0 | 162.96 | CONC |
| PZ50 | 522462.8 | 2305060.4 | 162.68 | TOP |
| PZ51 | 521779.5 | 2304837.1 | 155.85 | CONC |
| PZ51 | 521779.2 | 2304836.5 | 155.52 | TOP |



Robert H Patten, PLS
 Geomatics Project Manager
bpatten@mckimcreed.com





ENGINEERS

SURVEYORS

PLANNERS

Date: December 10, 2021

To: Gregory Wrenn
Project Manager
Wood Environment & Infrastructure Solutions, Inc.
dreynolds@charah.com

From: Scott Watkins
Geomatics Project Manager
McKim & Creed, Inc.
swatkins@mckimcreed.com

RE: Plant Mitchell Monitoring Well Locations

Horizontal grid coordinates were established with eGPS VRS/RTK system, using a Trimble R8 Model 3 GPS/GNSS receiver and a Trimble S6 robotic total station, to achieve +/-0.25' accuracy. Horizontal positions are referenced to the Georgia state plane west zone in US Survey Feet, NAD 83(2011).

Vertical coordinates were established with differential leveling, using a Trimble Dini Digital level. All vertical traverses achieved 0.01' or less closure. Vertical positions are referenced to NAVD88.

Georgia State Plane West Zone (NAD 83/2011), NAVD88

| | | | | |
|------|------------|------------|---------|------|
| PZ57 | 522849.163 | 2306108.02 | 166.535 | NAIL |
| PZ57 | 522849.92 | 2306107.52 | 169.346 | TOP |



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C. GROUNDWATER SAMPLING PROCEDURE

Groundwater sampling will be conducted using the most updated version of USEPA Region 4 *Field Quality and Technical Procedures* as a guide. The following procedures describe the general methods associated with groundwater sampling at the site. Prior to sampling, the well must be evacuated (purged) to ensure that representative groundwater is obtained. To accomplish this objective, low-flow purging from the screened interval is recommended until target parameters listed below are stabilized and then, representative groundwater flowing from geologic formation is collected. Any item coming in contact with the inside of the well casing or the well water will be kept in a clean container and handled only with gloved hands. Field log books and forms shall be kept for each sampling event, and should include but not be limited to, the following: well signage, well access, sampling and purging equipment condition, and any site conditions that may affect sampling.

Sampling personnel will follow the procedures below at each well to ensure that a representative sample is collected:

- Check the well, the lock, and the locking cap for damage or evidence of tampering. Record observations and notify GPC if it appears that the well has been compromised.
- Measure and record the depth to water in all wells to be sampled prior to purging using a water measuring device consisting of probe and measuring tape capable of measuring water levels with accuracy to 0.01 foot. Static water levels will be measured from each well, within a 24-hour period. The water level measuring device will be decontaminated prior to lowering in each well.
- Install Pump: If a dedicated pump is not present, slowly lower the pump into the well to the midpoint of the well screen or a depth otherwise approved by the hydrogeologist or project scientist. The pump intake must be kept at least two feet above the bottom of the well to prevent disturbance and suspension of any sediment present in the bottom of the well. Record the depth to which the pump is lowered. Non-dedicated equipment will be decontaminated between wells in general accordance with USEPA LSASDPROC-205-R4 (USEPA, 2020).
- Measure Water Level: Immediately prior to purging, measure the water level again with the pump in the well. Leave the water level measuring device in the well.
- Purge Well: Begin pumping the well at approximately 100 to 500 milliliters per minute (mL/min). Monitor the water level continually. Maintain a steady flow rate that results in a stabilized water level with 0.3 ft or less of variability. Avoid entraining air in the tubing. Record each adjustment made to the pumping rate and the water level measured immediately after each adjustment. A brief overview of the purging and sampling methodologies, including the type of sampling equipment used will be provided in routine monitoring reports.
- Monitor Indicator Parameters: Monitor and record the field indicator parameters (turbidity, temperature, specific conductance, pH, oxidation reduction potential, and dissolved oxygen (DO)) approximately every three to five minutes. The well is considered stabilized and ready for sample

collection when the indicator parameters have stabilized for three consecutive readings at a minimum:

- ± 0.1 S.U. for pH
 - Oxidation Reduction Potential (ORP) – Record only, not used for stabilization criteria
 - $\pm 5\%$ for specific conductance (conductivity)
 - ± 0.2 mg/L or $\pm 10\%$ for DO where DO > 0.5 mg/L (whichever is greater). If DO < 0.5 mg/L, no stabilization criteria apply
 - ≤ 5 NTUs for turbidity
 - Temperature – Record only, not used for stabilization criteria
- Collect samples at a low flow rate in accordance with the most current USEPA Region 4 *Field Quality and Technical Procedures* such that drawdown of the water level within the well is stable. Flow rate must be reduced if excessive drawdown is observed during sampling. All sample containers should be filled with minimal turbulence by allowing the groundwater to flow from the tubing gently down the inside of the container.
 - Compliance samples will be unfiltered; however, to determine if turbidity is affecting sample results, duplicate samples may be filtered in the field prior to being placed in a sample container, clearly marked as filtered and preserved. Filtering will be accomplished by the use of 0.45-micron filters on the sampling line. At least two filter volumes of sample will pass through before filling sample containers. A new filter must be used for each well and each sampling event. Filtered samples are not considered compliance samples and are only used to evaluate the effects of turbidity.
 - All sample bottles will be filled, capped, and placed in an ice containing cooler immediately after sampling where temperature control is required. Samples that do not require temperature control will be placed in a clean and secure container.
 - Sample containers and preservatives will be appropriate for the analytical method being used.
 - Information contained on sample container labels will include:
 - a. Name of facility
 - b. Date and time of sampling
 - c. Sample description (well number)
 - d. Sampler's initials
 - e. Preservatives
 - f. Analytical method(s)

- After samples are collected, samplers will remove all non-dedicated equipment. Upon completion of all activity, the well will be closed and locked.
- Samples will be delivered to the laboratory following appropriate chain-of-custody (COC) and temperature control requirements. The goal for sample delivery will be within 48 hours of collection; however, at no time will samples be analyzed after the method-prescribed hold time.

Throughout the sampling process, new nitrile gloves will be worn by the sampling personnel. A clean pair of new, disposable gloves will be worn each time a different location is sampled and new gloves donned prior to filling sample bottles. Gloves will be discarded after sampling each well and before sampling the next well.

The goal when sampling is to attain a turbidity of less than 5 NTU; however, samples may be collected where turbidity is less than 10 NTU and the stabilization criteria described above are met.

If sample turbidity is greater than 5 NTU and all other stabilization criteria have been met, samplers will continue purging for three additional hours in order to reduce the turbidity to 5 NTUs or less:

- If turbidity remains above 5 NTU but is less than 10 NTU, and all other parameters are stabilized, the well can be sampled.
- Where turbidity remains above 10 NTU, an unfiltered sample will be collected, followed by a filtered sample that has passed through an in-line 0.45-micron filter attached to the discharge (sample collection) tube. Data from filtered samples will be used only to quantify the effects of turbidity on sample results.

Samplers will identify the sample bottle as containing a filtered sample on the sample bottle label and on the COC form.