

December 20, 2017

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Ms. Jan Trent  
Hydrogeologist  
State Remediation Section  
Site Assessment, Remediation  
& Revitalization Division  
Bureau of Land and Waste Management  
South Carolina Department of Health  
and Environmental Control  
2600 Bull Street  
Columbia, South Carolina 29201

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DEC 27 2017

SITE ASSESSMENT,  
REMEDICATION &  
REVITALIZATION

**Re: Annual Groundwater Monitoring Report  
Ingersoll Rand-Honea Path Plant  
Honea Path, South Carolina  
BLWM Site ID: 400238  
AEM Project No. 1320-1701-2**

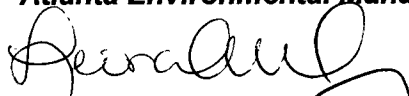
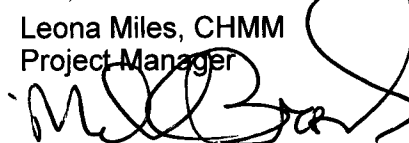
Dear Ms. Trent:

Please find enclosed one electronic copy (on computer disc) and one hardcopy of the Annual Groundwater Monitoring Report for the Ingersoll Rand facility in Honea Path, South Carolina.

If you have any questions, please call us at 404-329-9006.

Sincerely,

**Atlanta Environmental Management, Inc.**

Leona Miles, CHMM  
Project Manager

Michael Brock, P.G.  
Vice President

/krf

c: Michael Goldstein (Ingersoll Rand)

Enclosures

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400238

# Annual Groundwater Monitoring Report

Honea Path Plant  
Honea Path, South Carolina

**BLWM Site ID: 400238**

AEM Project No. 1320-1701-2

December 20, 2017

Volume I

*Prepared For:*

**Ingersoll Rand  
800-E Beaty Street  
Davidson, North Carolina 28036**

*Prepared By:*



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**SITE ASSESSMENT  
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REVITALIZATION**

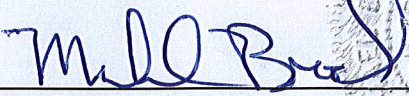
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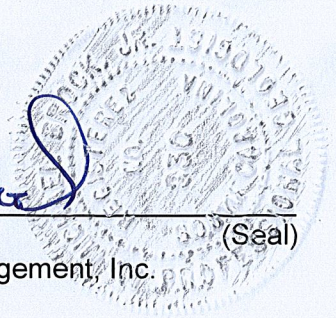


## PROFESSIONAL GEOLOGIST CERTIFICATION

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

Dec 20, 2017  
Date

  
\_\_\_\_\_  
Michael Brock, P.G. # 930 (Seal)  
Atlanta Environmental Management, Inc.  
Atlanta, Georgia





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## **SECTION 1.0 INTRODUCTION**

The Honea Path Plant (HPP) is located at 415 Brick Mill Road in Honea Path, South Carolina (see Figure 1). The property encompasses approximately 466 acres. The Torrington Company (Torrington), formerly a division of Ingersoll Rand, manufactured steering components, universal joint assemblies, and other specialty metal components at its Honea Path, South Carolina, facility from 1970 to 2003. Process wastewater was generated from metal cleaning operations. Since December 1989, process wastewater has been treated in a pretreatment facility prior to discharge to the Town of Honea Path Chiquola Creek Treatment Plant. Prior to construction of the pretreatment facility in 1989, process wastewater was treated in three grit chambers and three oxidation/equalization ponds at the plant and then discharged to Broad Mouth Creek, under National Pollutant Discharge Elimination System (NPDES) Permit Number SC0047520. This treatment system was operated from approximately 1970 to December 1989.

HPP was originally owned and operated as part of Torrington. In February 2003, Ingersoll Rand sold Torrington to The Timken Company, and Torrington was renamed Timken US Corporation, which was subsequently renamed Timken US LLC. Timken US LLC continues to operate the facility. Ingersoll Rand has retained responsibility for groundwater remediation of pre-existing volatile organic compound (VOC) releases at HPP.

### **1.1 GROUNDWATER**

For historical reference, in 1990, HPP installed five groundwater monitoring wells (W-1 through W-5) in the vicinity of the pretreatment facility and treatment lagoons as required by the pretreatment facility construction permit issued by the South Carolina Department of Health and Environmental Control (DHEC). These five wells were completed in the residuum aquifer zone. Groundwater samples collected from these wells contained trichloroethene (TCE). Additional monitoring wells were installed to better define the extent of groundwater impacts between 1992 and 2001.

In 1995, HPP installed five recovery wells (RW-1 through RW-5) and converted four monitoring wells (MW-7A, -10A, -17A, and -19A) into recovery wells. The recovery wells were operated to hydraulically control and contain VOC-impacted groundwater on the plant property, as well as to remove and treat impacted groundwater in the vicinity of the known source areas. Subsequently, additional groundwater recovery wells have been installed. The current groundwater recovery well network is depicted in Figure 2. Recovered groundwater has been pumped to an air-stripper treatment system to remove VOCs and then discharged to Broad Mouth Creek in accordance with NPDES Permit SC0047520 since the first recovery well began operating. NPDES Permit SC0047520 expires in February 2019.

In February 2001, DHEC issued Consent Agreement #01-145-W to HPP to regulate groundwater monitoring and corrective action activities at the facility. The monitoring program outlined in the Consent Agreement included collecting quarterly water level measurements from the monitoring wells and collecting semiannual groundwater samples for VOC analysis from select monitoring wells. The Consent Agreement also required that the groundwater recovery and treatment system continue to be operated and that a groundwater monitoring and corrective action effectiveness report be submitted annually.

Subsequent to the Consent Agreement being issued, additional recovery wells and monitoring wells were installed. In June 2004, the groundwater remediation system was expanded to include recovery well RW-6 and recovery well RW-7. Additional system expansion occurred in March 2007 when recovery wells RW-8 and RW-9 were installed and a new groundwater air-stripper treatment system (Phase III) was installed along the western plume limb (AEM, 2008b). Further system expansion occurred in October 2008 when recovery wells RW-10, -11, and -12 were installed (AEM, 2009).

In 2007 and 2008, six additional monitoring wells were installed. Monitoring well MW-29A was installed in February 2007 to monitor the partially weathered rock (PWR) aquifer zone (AEM, 2008c). Monitoring wells MW-30, -31, -32, -33, and -34 were installed in October 2008, near the anticipated downgradient extent of the VOC plume (AEM 2009). MW-30 and MW-31 monitor the residuum aquifer zone, MW-33 and MW-34 monitor the PWR aquifer zone, and MW-32 monitors both the residuum and PWR aquifer zones. MW-30 was installed off site to demonstrate plume containment west of the HPP. MW-30 was properly abandoned in 2010 as approved by DHEC because no VOCs were observed in groundwater samples collected from the well (see Figure 2).

In October 2011, monitoring wells MW-35, -36, and -37 were completed in the PWR aquifer zone to further delineate the VOC plume downgradient of monitoring well MW-32 (AEM, 2011a). Atlanta Environmental Management, Inc. (AEM) subsequently submitted a *Permit to Construct* application to convert monitoring well MW-35 to a recovery well to contain the plume downgradient of MW-32 (AEM, 2012a). MW-35 was converted to a recovery well in September 2013 and began operating on September 27, 2013.

In November 2013, monitoring wells MW-38 and MW-39 were installed along the western plume limb within the drainage feature that forms the western boundary of the HPP property (AEM, 2014d). Monitoring well MW-38 monitors the PWR aquifer zone and MW-39 monitors the residuum aquifer zone (see Figure 2).

A groundwater recovery trench was installed between August 13, 2015, and March 17, 2016, to capture VOC-impacted groundwater before it discharges to the surface water drainage ditch. The trench and recovery well were approved for operation by DHEC on June 17, 2016, and have operated since that time.



Groundwater monitoring reports documenting the quarterly groundwater measurements and semiannual groundwater monitoring events have been submitted annually in accordance with the Consent Agreement for the HPP. The groundwater monitoring results for 2017 are summarized in this report.

## 1.2 SURFACE WATER

In 2011 and 2012, AEM conducted a monitoring study to identify the source of VOCs detected in surface water along the western intermittent surface water drainage ditch (unnamed tributary of Broad Mouth Creek). The study included three surface water sampling events performed in December 2011, January 2012, and April 2012. The results of this study were submitted to DHEC in the report *Surface Water Investigation—Western Plume Limb* (AEM, 2012b).

In November 2013, AEM implemented a VOC migration pathway study within the western intermittent surface water drainage ditch in accordance with the *Surface Water Investigation Work Plan* that was approved by DHEC (AEM, 2013a). This study involved the use of direct-push technology (DPT) to install shallow and deeper temporary wells along the bank of the intermittent drainage ditch to compare groundwater and surface water elevations and to collect shallow and deeper groundwater VOC samples. The results of this study indicated that groundwater discharges to surface water within the upstream section of the western intermittent surface water drainage ditch and that surface water migrates to the groundwater downstream near Broad Mouth Creek. The results of this study were submitted in March 2014 in the report *Groundwater Migration Investigation Western Plume Limb* (AEM, 2014a).

In October 2014, AEM implemented a second VOC migration pathway study to define the extent of shallow subsurface fine- to coarse-grained sand that was acting as a preferential pathway for impacted groundwater migration to surface water. The investigation was conducted in accordance with the *Residuum Investigation Work Plan* that was approved by DHEC (AEM, 2014d). The results of the investigation were submitted as the letter report *Residuum Investigation Report* dated December 19, 2014 (AEM, 2014c). As recommended in the report, a groundwater recovery trench was installed between August 13, 2015, and March 17, 2016, to capture VOC-impacted groundwater before it discharges to the surface water drainage ditch. The trench and recovery well were approved for operation by DHEC on June 17, 2016. During 2017 this trench and recovery well continued operation.

## **SECTION 2.0 WORK PERFORMED**

The following sections summarize work tasks performed at HPP for the current reporting period (October 2016 through September 2017). The groundwater monitoring requirements and schedule are included in Table 1. Figure 2 shows the current monitoring well, recovery well, and surface water sampling locations.

### **2.1 TREATMENT SYSTEM INSPECTIONS AND REPORTING**

AEM conducted weekly, monthly, and quarterly groundwater treatment system inspections and reporting as described below.

#### **Weekly**

AEM personnel inspected the groundwater treatment system twice a week. Weekly inspection sheets are maintained in the treatment system trailer at the Wastewater Pre-Treatment Plant. The recovery wells were also visually inspected twice per week. At that time, flow meter readings were recorded. These data were used to calculate the average groundwater volume removed weekly, monthly, and annually and are discussed in Section 5.2 of this report.

#### **Monthly**

Monthly flow discharge monitoring reports (DMRs) were submitted to DHEC by the 28<sup>th</sup> of each month in accordance with the requirements of NPDES Permit No. SC0047520. The groundwater treatment system discharge rates were in compliance with the permit limits during the reporting period and are discussed in Section 5.2 of this report.

#### **Quarterly**

AEM sampled the groundwater treatment system influent and effluent quarterly (March, June, September, and December) for total suspended solids (TSS), biological oxygen demand (BOD), TCE, and pH as required by NPDES Permit Number SC0047520. These data are submitted to DHEC on NPDES DMRs submitted by March 28, June 28, September 28, and December 28. The groundwater treatment system discharge was in compliance with the permit limits during the reporting period and is not discussed further in this report.

## 2.2 GROUNDWATER ELEVATION MEASUREMENTS

Quarterly depth-to-groundwater measurements were collected from 38 monitoring wells, 16 recovery wells, 5 soil test boring bedrock wells, and 8 observation wells as required by the consent agreement (see Tables 1 and 2). The quarterly measurements were collected in November 2016, January 2017, June 2017, and August 2017 for this reporting period and are discussed in Section 3.0 of this report.

## 2.3 GROUNDWATER AND SURFACE WATER MONITORING

The groundwater and surface water monitoring schedule for 2017 is presented in Table 1. Semiannual sampling was conducted in January and June 2017. These data are discussed in Section 4.0 of this report.

## 2.4 RECOVERY AND TREATMENT SYSTEM MAINTENANCE AND MODIFICATIONS

The following routine system maintenance and repairs were conducted from October 2016 through September 2017:

- Replaced pumps and motors in recovery wells RW-8 and RW-11.
- Repaired the riser and discharge piping at recovery wells RW-1, -2, -3, and -12.
- Replaced compressor at MW-7A.
- Cleaned the Phase IV air stripper and replaced the gaskets.
- Installed a new jet pump in MW-17A.
- Installed new motors and pumps for RW-4, RW-9 and MW-19A. Also replaced polyvinyl chloride (PVC) riser pipes in these recovery wells.
- Replaced the contactor in RW-11 and troubleshoot motor issues at RW-4 following replacement of the motor and pump. Replaced the motor a second time at RW-4.
- Replaced the motor in RW-9.
- Installed new transformer and contacts for Warrick level controls at RW-9 and RW-11.
- Repaired a leak in the discharge line from the trench sump to the Phase III system.

## 2.5 ADDITIONAL SOIL ASSESSMENT

DHEC requested additional soil assessment to further define the extent of impacted soil near a former TCE aboveground storage tank (AST) located at the Honea Path Plant in correspondence dated March 21, 2017. The soil assessment was performed on July 27, 2017, in accordance with the *Soil Assessment Work Plan Addendum–TCE AST Pad*, dated May 30, 2017. The work plan addendum was approved by DHEC in correspondence dated June 30,



2017. The results of the assessment were presented to DHEC in the *Supplemental Soil Assessment Report–Former TCE AST* dated October 5, 2017.

## SECTION 3.0 GROUNDWATER FLOW

Groundwater has been impacted by historical VOC releases at HPP. The groundwater recovery system at HPP modifies groundwater flow within the recovery well and trench areas of influence. The strategy behind the remedial pumping system is to create capture zones that will contain the VOC plume.

The effectiveness of this effort is monitored by collecting water level data to evaluate groundwater flow paths and collecting groundwater samples to define the concentration and extent of dissolved groundwater constituents within the aquifer. Capture zones are determined by preparing water level contour maps and conducting standard flow-net analysis on these maps. Capture zone boundaries are then compared to the extent of groundwater constituents to ensure that the plumes are fully contained. The following sections discuss the hydrogeologic units and groundwater flow at the facility, including the capture zones created by the recovery systems.

### 3.1 HYDROGEOLOGIC ZONES

HPP lies within the Inner Piedmont Belt of South Carolina. The dominant rocks of the Inner Piedmont Belt include mica schist, biotite gneiss, amphibolite, and granitoid gneiss as well as younger granitic plutonic intrusions. The facility is underlain by one aquifer that can be subdivided into three hydrogeologic zones differing in depth, appearance, texture, composition, and hydraulic properties. With increasing depth, these hydrogeologic zones are the residuum aquifer zone, PWR aquifer zone, and bedrock aquifer zone. Each zone is briefly described below.

#### 3.1.1 Residuum Aquifer Zone

The residuum aquifer zone is derived from extensive weathering of the parent bedrock. The residuum lithology consists predominantly of unconsolidated silt with varying proportions of clay and fine–coarse sand. Below the shallow soil horizon, the residuum is saprolite with remnant textural and structural features evident from the original parent bedrock. The predominant textural features include weathered granite and banded biotite schist/gneiss. The saprolite consists of silt, fine–coarse sand, and traces of weathered rock fragments. Groundwater movement within the residuum aquifer zone is characterized by porous-type flow, owing to its predominantly granular texture.

### **3.1.2 Partially Weathered Rock Aquifer Zone**

Underlying the residuum is a transition zone of partially weathered bedrock referred to as the PWR aquifer zone. Boring logs from historical drilling activities indicate that this material is not granular but is, instead, highly fractured rock interlayered with highly weathered saprolite. It is believed that groundwater movement on a macro scale can be roughly characterized as porous-type flow in the PWR because the fractures are numerous and densely spaced. This aquifer zone is hydraulically connected with, and recharged by, the residuum aquifer zone. The thickness of this unit is difficult to determine because of the transitional nature of the upper and lower boundaries of the PWR.

### **3.1.3 Bedrock Aquifer Zone**

As weathering and the number of fractures decrease with depth, the PWR aquifer zone transitions into the bedrock aquifer zone. Groundwater flow in the bedrock aquifer zone is controlled by the orientation, size, and interconnection of structural features (fractures, faults, joints, unit contacts, etc.) within the rock and is not characterized as porous-type flow at the facility, even on a macro scale. In general, this zone is poorly connected with the PWR aquifer zone.

## **3.2 TOPOGRAPHY AND GROUNDWATER FLOW PATHS**

HPP lies on a northeast–southwest-oriented topographic high that forms the divide between two small local hydrogeologic drainage basins; both small basins drain to the north-northeast into Broad Mouth Creek. Rainfall/recharge produces a generally circular mounding of the water table along this topographic high, with the highest water levels occurring near the main plant building. Groundwater migrates in a radial pattern from the northeastern end of this topographic high to the northwest, north, and northeast. The underlying geologic structure impacts groundwater flow at the facility, and thus groundwater migration is more pronounced to the northwest and northeast along unnamed intermittent tributaries toward Broad Mouth Creek (see Figures 1 and 2). This is also observed in the configuration of the VOC plume at the facility, which consists of two prominent plume limbs, one migrating to the northwest and one migrating to the northeast.

## **3.3 GROUNDWATER FLOW AND REMEDIAL CAPTURE ZONES**

Groundwater elevation measurements from November 15, 2016, January 25, 2017, June 5–6, 2017, and August 29, 2017, were used to prepare potentiometric contour maps for the residuum aquifer zone, the PWR aquifer zone, and the bedrock aquifer zone (see Figures 3 through 14). Many of the monitoring wells completed within the residuum aquifer zone were dry when water levels were measured and have been dry for many years (see Attachment A). A summary of the groundwater elevation data is provided in Table 3.

### 3.3.1 Residuum Aquifer Zone

Groundwater flow in the residuum aquifer zone mimics the topography. Groundwater migrates from the higher areas near the plant and along the northeast–southwest ridge to the north, northwest, and northeast and ultimately toward Broad Mouth Creek (see Figures 3, 6, 9, and 12). Within this larger flow regime, the groundwater recovery wells have created localized capture zones in the residuum.

Groundwater migrates downward from the residuum to the PWR and bedrock over most of the site with the exception of the upgradient area near the facility building and the downgradient area adjacent to Broad Mouth Creek near MW-34, -35, -36, and -37. In these areas groundwater migrates downward from the residuum to the PWR and upward from the bedrock to the PWR. In the upgradient area near the facility building this is due to pumping RW-19A and in the downgradient area this is the natural flow gradient, which is also enhanced by pumping MW-35 as a recovery well.

Observations made during soil boring and monitoring well installation activities in 2013 and 2014 identified a shallow, subsurface, fine- to coarse-grained sand encountered in the shallow subsurface east of the narrow drainage ditch along the western property boundary of the HPP facility near monitoring well MW-39. This sand is more transmissive than the remaining silty and clayey residuum in this area. The groundwater migration pathway investigation showed that groundwater was discharging from this shallow sand unit to surface water in the drainage ditch, thus indicating a predominantly horizontal flow component in the more transmissive sand unit. This sand unit is a preferential groundwater pathway from upgradient areas to the surface water ditch. A groundwater recovery trench was installed in this area to capture VOC-impacted groundwater before it discharges to the surface water drainage ditch. The trench began operating on July 1, 2016. Recovery well RW-13 and trench sump TS-1 recover residuum groundwater along a 200-foot trench adjacent to the western intermittent stream. Near the trench, concentrations of VOCs in the adjacent surface water locations (SS-21, -23, -22, -18, and -25) have decreased to below the laboratory detection limit. Thus, the trench is effective in controlling VOC-impacted groundwater discharging to the adjacent intermittent stream in this area.

Recovery wells MW-7A and MW-19A have created localized capture zones near the facility building to capture VOCs in the upgradient areas. Recovery wells RW-4, -5, -7, and -10 pump groundwater from the deeper PWR and bedrock and have created localized capture zones in the residuum as groundwater migrates downward from the residuum into the PWR along the northwestern intermittent drainage ditch. Recovery wells RW-6 and RW-11 have created capture zones in the same manner to the north, and recovery wells MW-17A, RW-1, -2, -3, and -12 have created capture zones in the same manner to the northeast (see Figures 3, 6, 9, and 12).

The potentiometric data are consistent with historical potentiometric data.

### 3.3.2 Partially Weathered Rock and Bedrock Aquifer Zones

As in the residuum, the highest groundwater elevations within the PWR and bedrock occur along the northeast–northwest ridge near the plant building. Groundwater migrates from this area to the north, northwest, and northeast and ultimately toward Broad Mouth Creek (see Figures 4, 5, 7, 8, 10, 11, 13, and 14). Within this larger flow regime, the groundwater recovery wells have created capture zones in the PWR and bedrock.

Groundwater migrates downward from the residuum to the PWR and bedrock over most of the facility with the exception of the upgradient area near the facility building and the downgradient area adjacent to Broad Mouth Creek near MW-34, -35, -36, and -37. In these areas groundwater migrates downward from the residuum to the PWR and upward from the bedrock to the PWR. In the upgradient area near the facility building this is due to pumping RW-19A and in the downgradient area this is the natural flow gradient, which is also enhanced by pumping MW-35 as a recovery well.

Recovery well RW-19A has created a localized capture zone near the facility building to capture VOCs in the upgradient area. Recovery wells RW-4, -5, -7, -10, and MW-35 pump groundwater from the PWR and bedrock and recovery wells RW-8 and RW-9 pump groundwater from the bedrock. These recovery wells have created capture zones in PWR and bedrock along the northwestern property boundary. Recovery wells RW-6 and RW-11 have created capture zones in the same manner to the north, and recovery wells RW-1, -2, -3, and -12 have created capture zones in the same manner to the northeast (see Figures 4, 7, 10, and 13).

The potentiometric data are consistent with historical potentiometric data.

Groundwater flow in the PWR and bedrock is structurally controlled as indicated by the presence of the intermittent drainage ditch to the northwest, the intermittent drainage ditch to the northeast, and to a lesser extent the shallow drainage ditch to the north. The rectangular nature of bends in Broad Mouth Creek also indicates the impact of the fractures and joints within the PWR and bedrock on groundwater and surface water flow. These two intermittent drainage features indicate subsurface fractures and joints that create areas with preferential groundwater flow paths. This is why the recovery wells have been installed in these areas.



## SECTION 4.0 ANALYTICAL RESULTS

Groundwater sample forms for January and June 2017 are included in Attachments B and C, respectively. Laboratory analytical data sheets for samples collected in January and June 2017 are provided in Attachments D and E, respectively. Tabulated data from the January and June 2017 groundwater and surface water sample data are provided in Tables 4 through 13. The tabulated data have been further subdivided based on which plume limb (western or eastern) the samples were collected from.

Groundwater sample data from January and June 2017 indicate that dissolved VOC concentrations and dissolved VOC distribution are consistent with historical data (see Attachment F).

VOCs were historically released from the northwestern side of the northern corner of the facility building near wells SH-02/MW-19A. It also appears that minor releases have occurred from an area northeast of the facility building and parking lot near well MW-7A. VOCs have subsequently migrated downgradient of the source areas and formed two plume limbs, the western plume limb and the eastern plume limb, along the more fractured areas represented by the intermittent drainage ditches to the west and east. More recently, VOCs have diffused to the less transmissive areas between the two plume limbs (ridge areas) at lower concentrations than along the two main plume limbs.

### 4.1 WESTERN PLUME

The western plume extends from beneath the facility building approximately 2,700 feet to the northwest. The recovery trench and wells generate capture zones that contain the western groundwater plume on site.

#### 4.1.1 Groundwater Plume

Analytical data for groundwater samples collected along the western plume limb during January 2017 are summarized in Table 4 and Figures 15 and 16. Analytical data for groundwater samples collected along the western plume limb during June 2017 are summarized in Table 7 and Figures 17 and 18. Monitoring well MW-11 was dry during January and June 2017.

TCE migrates to the northwest under the natural groundwater flow gradient and also because of the groundwater flow gradient created by the recovery wells installed along the intermittent drainage ditch that are operated to capture and contain impacted groundwater on the plant property. The downgradient extent of TCE to the northwest and north is defined by the

recovery wells that contain the TCE plume and by monitoring wells MW-26A, -29A, and -37 as TCE was not reported above laboratory reporting limits in these three monitoring wells.

The field and laboratory quality assurance/quality control (QA/QC) sample analytical data are provided in Attachments D and E. A duplicate groundwater sample was collected from monitoring well MW-24A along the western plume limb (see Tables 5 and 8). Duplicate sample VOC concentrations were within acceptable limits and confirm that sampling techniques and laboratory analytical techniques are generating reproducible sample results. No field QC samples (trip blanks or equipment blanks) contained constituents above laboratory reporting limits.

#### **4.1.2 Groundwater Plume Containment**

Recovery wells RW-4, -5, -7, -8, -9, -10, -13, TS-1, MW-19A, and MW-35 and the recovery trench installed in July 2016 recover groundwater from the western plume limb. The capture zones indicate that the western edge of the VOC plume is being contained on site, although VOC-impacted groundwater was discharging to surface water along the western plume limb.

The northern edge of the western plume extended beyond RW-10 in January and June 2017, as VOCs were detected in downgradient wells MW-31 and MW-32 (see Figures 15 and 17). However, the plume is being contained as demonstrated by the downward VOC concentration trend in downgradient monitoring wells MW-31 and MW-32. VOC concentrations in groundwater samples collected from MW-31 have declined an order of magnitude from 160 micrograms per liter ( $\mu\text{g/L}$ ) in 2009 to 13  $\mu\text{g/L}$  in June 2017 (see Attachments F and G). This is attributed to the operation of recovery well RW-10.

In October 2011, AEM installed monitoring wells MW-35, -36, and -37 to assess the lateral extent of the VOC plume near MW-32. MW-35 was converted to a recovery well at the end of September 2013 to contain the VOC plume near MW-32 and MW-36. The cone of depression observed at MW-35 since start-up indicates that MW-35 is capturing the VOC plume downgradient of MW-32 as evidenced by the fact that VOC concentrations in monitoring well MW-36, crossgradient of MW-35 and downgradient of MW-32, have decreased from 81.5  $\mu\text{g/L}$  (January 2014) to 47  $\mu\text{g/L}$  in June 2017 (see Attachments F and G). Thus, the operation of MW-35 as a recovery well is capturing the downgradient edge of the plume near MW-32 and MW-36. No VOCs have been detected in the groundwater samples collected from MW-37 (see Attachment F).

#### **4.1.3 Surface Water VOC Concentrations**

Analytical data for surface water samples collected along the western plume limb during January 2017 are summarized in Table 6 and in Figure 19. Analytical data for surface water

samples collected along the western plume limb during June 2017 are summarized in Table 9 and in Figure 20.

A residuum groundwater trench and recovery system began operating on July 1, 2016, to control groundwater migration to surface water along the western intermittent drainage ditch. Recovery well RW-13 and the trench recover residuum groundwater along a 200-foot trench adjacent to the western intermittent drainage ditch. Near the trench, a marked improvement in VOCs detected in the surface water has been observed. VOCs in residuum groundwater are contained, as concentrations of VOCs in the adjacent surface water locations (SS-21, -23, -22, -18, and -25) have decreased to below the laboratory detection limit (see Tables 6 and 9). Additionally, downgradient of the trench, VOCs in surface water have declined. No VOCs are detected in surface water at the downstream property boundary.

The field and laboratory quality QA/QC sample analytical results are provided in Attachments D and E. A duplicate sample was collected from surface water sample location SS-20 during the January 2017 sampling event and from SS-28 during the June 2017 sampling event (see Tables 5 and 8). Duplicate sample VOC concentrations were within acceptable limits and confirm that sampling techniques and laboratory analytical techniques are generating reproducible sample results. No field QC samples (trip blanks) contained constituents above laboratory reporting limits.

## **4.2 EASTERN PLUME**

The eastern plume limb extends from MW-17A to the north and northeast. The recovery wells generate capture zones that contain the eastern groundwater plume on site.

### **4.2.1 Groundwater Plume**

Analytical data for groundwater samples collected along the eastern plume limb during January 2017 are summarized in Table 10 and in Figures 15 and 16. Analytical data for groundwater samples collected along the eastern plume limb during June 2017 are summarized in Table 12 and in Figures 17 and 18. Monitoring wells W-1, -2, -3, MW-7, -8, -9, and MW-14 were dry in January 2017. Monitoring wells W-1, -2, -3, MW-9, and MW-14 were also dry in June 2017.

The downgradient extent of TCE to the north is defined by monitoring wells MW-29A and MW-37 that did not contain TCE above laboratory reporting limits and by the recovery wells to the northeast (see Figures 15 and 17).

The field and laboratory QA/QC sample analytical results are provided in Attachments D and E. A duplicate groundwater sample was collected from monitoring well MW-16A (see Tables 5 and 8). Duplicate sample VOC concentrations were within acceptable limits and

confirm that sampling techniques and laboratory analytical techniques are generating reproducible sample results. No field QC samples (trip blanks and equipment blanks) contained constituents above laboratory reporting limits.

#### 4.2.2 Groundwater Plume Containment

Recovery wells MW-17A and RW-1, -2, -3, and -12 recover groundwater from the downgradient extent of the eastern plume limb to the northeast (see Figure 2). Recovery wells RW-6 and RW-11 recover groundwater from the downgradient extent of the eastern plume limb to the north. Recovery well MW-7A is located within the source area of the eastern plume limb. Drawdown was observed in each of these recovery wells during each quarter when depth-to-water measurements were collected.

The capture zones for recovery wells MW-17A and RW-1, -2, -3, and -12 indicate that the eastern edge of the northeastern VOC plume is being contained on site. During 2017 the northern edge of the northeastern plume extended beyond RW-12 to MW-27 and MW-34 (see Tables 10 and 12). However, note that concentrations of VOCs in groundwater at MW-27 have exhibited a declining trend since 2014 (see Attachments F and H) thus indicating capture by the recovery well network. VOCs in groundwater at MW-34 also exhibited an overall declining trend to below laboratory reporting limits in 2016 and January 2017 due to the operation of recovery well RW-12. A slight rebound to 5.3 µg/L PCE and 3.9 µg/L TCE was observed because of RW-12 downtime for repairs. RW-12 has operated continually since being repaired on April 17, 2017.

An evaluation of the capture zone at recovery wells RW-6 and RW-11 within the northern extent of the eastern plume limb indicated that VOCs in this area extended beyond RW-6 and RW-11 to MW-28A. TCE concentrations in groundwater samples collected from MW-28A have been trending downward since 2011, indicating capture by the recovery well network. TCE concentrations in groundwater samples collected from MW-28A have declined from 101 µg/L in January 2011 to 12 µg/L in June 2017, also indicating capture by the recovery well network. Thus, the plume is contained to the north by recovery wells RW-6 and RW-11 and VOCs farther downgradient are attenuating. This is demonstrated by the downward TCE concentration trend in groundwater samples collected from monitoring well MW-28A and the absence of VOCs in groundwater samples collected from MW-29A downgradient of MW-28A.

#### 4.2.3 Surface Water VOC Concentrations

Analytical data for the January and June 2017 surface water samples collected along (1) the eastern surface water drainage feature (which forms the eastern boundary of the northeastern plume limb), (2) the smaller centrally located drainage feature (which traverses the northwestern extent of the eastern plume limb), and (3) Broad Mouth Creek (which forms the northern boundary of the facility) are summarized in Tables 11 and 13 and Figures 19 and 20.

Surface water samples were collected from SS-7 and SS-8 (in Broad Mouth Creek) in January 2017. The remaining surface water locations were dry (see Table 11). VOCs were reported below laboratory reporting limits in each of these surface water samples.

Surface water samples were collected from SS-7, SS-8 (in Broad Mouth Creek), and SD-3 in June 2017. The remaining locations were dry (see Table 13). VOCs were reported below laboratory reporting limits in SS-7 and SS-8. TCE was the only VOC reported in SD-3, at 5.0 µg/L. SD-3 was the only surface water sample collected along the northern plume limb to exceed the DHEC groundwater standard of 2.5 µg/L for TCE during January and/or June 2017 and no VOCs were detected in Broad Mouth Creek.

The field and laboratory QA/QC sample analytical results are provided in Attachments D and E. No field QC samples (trip blanks) contained constituents above laboratory reporting limits.



## SECTION 5.0 RECOVERY AND TREATMENT SYSTEM PERFORMANCE

### 5.1 SYSTEM MAINTENANCE

Routine system maintenance, modifications, and repairs are discussed in Section 2.4 of this report.

### 5.2 SYSTEM PERFORMANCE

The average monthly flow rates from October 2016 through September 2017 were calculated using the flow meter readings and the actual run time for each recovery well (see Table 15). Approximately 47 million gallons of groundwater was recovered by the groundwater recovery system during the current reporting period.

Recovered groundwater VOC influent samples were collected from the Phase I/II, Phase III, and Phase IV air strippers on December 7, 2016, March 1, 2017, June 7, 2017, and September 6, 2017. A composite treatment system VOC effluent sample at NPDES Outfall 001, as the treated groundwater was discharged to Broad Mouth Creek, was also collected on these dates (see Table 16).

On July 1, 2016, the groundwater recovery trench system began operating. The system was designed to control the migration of VOC-impacted residuum groundwater to surface water. For this reporting year, the trench system average groundwater removal rate has been approximately 9.98 gallons per minute. Approximately 5.3 million gallons of VOC-impacted residuum groundwater has been removed from the trench system (see Table 15).

The VOC mass recovered by the Phase I/II, Phase III, and Phase IV groundwater recovery systems during the current reporting period was calculated using the quarterly treatment system influent VOC sample concentrations and the groundwater volume treated by each of the three groundwater treatment systems (see Tables 17, 18, and 19). Approximately 310.2 pounds of VOCs were recovered by the groundwater recovery system from October 2016 to September 2017.

The average groundwater treatment system influent sample PCE and TCE concentrations were 2.20 µg/L and 696 µg/L, respectively (see Table 16). PCE was not reported above laboratory reporting limits in any of the quarterly groundwater treatment system composite effluent samples during the reporting period. TCE was detected in the effluent samples from the December 2016 and March 2017 at 30.5 and 44.5 µg/L, respectively, below the NPDES discharge limits of 590 µg/L (maximum average) and 1,180 µg/L (maximum daily). TCE was reported at <2.0 µg/L and 3.2 µg/L in the June and September 2017 quarterly samples, also below the NPDES discharge limits of 590 µg/L (maximum average) and

1,180 µg/L (maximum daily). Therefore, the VOC remediation system continues to effectively treat impacted groundwater prior to its discharge to Broad Mouth Creek in accordance with NPDES Permit SC0047520.

## SECTION 6.0 CONCLUSIONS

The following conclusions were drawn from data collected during the reporting period:

### Western Plume Limb

- The western edge of the VOC plume limb is being contained by the capture zones generated by recovery wells RW-4, -5, -8, -9, -10, -13, and MW-35 as well as the recovery trench.

The northern edge of the western plume extended beyond RW-10 in January and June 2017, as VOCs were detected in downgradient wells MW-31 and MW-32; however, the downward trend in VOC concentrations at MW-31 and MW-32 indicates that groundwater capture is occurring at these wells.

- TCE concentrations were detected above DHEC surface water standards in surface water samples collected from the surface water body during 2017; however, a reduction in VOC concentrations detected in surface water has been observed since the start-up of the recovery trench in July 2017. VOCs were not detected in surface water near the downgradient property boundary.

### Eastern Plume Limb

- The eastern edge of the northeastern VOC plume is being contained as demonstrated by the capture zones for recovery wells MW-17A and RW-1, -2, -3, and -12. Although the eastern edge of the northeastern plume extended beyond RW-11 and RW-12, as VOCs were detected in downgradient wells MW-33 and MW-27, the plume is contained as demonstrated by the fact that VOCs have not been detected in groundwater since January 2015 at the farthest downgradient monitoring well MW-34.
- The northern edge of the northeastern VOC plume is being contained by recovery wells RW-6 and RW-11 as demonstrated by the decreasing VOC concentration trends observed in downgradient well MW-28A and the absence of VOCs in downgradient well MW-29A in June 2017.
- Recovery well RW-11 began operating in 2009 to contain VOCs historically observed in the north drainage ditch. VOCs have not been reported in surface water at locations SS-9 and SS-10 since 2010, indicating that RW-11 is controlling the migration of VOCs from groundwater to surface water.

TCE has been reported in surface water samples collected from sample locations SS-14 and SD-3 since 2013 at or below the surface water standard. SS-14 and SD-3 are often dry and were dry during January 2017. TCE was only detected in SD-3 near the surface water standard in June. Declining TCE concentrations from monitoring well MW-28A, upgradient of SS-14 and SD-3, indicate that the groundwater recovery system is containing VOCs in the area as downgradient VOCs attenuate.

- VOCs have not been detected in surface water samples within the eastern intermittent stream adjacent to recovery wells RW-1, -2, -3, and -12. Thus, the

operation of recovery wells is containing the VOC plume from discharging to surface water.

### **Groundwater Recovery and Treatment System**

- Approximately 310 pounds of VOCs were recovered by the groundwater recovery system from October 2016 to September 2017.

## SECTION 7.0 REFERENCES

- ADVENT Group, Inc. 1993. *Standard Operating Procedures for Field and Laboratory Activities Related to Consulting Services*. The Torrington Company Special Products Division, Honea Path, South Carolina, May 6, 1993.
- Atlanta Environmental Management, Inc. 2008a. *NPDES Permit No. SC0047520 Reapplication, Honea Path Plant*; Honea Path, South Carolina, February 26, 2008.
- . 2008b. *Groundwater Remediation System Engineering Report and Construction Permit Application, Honea Path Plant*; Honea Path, South Carolina, September 26, 2008.
- . 2008c. *Annual Groundwater Monitoring Report, Honea Path Plant*; Honea Path, South Carolina, November 25, 2008.
- . 2009. *Annual Groundwater Monitoring Report, Honea Path Plant*; Honea Path, South Carolina, November 25, 2009.
- . 2010. *Annual Groundwater Monitoring Report, Honea Path Plant*; Honea Path, South Carolina, November 23, 2010.
- . 2011a. *Monitoring Well Installation Notification, Honea Path Plant*; Honea Path, South Carolina, November 23, 2011.
- . 2011b. *Annual Groundwater Monitoring Report, Honea Path Plant*; Honea Path, South Carolina, November 23, 2011.
- . 2012a. *Groundwater Remediation System Engineering Report and Construction Permit Application, Honea Path Plant*; Honea Path, South Carolina, September 21, 2012.
- . 2012b. *Surface Water Investigation—Western Plume Limb, Honea Path Plant*; Honea Path, South Carolina, December 19, 2012.
- . 2012c. *Annual Groundwater Monitoring Report, Honea Path Plant*; Honea Path, South Carolina, December 19, 2012.
- . 2013a. *Surface Water Investigation Work Plan, Honea Path Plant*; Honea Path, South Carolina, June 28, 2013.
- . 2013b. *NPDES Permit No. SC0047520 Reapplication, Honea Path Plant*; Honea Path, South Carolina, August 26, 2013.



- . 2013c. *Annual Groundwater Monitoring Report, Honea Path Plant*; Honea Path, South Carolina, November 25, 2013.
- . 2014a. *Groundwater Migration Investigation—Western Plume Limb, Honea Path Plant*; Honea Path, South Carolina, March 28, 2014.
- . 2014b. *Residuum Investigation Work Plan, Honea Path Plant*; Honea Path, South Carolina, July 28, 2014 (Letter Format).
- . 2014c. *Annual Groundwater Monitoring Report, Honea Path Plant*; Honea Path, South Carolina, November 24, 2014.
- . 2014d. *Residuum Investigation Report, Honea Path Plant*; Honea Path, South Carolina, December 19, 2014.
- . 2015. *Groundwater Remediation System Engineering Report and Construction Permit Application, Honea Path Plant*; Honea Path, South Carolina, May 27, 2015.

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# TABLES

Table 1. Groundwater and Surface Water 2017 Monitoring Schedule  
Honea Path Plant, Honea Path, South Carolina

Sample Location	Semi-Annual Sampling (January)	Annual Sampling (June)
<b>Monitoring Wells</b>		
W-1	X	X
W-2	X	X
W-3	X	X
MW-7	X	X
MW-8	X	X
MW-9	X	X
MW-11	X	X
MW-13	X	X
MW-14	X	X
MW-16A	X	X
MW-18A	X	X
MW-21A	X	X
MW-23A	X	X
MW-24A	X	X
MW-26A	X	X
MW-27	X	X
MW-28A	X	X
MW-29A	X	X
MW-31	X	X
MW-32	X	X
MW-33	X	X
MW-34	X	X
MW-36	X	X
MW-37	X	X
MW-38	X	X
MW-39	X	X
<b>Recovery Wells</b>		
MW-7A	X	X
MW-17A	X	X
MW-19A	X	X
MW-35	X	X
RW-1	X	X
RW-2	X	X
RW-3	X	X
RW-4	X	X
RW-5	X	X
RW-6	X	X
RW-7	X	X
RW-8	X	X
RW-9	X	X
RW-10	X	X
RW-11	X	X
RW-12	X	X
RW-13	X	X
TS-1	X	X
<b>Sanborn Head Wells</b>		
SH-01 <sup>1</sup>	X	X
SH-02 <sup>1</sup>	X	X
SH-03 <sup>1</sup>	X	X
SH-04 <sup>1</sup>	X	X

Table 1. Groundwater and Surface Water 2017 Monitoring Schedule  
Honea Path Plant, Honea Path, South Carolina

Sample Location	Semi-Annual Sampling (January)	Annual Sampling (June)
<b>Surface Water Locations</b>		
SS-1	X	X
SS-2	X	X
SS-3	X	X
SS-4/SD-1	X	X
SS-5	X	X
SS-6/SD-2	X	X
SS-7	X	X
SS-8	X	X
SS-9	X	X
SS-10	X	X
SS-11	X	X
SS-12	X	X
SS-13	X	X
SS-14	X	X
SS-15	X	X
SS-16	X	X
SS-17	X	X
SS-18	X	X
SS-19	X	X
SS-20	X	X
SS-21	X	X
SS-22	X	X
SS-23	X	X
SS-24	X	X
SS-25	X	X
SS-26	X	X
SS-27	X	X
SS-28	X	X
SD-3	X	X
SD-4	X	X
SD-5	X	X
SD-6	X	X
SD-7	X	X
SD-8	X	X
SD-9	X	X

Notes:

- SH-01: These wells were installed by Sanborn Head in 2004 and are located in and around the main plant building. These wells are not required to be sampled by DHEC, but are sampled to facilitate plume assessment.

Table 2. Well Construction Details  
Honea Path Plant, Honea Path, South Carolina

Well	Installation Date	Ground Elevation ft. AMSL <sup>1</sup>	TOC Elevation ft. AMSL <sup>1</sup>	Boring Depth ft. BLS	Screened Interval ft. BLS	Zone Screened	Bottom of Casing Depth AMSL				
							1.5 in. dia.	2 in. dia.	4 in. dia.	6 in. dia.	8 in. dia.
W-1 <sup>2</sup>	01/05/90	780.23	782.51	38.0	25.0 - 35.0	Residuum	-	35.0	-	-	-
W-2 <sup>2</sup>	01/05/90	758.96	761.99	33.0	22.0 - 32.0	Residuum	-	32.0	-	-	-
W-3 <sup>2</sup>	01/05/90	759.06	761.90	33.5	22.0 - 32.0	Residuum	-	32.0	-	-	-
W-4 <sup>2</sup>	01/09/90	741.70	744.11	18.0	7.0 - 17.0	Residuum	-	17.0	-	-	-
W-5 <sup>2</sup>	01/08/90	734.81	737.71	17.0	6.0 - 16.0	Residuum	-	16.0	-	-	-
MW-6 <sup>2</sup>	03/17/92	783.30	783.02	20.0	10.0 - 20.0	Residuum	-	20.0	-	-	-
MW-7 <sup>3</sup>	03/16/92	777.21	779.32	35.0	23.0 - 33.0	Residuum	-	33.0	-	-	-
MW-7A <sup>3</sup>	10/12/92	777.10	772.91	60.0	55.0 - 60.0	Residuum	-	60.0	-	50.0	-
MW-7B <sup>2</sup>	08/23/94	776.94	779.45	336.8	Open Hole	Bedrock/Abandoned	-	-	327.4	218.0	106.0
MW-8 <sup>2</sup>	03/12/92	762.52	763.35	35.0	18.0 - 28.0	Residuum	-	28.0	-	-	-
MW-9 <sup>2</sup>	03/13/92	768.30	770.75	30.0	19.5 - 29.5	Residuum	-	29.5	-	-	-
MW-10 <sup>2</sup>	03/19/92	729.92	731.49	15.0	3.5 - 13.5	Residuum	-	13.5	-	-	-
MW-10A <sup>2</sup>	03/24/92	730.61	734.48	51.5	46.5 - 51.5	PWR	-	51.5	42.5	-	-
MW-11 <sup>2</sup>	03/18/92	749.85	750.89	30.0	18.5 - 28.5	Residuum	-	28.5	-	-	-
MW-12 <sup>2</sup>	03/18/92	732.12	735.69	15.0	3.0 - 13.0	Residuum	-	13.0	-	-	-
MW-13 <sup>2</sup>	10/09/92	771.67	773.82	34.0	24.0 -34.0	Residuum	-	34.0	-	-	-
MW-14 <sup>2</sup>	10/12/92	756.01	757.71	40.0	30.0 - 40.0	Residuum/PWR	-	40.0	-	-	-
MW-15	04/05/93	745.25	746.52	63.5	53.4 - 62.7	PWR	-	62.7	-	-	-
MW-16A	01/07/94	716.70	718.64	54.9	44.5 - 54.5	PWR	-	54.8	-	-	-
MW-17A <sup>3</sup>	01/07/94	734.59	731.99	55.0	34.8 - 54.8	Residuum	-	-	55.0	-	-



Table 2. Well Construction Details  
Honea Path Plant, Honea Path, South Carolina

Well	Installation Date	Ground Elevation ft. AMSL <sup>1</sup>	TOC Elevation ft. AMSL <sup>1</sup>	Boring Depth ft. BLS	Screened Interval ft. BLS	Zone Screened	Bottom of Casing Depth AMSL				
							1.5 in. dia.	2 in. dia.	4 in. dia.	6 in. dia.	8 in. dia.
MW-18A	12/06/93	760.14	762.06	62.9	52.3 - 62.3	PWR	-	62.6	32.3	-	-
MW-19A <sup>3</sup>	01/11/94	782.84	765.68	92.5	72.4 - 92.4	PWR	-	-	92.4	-	-
MW-19B	05/18/94	782.58	784.95	277.9	Open Hole	Bedrock/Abandoned	-	-	268.7	170.0	92.5
MW-20A	01/10/94	780.55	780.37	95.2	81.9 - 91.9	PWR	-	92.2	-	-	-
MW-21A	12/16/93	768.54	770.27	62.9	44.6 - 54.6	PWR	-	54.9	-	-	-
MW-22A	03/16/94	772.40	774.69	118.5	107.5 - 117.5	PWR	-	117.9	-	-	-
MW-23A	01/08/94	698.88	700.76	33.0	22.3 - 32.3	PWR	-	32.6	-	-	-
MW-24A	12/18/93	726.01	727.89	52.2	39.6 - 49.6	PWR	-	49.9	-	-	-
MW-25A	12/22/93	729.08	731.17	92.4	77.1 - 87.1	PWR/Bedrock	-	87.5	-	-	-
MW-26A	03/12/94	742.71	744.30	68.5	58.0 - 68.0	PWR	-	68.2	-	-	-
MW-27	06/21/95	702.13	704.67	30.2	20.0 - 30.0	Residuum	-	30.0	-	-	-
MW-27A	06/28/95	703.13	705.72	39.7	29.7-39.7	PWR	-	-	39.7	-	-
MW-28A	06/28/95	708.48	710.69	27.1	10.1 - 20.1	PWR	-	-	20.1	-	-
MW-29A	02/19/07	679.70	683.42	27.0	16.9 - 26.8	PWR	-	27.0	-	-	-
MW-30 <sup>3</sup>	10/21/08	718.24	720.74	35.7	25.9-34.5	Residuum	-	35.7	-	-	-
MW-31 <sup>3</sup>	10/17/08	688.29	691.06	29.4	19.15-29.15	Residuum	-	29.4	-	-	-
MW-32 <sup>3</sup>	10/16/08	732.94	736.16	51.0	40.8-50.8	Residuum/PWR	-	51.0	-	-	-
MW-33 <sup>3</sup>	10/14/08	738.48	741.44	82.0	71.3-81.3	PWR	-	82.0	-	-	-
MW-34 <sup>3</sup>	10/15/08	712.00	714.53	40.5	30.3-40.3	PWR	-	40.5	-	-	-
MW-35 <sup>3</sup>	10/21/11	705.59	704.00	72.0	49.0-69.0	PWR	-	-	-	72.0	-

Table 2. Well Construction Details  
Honea Path Plant, Honea Path, South Carolina

Well	Installation Date	Ground Elevation ft. AMSL <sup>1</sup>	TOC Elevation ft. AMSL <sup>1</sup>	Boring Depth ft. BLS	Screened Interval ft. BLS	Zone Screened	Bottom of Casing Depth AMSL				
							1.5 in. dia.	2 in. dia.	4 in. dia.	6 in. dia.	8 in. dia.
MW-36 <sup>3</sup>	10/20/11	708.04	710.60	56.3	35.0-55.0	PWR	-	-	-	56.3	-
MW-37 <sup>3</sup>	10/18/11	696.32	698.61	56.0	32.0-37.0	PWR	-	56.0	-	-	-
MW-38 <sup>3</sup>	11/15/13	698.98	701.98	26.0	20.5-25.5	PWR	-	25.5	-	-	-
MW-39 <sup>3</sup>	11/15/13	699.30	702.30	12.5	2.0-12.0	Residuum	-	12.5	-	-	-
SH-01	07/11/06	770.00	769.96	31.0	20.3 - 30.3	Residuum	-	30.0	-	-	-
SH-02	07/12/06	770.86	770.78	32.5	21.5 - 31.5	Residuum	-	30.0	-	-	-
SH-03	07/12/06	774.71	774.71	37.5	27.0 - 37.0	Residuum	35.0	-	-	-	-
SH-04	07/13/06	774.67	774.70	35.0	24.2 - 34.2	Residuum	35.0	-	-	-	-
STB-1	08/30/93	771.15	772.92	251.9	Open Hole	Bedrock	-	-	137.0	81.7	-
STB-2	08/09/93	783.19	782.99	152.8	Open Hole	Bedrock	-	-	119.1	104.5	-
STB-3	07/20/93	778.62	778.29	162.5	Open Hole	Bedrock/Abandoned	-	-	92.7	73.9	-
STB-4	08/07/93	756.00	758.43	221.8	Open Hole	Bedrock	-	-	81.9	60.1	-
STB-5	08/03/93	732.65	733.71	151.8	Open Hole	Bedrock	-	-	109.4	62.5	-
STB-6	08/04/93	720.70	720.29	233.6	Open Hole	Bedrock	-	-	53.7	29.5	-
RW-1	08/18/98	-	725.48	171.5	16.2 - 171.0	PWR	-	-	-	171.0	-
RW-2	08/21/95	-	725.12	170.0	11.5 - 166.8	PWR	-	-	-	166.8	-
RW-3	08/28/95	-	705.05	151.0	14.9 - 150.0	PWR	-	-	-	150.0	-
RW-4	12/18/96	704.47	702.06	113.0	12.5 - 112.5	PWR	-	-	-	112.5	-
RW-5	12/17/96	729.83	727.67	143.0	19.6 - 139.6	PWR	-	-	-	139.6	-
RW-6	03/23/04	729.64	732.49	61.0	11.0 - 61.0	PWR	-	-	61.0	-	-

Table 2. Well Construction Details  
Honea Path Plant, Honea Path, South Carolina

Well	Installation Date	Ground Elevation ft. AMSL <sup>1</sup>	TOC Elevation ft. AMSL <sup>1</sup>	Boring Depth ft. BLS	Screened Interval ft. BLS	Zone Screened	Bottom of Casing Depth AMSL				
							1.5 in. dia.	2 in. dia.	4 in. dia.	6 in. dia.	8 in. dia.
RW-7	03/24/04	750.24	753.34	66.3	16.3 - 66.0	PWR	-	-	66.0	-	-
RW-8	07/13/06	721.13	723.32	145.0	41.5 - 140.5	Bedrock	-	-	-	145.0	-
RW-9	07/07/06	713.37	715.72	130.0	28.5 - 128.5	Bedrock	-	-	-	130.0	-
RW-10 <sup>3</sup>	10/29/08	695.81	693.80	106.5	21.0-106	PWR/Bedrock	-	-	-	106.5	-
RW-11 <sup>3</sup>	10/23/08	718.63	717.25	103.1	32.6-102.6	PWR/Bedrock	-	-	-	103.1	-
RW-12 <sup>3</sup>	10/22/08	707.40	705.87	141.0	21.5-140.5	PWR/Bedrock	-	-	-	141.0	-
RW-13	08/13/15	NA	NA	21.0	10.5-20.5	Residuum	-	20.8	-	-	-
OW-1	09/06/94	734.40	737.25	44.8	14.6 - 44.6	PWR	-	-	44.8	-	-
OW-2	09/08/94	733.82	736.42	56.6	16.4 - 56.4	PWR	-	-	56.6	-	-
OW-3	08/29/94	732.55	735.47	54.1	13.8 - 53.8	PWR	-	-	-	54.1	-
OW-4	09/12/94	722.38	725.12	46.0	10.6 - 45.8	PWR	-	-	46.0	-	-
OW-5	08/29/94	731.15	733.93	49.9	9.6 - 49.7	PWR	-	-	-	49.9	-
OW-6	09/09/94	732.96	735.40	57.5	14.5 - 54.8	PWR	-	-	57.5	-	-
OW-7	08/30/94	735.35	738.13	57.0	16.8 - 56.8	PWR	-	-	57.0	-	-
OW-8	08/29/95	-	742.04	-	-	PWR	-	-	-	-	-

See Notes last page.

Table 2. Well Construction Details  
Honea Path Plant, Honea Path, South Carolina

Notes:

TOC - Top of Casing

in. dia.- inch diameter

ft. BLS- feet below land surface

ft. AMSL- feet above mean sea level

PWR- Partially Weathered Rock

NA- Not Available

1. Elevations surveyed based on U.S.G.S. National Geodetic Vertical Datum (NGVD) of 1929.
2. Well Logs for wells W-1 through MW-14 provided by S&ME, Inc. Spartanburg, South Carolina  
Elevations provided by Site Design Inc., Greenville, South Carolina
3. Wells surveyed by Atlanta Environmental Management, Inc.

Table 3. Groundwater Elevation Data  
Honea Path Plant, Honea Path, South Carolina

Observation Well:	<b>W-01</b>	<b>W-02</b>	<b>W-03</b>	<b>W-04</b>	<b>W-05</b>	<b>MW-06</b>	<b>MW-07</b>	<b>MW-7A<sup>2</sup></b>	<b>MW-7B</b>									
Installation Date:	1/5/1990	1/5/1990	1/5/1990	1/9/1990	1/8/1990	3/17/1992	3/16/1992	10/12/1992	8/23/1994									
Monitored Zone:	Residuum	Residuum	Residuum	Residuum	Residuum	Residuum	Residuum	Residuum	Competent Rock- Abandoned March 12, 1997									
Elevation, ft. AMSL <sup>1</sup> :								Original Survey										
Top of Casing Elevation	782.51	761.99	761.90	744.11	737.71	783.02	778.17	779.71	779.45									
Ground Elevation	780.23	758.96	759.06	741.70	734.81	783.30	777.21	--	776.94									
Date	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL
November 15, 2016	36.40	<b>746.11</b>	DRY	<b>&lt;726.55</b>	DRY	<b>&lt;727.06</b>	DRY	<b>&lt;724.06</b>	DRY	<b>&lt;717.92</b>	17.11	<b>765.91</b>	34.84	<b>743.33</b>	28.33	<b>744.58</b>	A	A
January 25, 2017	DRY	<b>&lt;744.93</b>	DRY	<b>&lt;726.55</b>	DRY	<b>&lt;727.06</b>	DRY	<b>&lt;724.06</b>	DRY	<b>&lt;717.92</b>	18.52	<b>764.50</b>	DRY	<b>&lt;741.28</b>	29.60	<b>743.31</b>	A	A
June 5-6, 2017	DRY	<b>&lt;744.93</b>	DRY	<b>&lt;726.55</b>	DRY	<b>&lt;727.06</b>	DRY	<b>&lt;724.06</b>	DRY	<b>&lt;717.92</b>	17.46	<b>765.56</b>	36.22	<b>741.95</b>	33.57	<b>739.34</b>	A	A
August 29, 2017	DRY	<b>&lt;744.93</b>	DRY	<b>&lt;726.55</b>	DRY	<b>&lt;727.06</b>	DRY	<b>&lt;724.06</b>	DRY	<b>&lt;717.92</b>	17.78	<b>765.24</b>	DRY	<b>&lt;741.28</b>	31.36	<b>741.55</b>	A	A

Notes: See last page of table.

Table 3. Groundwater Elevation Data  
Honea Path Plant, Honea Path, South Carolina

Observation Well:	<b>MW-08</b>	<b>MW-09</b>	<b>MW-10</b>	<b>MW-10A</b>	<b>MW-11</b>	<b>MW-12</b>	<b>MW-13</b>	<b>MW-14</b>	<b>MW-15</b>									
Installation Date:	3/12/1992	3/13/1992	3/19/1992	3/24/1992	3/18/1992	3/18/1992	10/9/1992	10/12/1992	4/5/1993									
Monitored Zone:	Residuum	Residuum	Residuum	Partially Weathered Rock	Residuum	Residuum	Residuum	Residuum/PWR	Partially Weathered Rock									
Elevation, ft. AMSL <sup>1</sup> :																		
Top of Casing Elevation	763.35	770.75	731.49	734.48	750.89	735.69	773.82	757.71	746.52									
Ground Elevation	762.52	768.30	729.92	730.61	749.85	732.12	771.67	756.01	745.25									
Date	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL
November 15, 2016	28.12	<b>735.23</b>	DRY	<b>&lt;738.24</b>	DRY	<b>&lt;716.53</b>	29.00	<b>705.48</b>	DRY	<b>&lt;720.90</b>	DRY	<b>&lt;718.70</b>	33.73	<b>740.09</b>	DRY	<b>&lt;715.79</b>	37.54	<b>708.98</b>
January 25, 2017	DRY	<b>&lt;733.59</b>	DRY	<b>&lt;738.24</b>	DRY	<b>&lt;716.53</b>	30.72	<b>703.76</b>	DRY	<b>&lt;720.90</b>	15.79	<b>&lt;718.70</b>	34.59	<b>739.23</b>	DRY	<b>&lt;715.79</b>	38.32	<b>708.20</b>
June 5-6, 2017	28.50	<b>734.85</b>	DRY	<b>&lt;738.24</b>	DRY	<b>&lt;716.53</b>	24.12	<b>710.36</b>	DRY	<b>&lt;720.90</b>	DRY	<b>&lt;718.70</b>	33.73	<b>740.09</b>	DRY	<b>&lt;715.79</b>	37.25	<b>709.27</b>
August 29, 2017	DRY	<b>&lt;733.59</b>	DRY	<b>&lt;738.24</b>	DRY	<b>&lt;716.53</b>	29.26	<b>705.22</b>	DRY	<b>&lt;720.90</b>	DRY	<b>&lt;718.70</b>	35.11	<b>738.71</b>	DRY	<b>&lt;715.79</b>	38.57	<b>707.95</b>

Notes: See last page of table.

Table 3. Groundwater Elevation Data  
Honea Path Plant, Honea Path, South Carolina

Observation Well:	<b>MW-16A</b>	<b>MW-17A</b>	<b>MW-18A</b>	<b>MW-19A<sup>2</sup></b>		<b>MW-19B</b>	<b>MW-20A</b>	<b>MW-21A</b>	<b>MW-22A</b>							
Installation Date:	1/7/1994	1/7/1994	12/6/1993	1/11/1994		5/18/1994	1/10/1994	12/16/1993	3/16/1994							
Monitored Zone:	Partially Weathered Rock	Residuum	Partially Weathered Rock	Partially Weathered Rock		Fractured Rock- Abandoned March 12, 1997	Partially Weathered Rock	Partially Weathered Rock	Partially Weathered Rock							
Elevation, ft. AMSL <sup>1</sup> :		Original Survey	736.89		(Old)	(New)										
Top of Casing Elevation	718.64		731.99	762.06	Original Survey	785.37	765.68	784.95	780.37	770.27	774.69					
Ground Elevation	716.70		734.59	760.14		778.77	NM	782.58	780.55	768.54	772.40					
Date	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL
November 15, 2016	40.15	<b>678.49</b>	31.42	<b>700.57</b>	23.60	<b>738.46</b>	42.08	<b>736.69</b>	A	A	32.30	<b>748.07</b>	27.95	<b>742.32</b>	28.47	<b>746.22</b>
January 25, 2017	33.76	<b>684.88</b>	17.58	<b>714.41</b>	24.83	<b>737.23</b>	37.89	<b>740.88</b>	A	A	33.93	<b>746.44</b>	29.23	<b>741.04</b>	27.37	<b>747.32</b>
June 5-6, 2017	38.80	<b>679.84</b>	33.45	<b>698.54</b>	25.30	<b>736.76</b>	83.33	<b>695.44</b>	A	A	33.60	<b>746.77</b>	28.76	<b>741.51</b>	23.39	<b>751.30</b>
August 29, 2017	43.77	<b>674.87</b>	35.14	<b>696.85</b>	25.65	<b>736.41</b>	85.15	<b>680.53</b>	A	A	33.62	<b>746.75</b>	28.97	<b>741.30</b>	26.97	<b>747.72</b>

Notes: See last page of table.



Table 3. Groundwater Elevation Data  
Honea Path Plant, Honea Path, South Carolina

Observation Well:	<b>MW-23A</b>	<b>MW-24A</b>	<b>MW-25A</b>	<b>MW-26A</b>	<b>MW-27</b>	<b>MW-27A</b>	<b>MW-28A</b>	<b>MW-29A</b>	<b>MW-30</b>									
Installation Date:	1/8/1994	12/18/1993	12/22/1993	3/12/1994	6/21/1995	6/28/1995	6/28/1995	2/19/2007	10/21/2008									
Monitored Zone:	Partially Weathered Rock/Fractured Rock	Partially Weathered Rock	Partially Weathered Rock/Fractured Rock	Partially Weathered Rock	Residuum	Partially Weathered Rock	Partially Weathered Rock	Partially Weathered Rock	Residuum									
Elevation, ft. AMSL <sup>1</sup> :																		
Top of Casing Elevation	700.76	727.89	731.17	744.30	704.67	705.72	710.69	683.41	720.79									
Ground Elevation	698.88	726.01	729.08	742.71	702.13	703.13	708.48	680.51	718.24									
Date	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL
November 15, 2016	16.84	<b>683.92</b>	24.32	<b>703.57</b>	13.46	<b>717.71</b>	18.40	<b>725.90</b>	26.71	<b>677.96</b>	27.65	<b>678.07</b>	14.00	<b>696.69</b>	12.74	<b>670.67</b>	A	A
January 25, 2017	11.79	<b>688.97</b>	22.25	<b>705.64</b>	11.45	<b>719.72</b>	16.42	<b>727.88</b>	25.43	<b>679.24</b>	26.42	<b>679.30</b>	11.72	<b>698.97</b>	11.63	<b>671.78</b>	A	A
June 5-6, 2017	11.37	<b>689.39</b>	19.99	<b>707.90</b>	10.70	<b>720.47</b>	14.76	<b>729.54</b>	22.35	<b>682.32</b>	23.39	<b>682.33</b>	9.80	<b>700.89</b>	11.60	<b>671.81</b>	A	A
August 29, 2017	14.60	<b>686.16</b>	22.61	<b>705.28</b>	12.80	<b>718.37</b>	17.22	<b>727.08</b>	26.31	<b>678.36</b>	27.31	<b>678.41</b>	13.62	<b>697.07</b>	13.11	<b>670.30</b>	A	A

Notes: See last page of table.

Table 3. Groundwater Elevation Data  
Honea Path Plant, Honea Path, South Carolina

Observation Well:	<b>MW-31</b>	<b>MW-32</b>	<b>MW-33</b>	<b>MW-34</b>	<b>MW-35</b> <sup>3</sup>		<b>MW-36</b>	<b>MW-37</b>	<b>MW-38</b>							
Installation Date:	10/17/2008	10/16/2008	10/14/2008	10/15/2008	10/21/2011		10/19/2011	10/18/2011	11/15/2013							
Monitored Zone:	Residuum	Residuum/PWR	Partially Weathered Rock	Partially Weathered Rock	Partially Weathered Rock		Partially Weathered Rock	Partially Weathered Rock	Partially Weathered Rock							
Elevation, ft. AMSL <sup>1</sup> :						(Old) (New)										
Top of Casing Elevation	691.06	736.18	741.44	714.53	707.30	704.00	710.60	698.61	701.98							
Ground Elevation	688.29	732.94	738.48	712.00	705.59	705.59	708.04	696.32	698.98							
Date	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL
November 15, 2016	16.55	<b>674.51</b>	28.46	<b>707.72</b>	44.84	<b>696.60</b>	34.30	<b>680.23</b>	59.21	<b>644.79</b>	35.25	<b>675.35</b>	33.06	<b>665.55</b>	9.38	<b>692.60</b>
January 25, 2017	11.22	<b>679.84</b>	29.04	<b>707.14</b>	46.36	<b>695.08</b>	34.64	<b>679.89</b>	64.90	<b>639.10</b>	35.53	<b>675.07</b>	33.00	<b>665.61</b>	8.03	<b>693.95</b>
June 5-6, 2017	8.82	<b>682.24</b>	26.45	<b>709.73</b>	46.32	<b>695.12</b>	33.25	<b>681.28</b>	56.70	<b>647.30</b>	33.44	<b>677.16</b>	31.47	<b>667.14</b>	6.02	<b>695.96</b>
August 29, 2017	13.66	<b>677.40</b>	29.10	<b>707.08</b>	47.10	<b>694.34</b>	34.86	<b>679.67</b>	58.80	<b>645.20</b>	34.60	<b>676.00</b>	32.98	<b>665.63</b>	9.34	<b>692.64</b>

Notes: See last page of table.

Table 3. Groundwater Elevation Data  
Honea Path Plant, Honea Path, South Carolina

Observation Well:	<b>MW-39</b>	<b>STB-01</b>	<b>STB-02</b>	<b>STB-03</b>	<b>STB-04</b>	<b>STB-05</b>	<b>STB-06</b>	<b>RW-01</b>	<b>RW-02</b>									
Installation Date:	11/15/2013	8/30/1993	8/9/1993	7/20/1993	8/7/1993	8/3/1993	8/4/1993	8/18/1995	8/21/1995									
Monitored Zone:	Residuum	Fractured Rock	Fractured Rock	Fractured Rock	Fractured Rock	Fractured Rock	Fractured Rock	Partially Weathered Rock	Partially Weathered Rock									
Elevation, ft. AMSL <sup>1</sup> :																		
Top of Casing Elevation	702.30	772.92	782.99	778.29	758.43	733.71	720.29	725.48	725.12									
Ground Elevation	699.30	771.15	783.19	778.62	756.00	732.65	720.7	--	--									
Date	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL
November 15, 2016	9.10	<b>693.20</b>	20.60	<b>752.32</b>	19.15	<b>763.84</b>	A	A	20.14	<b>738.29</b>	33.72	<b>699.99</b>	26.98	<b>693.31</b>	71.05	<b>654.43</b>	70.14	<b>654.98</b>
January 25, 2017	7.96	<b>694.34</b>	20.75	<b>752.17</b>	20.56	<b>762.43</b>	A	A	21.56	<b>736.87</b>	35.15	<b>698.56</b>	26.91	<b>693.38</b>	70.33	<b>655.15</b>	68.30	<b>656.82</b>
June 5-6, 2017	7.71	<b>694.59</b>	19.18	<b>753.74</b>	20.41	<b>762.58</b>	A	A	21.56	<b>736.87</b>	34.45	<b>699.26</b>	25.33	<b>694.96</b>	70.81	<b>654.67</b>	68.37	<b>656.75</b>
August 29, 2017	9.28	<b>693.02</b>	20.78	<b>752.14</b>	20.27	<b>762.72</b>	A	A	22.08	<b>736.35</b>	35.77	<b>697.94</b>	27.38	<b>692.91</b>	70.86	<b>654.62</b>	73.34	<b>651.78</b>

Notes: See last page of table.

Table 3. Groundwater Elevation Data  
Honea Path Plant, Honea Path, South Carolina

Observation Well:	<b>RW-03</b>	<b>RW-04</b>	<b>RW-05</b>	<b>RW-06</b>	<b>RW-07</b>	<b>RW-08</b>	<b>RW-09</b>	<b>RW-10</b>	<b>RW-11</b>									
Installation Date:	8/28/1995	12/18/1996	12/17/1996	3/23/2004	3/24/2004	7/13/2006	7/7/2006	10/29/2008	10/23/2008									
Monitored Zone:	Partially Weathered Rock	Partially Weathered Rock	Partially Weathered Rock	Partially Weathered Rock	Partially Weathered Rock	Partially Weathered Rock	Partially Weathered Rock	Partially Weathered Rock/Bedrock	Partially Weathered Rock/Bedrock									
Elevation, ft. AMSL <sup>1</sup> :																		
Top of Casing Elevation	705.05	702.06	727.67	732.49	753.34	723.32	715.72	693.80	717.25									
Ground Elevation	--	704.47	729.83	--	--	--	--	695.81	718.63									
Date	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL
November 15, 2016	74.64	<b>630.41</b>	36.19	<b>665.87</b>	41.16	<b>686.51</b>	43.35	<b>689.14</b>	56.87	<b>696.47</b>	119.16	<b>604.16</b>	81.78	<b>633.94</b>	92.72	<b>601.08</b>	94.16	<b>623.09</b>
January 25, 2017	53.11	<b>651.94</b>	15.66	<b>686.40</b>	38.18	<b>689.49</b>	42.37	<b>690.12</b>	50.23	<b>703.11</b>	67.98	<b>655.34</b>	65.01	<b>650.71</b>	95.10	<b>598.70</b>	36.62	<b>680.63</b>
June 5-6, 2017	69.30	<b>635.75</b>	99.73	<b>602.33</b>	28.74	<b>698.93</b>	40.36	<b>692.13</b>	50.37	<b>702.97</b>	21.01	<b>702.31</b>	18.64	<b>697.08</b>	95.34	<b>598.46</b>	49.21	<b>668.04</b>
August 29, 2017	71.11	<b>633.94</b>	100.17	<b>601.89</b>	29.42	<b>698.25</b>	43.02	<b>689.47</b>	19.89	<b>733.45</b>	25.67	<b>697.65</b>	86.93	<b>628.79</b>	96.21	<b>597.59</b>	54.18	<b>663.07</b>

Notes: See last page of table.

Table 3. Groundwater Elevation Data  
Honea Path Plant, Honea Path, South Carolina

Observation Well:	<b>RW-12</b>	<b>RW-13</b>	<b>TS-1</b>	<b>OW-01</b>	<b>OW-02</b>	<b>OW-03</b>	<b>OW-04</b>	<b>OW-05</b>	<b>OW-06</b>									
Installation Date:	10/22/2008	8/13/2015	10/16/2015	9/6/1994	9/8/1994	8/29/1994	9/12/1994	8/29/1994	9/9/1994									
Monitored Zone:	Partially Weathered Rock/Bedrock	Residuum	Residuum	Partially Weathered Rock	Partially Weathered Rock	Partially	Partially	Partially	Partially									
Elevation, ft. AMSL <sup>1</sup> :																		
Top of Casing Elevation	705.87	701.31	702.58	737.25	736.42	735.47	725.12	733.93	735.40									
Ground Elevation	707.40			--	--	--	--	--	--									
Date	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL	Depth to Water, feet	Ground- Water Elevation, ft. AMSL
November 15, 2016	107.46	<b>598.41</b>	19.71	<b>681.60</b>	NM	NM	28.63	<b>708.62</b>	24.49	<b>711.93</b>	28.82	<b>706.65</b>	14.90	<b>710.22</b>	26.76	<b>707.17</b>	25.59	<b>709.81</b>
January 25, 2017	52.17	<b>653.70</b>	19.70	<b>681.61</b>	9.27	<b>693.31</b>	28.41	<b>708.84</b>	23.11	<b>713.31</b>	28.82	<b>706.65</b>	13.57	<b>711.55</b>	27.37	<b>706.56</b>	24.64	<b>710.76</b>
June 5-6, 2017	107.51	<b>598.36</b>	19.71	<b>681.60</b>	8.39	<b>694.19</b>	27.95	<b>709.30</b>	21.81	<b>714.61</b>	28.53	<b>706.94</b>	10.40	<b>714.72</b>	27.79	<b>706.14</b>	21.01	<b>714.39</b>
August 29, 2017	108.53	<b>597.34</b>	11.68	<b>689.63</b>	11.14	<b>691.44</b>	30.43	<b>706.82</b>	25.13	<b>711.29</b>	30.96	<b>704.51</b>	15.35	<b>709.77</b>	29.57	<b>704.36</b>	25.80	<b>709.60</b>

Notes: See last page of table.

Table 3. Groundwater Elevation Data  
Honea Path Plant, Honea Path, South Carolina

Observation Well:	<b>OW-07</b>		<b>OW-08</b>		<b>SH-01</b>		<b>SH-02</b>		<b>SH-03</b>		<b>SH-04</b>	
Installation Date:	8/30/1994		8/29/1995		7/11/2006		7/12/2006		7/12/2006		7/13/2006	
Monitored Zone:	Partially		Partially		Residuuum		Residuuum		Residuuum		Residuuum	
Elevation, ft. AMSL <sup>1</sup> :												
Top of Casing Elevation	738.13		742.04		769.96		770.78		774.71		774.70	
Ground Elevation	--		--		--		--		--		--	
Date	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL	Depth to Water, feet	Ground-Water Elevation, ft. AMSL
November 15, 2016	21.85	<b>716.28</b>	30.79	<b>711.25</b>	24.20	<b>745.76</b>	24.80	<b>745.98</b>	31.08	<b>743.63</b>	27.35	<b>747.35</b>
January 25, 2017	21.26	<b>716.87</b>	30.74	<b>711.30</b>	25.51	<b>744.45</b>	26.27	<b>744.51</b>	32.59	<b>742.12</b>	28.78	<b>745.92</b>
June 5-6, 2017	18.85	<b>719.28</b>	30.00	<b>712.04</b>	26.00	<b>743.96</b>	26.19	<b>744.59</b>	33.45	<b>741.26</b>	29.26	<b>745.44</b>
August 29, 2017	22.26	<b>715.87</b>	32.26	<b>709.78</b>	25.82	<b>744.14</b>	26.37	<b>744.41</b>	32.91	<b>741.80</b>	29.07	<b>745.63</b>

Notes: See last page of table.

Table 3. Groundwater Elevation Data  
Honea Path Plant, Honea Path, South Carolina

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1	Feet above mean sea level
2	MW-7A, MW-17A, and MW-19A were resurveyed in January 2009 because top of casing elevations prior to January 2009 were based on original top of casing measurements when the wells were installed in 1992 and 1994 respectively. These wells were converted to recovery wells in 1996. All water levels collected prior to 1996 have been evaluated based on the original survey data. Any data collected after 1996 has been evaluated based on the current survey data.
3	Active Recovery Well; Top of Casing cut-off 3.30 feet for recovery well MW-35 (well completed within below-grade vault)
Dry	The well or creek was dry.
NI	Not installed
NM	Not measured
A	Abandoned
NA	Not Available
RW	Recovery Well
OW	Observation Well
SH	Sanborn Head installed four wells in 2006 for Phase II Environmental Investigation for Timken US Corporation



Table 4. Western Plume Groundwater VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Upgradient	Source Area					
	MW-26A	SH-01	SH-02	SH-03	SH-04	MW-18A	MW-21A
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Tetrachloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<50.	<1.0
Trichloroethene, µg/L	<1.0	<b>1,000.</b>	<b>13,000.</b>	<b>110.</b>	<b>13.</b>	<b>44,000.</b>	<b>10,000.</b>
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<50.	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<50.	<b>5.9</b>
<b>Total Parent Products, µg/L</b>	BRL	<b>1,000.</b>	<b>13,000.</b>	<b>110.</b>	<b>13.</b>	<b>44,000.</b>	<b>10,006.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<50.	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<50.	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<50.	<1.0
cis-1,2-Dichloroethene, µg/L	<1.0	<1.0	<b>150.</b>	<b>1.7</b>	<1.0	<b>86.</b>	<b>110.</b>
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<50.	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<100.	<2.0
<b>Total Breakdown Products, µg/L</b>	BRL	BRL	<b>150.</b>	<b>1.7</b>	BRL	<b>86.</b>	<b>110.</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Chloroform, µg/L	<1.0	<b>1.1</b>	<b>30.</b>	<1.0	<1.0	<50.	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<50.	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<100.	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	BRL	<b>1,001.</b>	<b>13,180.</b>	<b>112.</b>	<b>13.</b>	<b>44,086.</b>	<b>10,116.</b>
<b>Date Sampled</b>	01/23/17	01/26/17	01/26/17	01/24/17	01/24/17	01/26/17	01/26/17

Notes:

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 4. Western Plume Groundwater VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Recovery Wells						
	MW-19A	RW-4	RW-5	RW-7	RW-8	RW-9	RW-10
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Tetrachloroethene, µg/L	<50.	5.1	<1.0	<50.	<1.0	2.0	<1.0
Trichloroethene, µg/L	25,000.	3,600.	200.	32,000.	1,400.	1,500.	570.
1,1,1-Trichloroethane, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>25,000.</b>	<b>3,605.</b>	<b>200.</b>	<b>32,000.</b>	<b>1,400.</b>	<b>1,502.</b>	<b>570.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
1,1-Dichloroethane, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	120.	13.	5.8	<50.	18.	18.	8.7
trans-1,2-Dichloroethene, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	<100.	<2.0	<2.0	<100.	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>120.</b>	<b>13.</b>	<b>5.8</b>	<b>BRL</b>	<b>18.</b>	<b>18.</b>	<b>8.7</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Chloroform, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
Methylene Chloride, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
Chloromethane, µg/L	<100.	<2.0	<2.0	<100.	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>25,120.</b>	<b>3,618.</b>	<b>206.</b>	<b>32,000.</b>	<b>1,418.</b>	<b>1,520.</b>	<b>579.</b>
<b>Date Sampled</b>	01/25/17	01/24/17	01/24/17	01/25/17	01/24/17	01/24/17	01/24/17

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 4. Western Plume Groundwater VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Recovery Wells (cont.)			Downgradient		
	MW-35	RW-13	TS-1	MW-11	MW-13	MW-23A
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Tetrachloroethene, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
Trichloroethene, µg/L	<b>320.</b>	<b>1.7</b>	<b>85.</b>	DRY	<1.0	<b>1,700.</b>
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>320.</b>	<b>1.7</b>	<b>85.</b>	DRY	BRL	<b>1,700.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	<b>1.6</b>	<1.0	<b>2.5</b>	DRY	<1.0	<b>32.</b>
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	DRY	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>1.6</b>	BRL	<b>2.5</b>	DRY	BRL	<b>32.</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Chloroform, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	DRY	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>322.</b>	<b>1.7</b>	<b>88.</b>	DRY	BRL	<b>1,732.</b>
<b>Date Sampled</b>	01/24/17	01/25/17	01/25/17	NS	01/23/17	01/26/17

Notes:

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 4. Western Plume Groundwater VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Downgradient (cont.)					
	MW-24A	MW-31	MW-32	MW-36	MW-38	MW-39
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Tetrachloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene, µg/L	<b>24.</b>	<1.0	<b>390.</b>	<b>30.</b>	<b>8.3</b>	<b>26.</b>
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>24.</b>	BRL	<b>390.</b>	<b>30.</b>	<b>8.3</b>	<b>26.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	<1.0	<b>1.7</b>	<b>2.6</b>	<1.0	<b>5.0</b>	<b>2.2</b>
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	BRL	<b>1.7</b>	<b>2.6</b>	BRL	<b>5.0</b>	<b>2.2</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Chloroform, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>24.</b>	<b>1.7</b>	<b>393.</b>	<b>30.</b>	<b>13.</b>	<b>28.</b>
<b>Date Sampled</b>	01/25/17	01/23/17	01/24/17	01/23/17	01/24/17	01/24/17

Notes:

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 5. Duplicate Sample Groundwater and Surface Water VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Groundwater				Surface Water	
	MW-16A	MW-16A DUP	MW-24A	MW-24A DUP	SS-20	SS-20 DUP
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Tetrachloroethene, µg/L	32.	31.	<1.0	<1.0	<1.0	<1.0
Trichloroethene, µg/L	240.	190.	24.	23.	16.	14.
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>272.</b>	<b>221.</b>	<b>24.</b>	<b>23.</b>	<b>16.</b>	<b>14.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	16.	15.	<1.0	<1.0	2.9	2.7
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>16.</b>	<b>15.</b>	BRL	BRL	<b>2.9</b>	<b>2.7</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Chloroform, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>288.</b>	<b>236.</b>	<b>24.</b>	<b>23.</b>	<b>19.</b>	<b>17.</b>
<b>Date Sampled</b>	01/24/17	01/24/17	01/25/17	01/25/17	01/26/17	01/26/17

Notes:

BRL - Analytical results below laboratory reporting limit.

µg/L - Micrograms per Liter.

Table 6. Western Plume Surface Water VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Upgradient				Plume			
	SS-15	SD-4	SS-24	SS-16	SS-21	SS-23	SS-22	SS-18
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Tetrachloroethene, µg/L	DRY	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene, µg/L	DRY	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane, µg/L	DRY	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	DRY	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	DRY	BRL	BRL	BRL	BRL	BRL	BRL	BRL
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
1,1-Dichloroethane, µg/L	DRY	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	DRY	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	DRY	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	DRY	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene, µg/L	DRY	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	DRY	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	DRY	BRL	BRL	BRL	BRL	BRL	BRL	BRL
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Chloroform, µg/L	DRY	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
Methylene Chloride, µg/L	DRY	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, µg/L	DRY	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	DRY	BRL	BRL	BRL	BRL	BRL	BRL	BRL
<b>Date Sampled</b>	NS	01/25/17	01/25/17	01/25/17	01/25/17	01/25/17	01/25/17	01/25/17

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 6. Western Plume Surface Water VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Plume (cont.)					Downgradient		
	SS-25	SS-20	SS-28	SS-17	SS-27	SD-5	SS-19	SS-26
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Tetrachloroethene, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	DRY	DRY	<1.0
Trichloroethene, µg/L	<1.0	<b>16.</b>	<b>17.</b>	DRY	<b>14.</b>	DRY	DRY	<b>6.2</b>
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	DRY	DRY	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	DRY	DRY	<1.0
<b>Total Parent Products, µg/L</b>	BRL	<b>16.</b>	<b>17.</b>	DRY	<b>14.</b>	DRY	DRY	<b>6.2</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	DRY	DRY	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	DRY	DRY	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	DRY	DRY	<1.0
cis-1,2-Dichloroethene, µg/L	<1.0	<b>2.9</b>	<b>2.7</b>	DRY	<1.0	DRY	DRY	<b>3.7</b>
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	DRY	DRY	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	DRY	<2.0	DRY	DRY	<2.0
<b>Total Breakdown Products, µg/L</b>	BRL	<b>2.9</b>	<b>2.7</b>	DRY	BRL	DRY	DRY	<b>3.7</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Chloroform, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	DRY	DRY	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	DRY	DRY	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	DRY	<2.0	DRY	DRY	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	BRL	<b>19.</b>	<b>20.</b>	DRY	<b>14.</b>	DRY	DRY	<b>9.9</b>
<b>Date Sampled</b>	01/26/17	01/26/17	01/26/17	NS	01/26/17	NS	NS	01/26/17

Notes:

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.



Table 7. Western Plume Groundwater VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Upgradient	Source Area					
	MW-26A	SH-01	SH-02	SH-03	SH-04	MW-18A	MW-21A
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Tetrachloroethene, µg/L	<1.0	<1.0	<100.	<1.0	<1.0	<500.	<100.
Trichloroethene, µg/L	<1.0	<b>930.</b>	<b>14,000.</b>	<b>98.</b>	<b>13.</b>	<b>40,000.</b>	<b>7,600.</b>
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<100.	<1.0	<1.0	<500.	<100.
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<100.	<1.0	<1.0	<500.	<100.
<b>Total Parent Products, µg/L</b>	<b>BRL</b>	<b>930.</b>	<b>14,000.</b>	<b>98.</b>	<b>13.</b>	<b>40,000.</b>	<b>7,600.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
1,1-Dichloroethane, µg/L	<1.0	<1.0	<100.	<1.0	<1.0	<500.	<100.
1,2-Dichloroethane, µg/L	<1.0	<1.0	<100.	<1.0	<1.0	<500.	<100.
1,1-Dichloroethene, µg/L	<1.0	<1.0	<100.	<1.0	<1.0	<500.	<100.
cis-1,2-Dichloroethene, µg/L	<1.0	<1.0	<100.	<b>2.8</b>	<1.0	<500.	<100.
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<100.	<1.0	<1.0	<500.	<100.
Vinyl Chloride, µg/L	<2.0	<2.0	<200.	<2.0	<2.0	<1,000.	<200.
<b>Total Breakdown Products, µg/L</b>	<b>BRL</b>	<b>BRL</b>	<b>BRL</b>	<b>2.8</b>	<b>BRL</b>	<b>BRL</b>	<b>BRL</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Chloroform, µg/L	<1.0	<b>1.3</b>	<100.	<1.0	<1.0	<500.	<100.
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
Methylene Chloride, µg/L	<1.0	<1.0	<100.	<1.0	<1.0	<500.	<100.
Chloromethane, µg/L	<2.0	<2.0	<200.	<2.0	<2.0	<1,000.	<200.
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>BRL</b>	<b>931.</b>	<b>14,000.</b>	<b>101.</b>	<b>13.</b>	<b>40,000.</b>	<b>7,600.</b>
<b>Date Sampled</b>	06/06/17	06/07/17	06/07/17	06/07/17	06/07/17	06/07/17	06/07/17

Notes:

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 7. Western Plume Groundwater VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Recovery Wells						
	MW-19A	RW-4	RW-5	RW-7	RW-8	RW-9	RW-10
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Tetrachloroethene, µg/L	<50.	2.7	<1.0	<50.	<1.0	1.3	1.4
Trichloroethene, µg/L	21,000.	2,500.	200.	19,000.	1,100.	700.	630.
1,1,1-Trichloroethane, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>21,000.</b>	<b>2,503.</b>	<b>200.</b>	<b>19,000.</b>	<b>1,100.</b>	<b>701.</b>	<b>631.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
1,1-Dichloroethane, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	180.	11.	6.8	<50.	20.	9.2	8.8
trans-1,2-Dichloroethene, µg/L	<50.	<1.0	<1.0	<50.	2.2	<1.0	<1.0
Vinyl Chloride, µg/L	<100.	<2.0	<2.0	<100.	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>180.</b>	<b>11.</b>	<b>6.8</b>	BRL	<b>22.</b>	<b>9.2</b>	<b>8.8</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Chloroform, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
Methylene Chloride, µg/L	<50.	<1.0	<1.0	<50.	<1.0	<1.0	<1.0
Chloromethane, µg/L	<100.	<2.0	<2.0	<100.	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>21,180.</b>	<b>2,514.</b>	<b>207.</b>	<b>19,000.</b>	<b>1,122.</b>	<b>711.</b>	<b>640.</b>
<b>Date Sampled</b>	06/06/17	06/06/17	06/06/17	06/06/17	06/06/17	06/08/17	06/06/17

Notes:

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 7. Western Plume Groundwater VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Recovery Wells (cont.)			Downgradient		
	MW-35	RW-13	TS-1	MW-11	MW-13	MW-23A
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Tetrachloroethene, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<b>3.8</b>
Trichloroethene, µg/L	<b>230.</b>	<1.0	<b>620.</b>	DRY	<1.0	<b>2,000.</b>
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>230.</b>	BRL	<b>620.</b>	DRY	BRL	<b>2,004.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	<b>1.7</b>	<1.0	<b>8.8</b>	DRY	<1.0	<b>22.</b>
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	DRY	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>1.7</b>	BRL	<b>8.8</b>	DRY	BRL	<b>22.</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Chloroform, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	DRY	<1.0	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	DRY	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>232.</b>	BRL	<b>629.</b>	DRY	BRL	<b>2,026.</b>
<b>Date Sampled</b>	06/05/17	06/06/17	06/06/17	NS	06/07/17	06/07/17

Notes:

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 7. Western Plume Groundwater VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Downgradient (cont.)					
	MW-24A	MW-31	MW-32	MW-36	MW-38	MW-39
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Tetrachloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene, µg/L	<b>21.</b>	<b>13.</b>	<b>280.</b>	<b>47.</b>	<b>4.6</b>	<b>160.</b>
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>21.</b>	<b>13.</b>	<b>280.</b>	<b>47.</b>	<b>4.6</b>	<b>160.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	<1.0	<b>1.6</b>	<b>2.4</b>	<1.0	<b>5.9</b>	<b>13.</b>
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>BRL</b>	<b>1.6</b>	<b>2.4</b>	<b>BRL</b>	<b>5.9</b>	<b>13.</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Chloroform, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>21.</b>	<b>15.</b>	<b>282.</b>	<b>47.</b>	<b>11.</b>	<b>173.</b>
<b>Date Sampled</b>	06/06/17	06/06/17	06/06/17	06/05/17	06/06/17	06/07/17

Notes:

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 8. Duplicate Sample Groundwater and Surface Water VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Groundwater				Surface Water	
	MW-16A	MW-16A DUP	MW-24A	MW-24A DUP	SS-28	SS-28 DUP
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Tetrachloroethene, µg/L	26.	24.	<1.0	<1.0	<1.0	<1.0
Trichloroethene, µg/L	190.	180.	21.	20.	14.	14.
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>216.</b>	<b>204.</b>	<b>21.</b>	<b>20.</b>	<b>14.</b>	<b>14.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	20.	19.	<1.0	<1.0	7.1	6.9
trans-1,2-Dichloroethene, µg/L	2.2	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>22.</b>	<b>19.</b>	BRL	BRL	<b>7.1</b>	<b>6.9</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>						
Chloroform, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>						
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>238.</b>	<b>223.</b>	<b>21.</b>	<b>20.</b>	<b>21.</b>	<b>21.</b>
<b>Date Sampled</b>	06/06/17	06/06/17	06/06/17	06/06/17	06/08/17	06/08/17

Notes:

BRL - Analytical results below laboratory reporting limit.

µg/L - Micrograms per Liter.

Table 9. Western Plume Surface Water VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Upgradient				Plume			
	SS-15	SD-4	SS-24	SS-16	SS-21	SS-23	SS-22	SS-18
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Tetrachloroethene, µg/L	DRY	<1.0	DRY	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene, µg/L	DRY	<1.0	DRY	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane, µg/L	DRY	<1.0	DRY	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	DRY	<1.0	DRY	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	DRY	BRL	DRY	BRL	BRL	BRL	BRL	BRL
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
1,1-Dichloroethane, µg/L	DRY	<1.0	DRY	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	DRY	<1.0	DRY	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	DRY	<1.0	DRY	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	DRY	<1.0	DRY	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene, µg/L	DRY	<1.0	DRY	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	DRY	<2.0	DRY	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	DRY	BRL	DRY	BRL	BRL	BRL	BRL	BRL
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Chloroform, µg/L	DRY	<1.0	DRY	<1.0	<1.0	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
Methylene Chloride, µg/L	DRY	<1.0	DRY	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, µg/L	DRY	<2.0	DRY	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	DRY	BRL	DRY	BRL	BRL	BRL	BRL	BRL
<b>Date Sampled</b>	NS	06/08/17	NS	06/08/17	06/08/17	06/08/17	06/08/17	06/08/17

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 9. Western Plume Surface Water VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Plume (cont.)					Downgradient		
	SS-25	SS-20	SS-28	SS-17	SS-27	SD-5	SS-19	SS-26
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Tetrachloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene, µg/L	<1.0	<b>8.0</b>	<b>14.</b>	<b>8.1</b>	<b>41.</b>	<b>31.</b>	<b>14.</b>	<b>6.7</b>
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>BRL</b>	<b>8.0</b>	<b>14.</b>	<b>8.1</b>	<b>41.</b>	<b>31.</b>	<b>14.</b>	<b>6.7</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	<1.0	<b>4.0</b>	<b>7.1</b>	<b>6.7</b>	<b>20.</b>	<b>15.</b>	<b>8.9</b>	<b>4.4</b>
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>BRL</b>	<b>4.0</b>	<b>7.1</b>	<b>6.7</b>	<b>20.</b>	<b>15.</b>	<b>8.9</b>	<b>4.4</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Chloroform, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>BRL</b>	<b>12.</b>	<b>21.</b>	<b>15.</b>	<b>61.</b>	<b>46.</b>	<b>23.</b>	<b>11.</b>
<b>Date Sampled</b>	<b>06/08/17</b>	<b>06/08/17</b>	<b>06/08/17</b>	<b>06/08/17</b>	<b>06/08/17</b>	<b>06/08/17</b>	<b>06/08/17</b>	<b>06/08/17</b>

Notes:

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.



Table 10. Eastern Plume Groundwater VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Sidegradient	Source	Plume				
	W-1	MW-7	W-2	W-3	MW-8	MW-9	MW-14
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Tetrachloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Trichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,1,1-Trichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,1,2-Trichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Total Parent Products, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
1,1-Dichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,2-Dichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,1-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
cis-1,2-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
trans-1,2-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Vinyl Chloride, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Total Breakdown Products, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Chloroform, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
Methylene Chloride, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Chloromethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Total Chlorinated Hydrocarbons, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Date Sampled</b>	NS	NS	NS	NS	NS	NS	NS

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L- Micrograms per Liter

Table 10. Eastern Plume Groundwater VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Plume (cont.)				Recovery Wells		
	MW-16A	MW-27	MW-28A	MW-33	MW-7A	MW-17A	RW-1
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Tetrachloroethene, µg/L	32.	6.3	<1.0	12.	1.7	7.0	6.8
Trichloroethene, µg/L	240.	8.0	42.	120.	1,900.	170.	100.
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>272.</b>	<b>14.</b>	<b>42.</b>	<b>132.</b>	<b>1,902.</b>	<b>177.</b>	<b>107.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	16.	1.4	<1.0	3.8	5.7	16.	12.
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>16.</b>	<b>1.4</b>	<b>BRL</b>	<b>3.8</b>	<b>5.7</b>	<b>16.</b>	<b>12.</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Chloroform, µg/L	<1.0	<1.0	<1.0	<1.0	3.6	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>288.</b>	<b>16.</b>	<b>42.</b>	<b>136.</b>	<b>1,911.</b>	<b>193.</b>	<b>119.</b>
<b>Date Sampled</b>	01/24/17	01/24/17	01/24/17	01/24/17	01/25/17	01/25/17	01/25/17

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L- Micrograms per Liter

Table 10. Eastern Plume Groundwater VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Recovery Wells (cont.)					Downgradient		
	RW-2	RW-3	RW-6	RW-11	RW-12	MW-29A	MW-34	MW-37
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Tetrachloroethene, µg/L	7.4	6.3	2.1	7.6	19.	<1.0	<1.0	<1.0
Trichloroethene, µg/L	220.	150.	1,300.	780.	130.	6.0	<1.0	<1.0
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>227.</b>	<b>156.</b>	<b>1,302.</b>	<b>788.</b>	<b>149.</b>	<b>6.0</b>	BRL	BRL
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	22.	13.	12.	11.	12.	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>22.</b>	<b>13.</b>	<b>12.</b>	<b>11.</b>	<b>12.</b>	BRL	BRL	BRL
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Chloroform, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>249.</b>	<b>169.</b>	<b>1,314.</b>	<b>799.</b>	<b>161.</b>	<b>6.0</b>	BRL	BRL
<b>Date Sampled</b>	01/25/17	01/25/17	01/25/17	01/25/17	01/25/17	01/23/17	01/24/17	01/23/17

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter

Table 11. Eastern Plume Surface Water VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Upgradient					Plume		
	SS-1	SS-2	SS-3	SS-4/SD-1	SD-6	SD-7	SS-9	SS-10
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Tetrachloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Trichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,1,1-Trichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,1,2-Trichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Total Parent Products, µg/L</b>	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
1,1-Dichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,2-Dichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,1-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
cis-1,2-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
trans-1,2-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Vinyl Chloride, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Total Breakdown Products, µg/L</b>	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Chloroform, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
Methylene Chloride, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Chloromethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Total Chlorinated Hydrocarbons, µg/L</b>	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Date Sampled</b>	NS	NS	NS	NS	NS	NS	NS	NS

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 11. Eastern Plume Surface Water VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Downgradient							
	SD-8	SS-5	SD-9	SD-2/SS-6	SS-7	SS-8	SS-11	SS-12
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Tetrachloroethene, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
Trichloroethene, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
1,1,1-Trichloroethane, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
1,1,2-Trichloroethane, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
<b>Total Parent Products, µg/L</b>	DRY	DRY	DRY	DRY	BRL	BRL	DRY	DRY
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
1,1-Dichloroethane, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
1,2-Dichloroethane, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
1,1-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
cis-1,2-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
trans-1,2-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
Vinyl Chloride, µg/L	DRY	DRY	DRY	DRY	<2.0	<2.0	DRY	DRY
<b>Total Breakdown Products, µg/L</b>	DRY	DRY	DRY	DRY	BRL	BRL	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Chloroform, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
Methylene Chloride, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
Chloromethane, µg/L	DRY	DRY	DRY	DRY	<2.0	<2.0	DRY	DRY
<b>Total Chlorinated Hydrocarbons, µg/L</b>	DRY	DRY	DRY	DRY	BRL	BRL	DRY	DRY
<b>Date Sampled</b>	NS	NS	NS	NS	01/25/17	01/25/17	NS	NS

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 11. Eastern Plume Surface Water VOC Concentrations, January 2017  
Honea Path Plant, Honea Path, South Carolina

	Downgradient (cont.)		
	SS-13	SS-14	SD-3
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>			
Tetrachloroethene, µg/L	DRY	DRY	DRY
Trichloroethene, µg/L	DRY	DRY	DRY
1,1,1-Trichloroethane, µg/L	DRY	DRY	DRY
1,1,2-Trichloroethane, µg/L	DRY	DRY	DRY
<b>Total Parent Products, µg/L</b>	DRY	DRY	DRY
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>			
1,1-Dichloroethane, µg/L	DRY	DRY	DRY
1,2-Dichloroethane, µg/L	DRY	DRY	DRY
1,1-Dichloroethene, µg/L	DRY	DRY	DRY
cis-1,2-Dichloroethene, µg/L	DRY	DRY	DRY
trans-1,2-Dichloroethene, µg/L	DRY	DRY	DRY
Vinyl Chloride, µg/L	DRY	DRY	DRY
<b>Total Breakdown Products, µg/L</b>	DRY	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>			
Chloroform, µg/L	DRY	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>			
Methylene Chloride, µg/L	DRY	DRY	DRY
Chloromethane, µg/L	DRY	DRY	DRY
<b>Total Chlorinated Hydrocarbons, µg/L</b>	DRY	DRY	DRY
<b>Date Sampled</b>	NS	NS	NS

Notes:

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 12. Eastern Plume Groundwater VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Sidegradient	Source	Plume				
	W-1	MW-7	W-2	W-3	MW-8	MW-9	MW-14
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Tetrachloroethene, µg/L	DRY	<1.0	DRY	DRY	<1.0	DRY	DRY
Trichloroethene, µg/L	DRY	<b>120.</b>	DRY	DRY	<1.0	DRY	DRY
1,1,1-Trichloroethane, µg/L	DRY	<1.0	DRY	DRY	<1.0	DRY	DRY
1,1,2-Trichloroethane, µg/L	DRY	<1.0	DRY	DRY	<1.0	DRY	DRY
Total Parent Products, µg/L	DRY	<b>120.</b>	DRY	DRY	BRL	DRY	DRY
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
1,1-Dichloroethane, µg/L	DRY	<1.0	DRY	DRY	<1.0	DRY	DRY
1,2-Dichloroethane, µg/L	DRY	<1.0	DRY	DRY	<1.0	DRY	DRY
1,1-Dichloroethene, µg/L	DRY	<1.0	DRY	DRY	<1.0	DRY	DRY
cis-1,2-Dichloroethene, µg/L	DRY	<1.0	DRY	DRY	<1.0	DRY	DRY
trans-1,2-Dichloroethene, µg/L	DRY	<1.0	DRY	DRY	<1.0	DRY	DRY
Vinyl Chloride, µg/L	DRY	<2.0	DRY	DRY	<2.0	DRY	DRY
Total Breakdown Products, µg/L	DRY	BRL	DRY	DRY	BRL	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Chloroform, µg/L	DRY	<1.0	DRY	DRY	<1.0	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
Methylene Chloride, µg/L	DRY	<1.0	DRY	DRY	<1.0	DRY	DRY
Chloromethane, µg/L	DRY	<2.0	DRY	DRY	<2.0	DRY	DRY
Total Chlorinated Hydrocarbons, µg/L	DRY	<b>120.</b>	DRY	DRY	BRL	DRY	DRY
<b>Date Sampled</b>	NS	06/07/17	NS	NS	06/06/17	NS	NS

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter

Table 12. Eastern Plume Groundwater VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Plume (cont.)				Recovery Wells		
	MW-16A	MW-27	MW-28A	MW-33	MW-7A	MW-17A	RW-1
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Tetrachloroethene, µg/L	26.	4.0	<1.0	12.	1.6	1.0	4.5
Trichloroethene, µg/L	190.	5.7	12.	120.	1,400.	9.2	71.
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>216.</b>	<b>9.7</b>	<b>12.</b>	<b>132.</b>	<b>1,402.</b>	<b>10.</b>	<b>76.</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	20.	<1.0	<1.0	3.7	12.	1.1	9.7
trans-1,2-Dichloroethene, µg/L	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>22.</b>	<b>BRL</b>	<b>BRL</b>	<b>3.7</b>	<b>12.</b>	<b>1.1</b>	<b>9.7</b>
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>							
Chloroform, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>							
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>238.</b>	<b>9.7</b>	<b>12.</b>	<b>136.</b>	<b>1,414.</b>	<b>11.</b>	<b>85.</b>
<b>Date Sampled</b>	06/06/17	06/06/17	06/06/17	06/06/17	06/06/17	06/06/17	06/06/17

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter



Table 12. Eastern Plume Groundwater VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Recovery Wells (cont.)					Downgradient		
	RW-2	RW-3	RW-6	RW-11	RW-12	MW-29A	MW-34	MW-37
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Tetrachloroethene, µg/L	7.6	2.9	1.2	1.5	9.9	<1.0	5.3	<1.0
Trichloroethene, µg/L	84.	62.	1,000.	790.	57.	<1.0	3.9	<1.0
1,1,1-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Total Parent Products, µg/L</b>	<b>92.</b>	<b>65.</b>	<b>1,001.</b>	<b>792.</b>	<b>67.</b>	BRL	<b>9.2</b>	BRL
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
1,1-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, µg/L	8.7	5.9	9.2	8.8	6.3	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Breakdown Products, µg/L</b>	<b>8.7</b>	<b>5.9</b>	<b>9.2</b>	<b>8.8</b>	<b>6.3</b>	BRL	BRL	BRL
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Chloroform, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
Methylene Chloride, µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	<b>100.</b>	<b>71.</b>	<b>1,010.</b>	<b>800.</b>	<b>73.</b>	BRL	<b>9.2</b>	BRL
<b>Date Sampled</b>	06/06/17	06/06/17	06/08/17	06/06/17	06/06/17	06/06/17	06/06/17	06/06/17

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter

Table 13. Eastern Plume Surface Water VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Upgradient					Plume		
	SS-1	SS-2	SS-3	SS-4/SD-1	SD-6	SD-7	SS-9	SS-10
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Tetrachloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Trichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,1,1-Trichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,1,2-Trichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Total Parent Products, µg/L</b>	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
1,1-Dichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,2-Dichloroethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
1,1-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
cis-1,2-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
trans-1,2-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Vinyl Chloride, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Total Breakdown Products, µg/L</b>	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Chloroform, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
Methylene Chloride, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Chloromethane, µg/L	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Total Chlorinated Hydrocarbons, µg/L</b>	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>Date Sampled</b>	NS	NS	NS	NS	NS	NS	NS	NS

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 13. Eastern Plume Surface Water VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Downgradient							
	SD-8	SS-5	SD-9	SD-2/SS-6	SS-7	SS-8	SS-11	SS-12
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Tetrachloroethene, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
Trichloroethene, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
1,1,1-Trichloroethane, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
1,1,2-Trichloroethane, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
<b>Total Parent Products, µg/L</b>	DRY	DRY	DRY	DRY	BRL	BRL	DRY	DRY
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
1,1-Dichloroethane, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
1,2-Dichloroethane, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
1,1-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
cis-1,2-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
trans-1,2-Dichloroethene, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
Vinyl Chloride, µg/L	DRY	DRY	DRY	DRY	<2.0	<2.0	DRY	DRY
<b>Total Breakdown Products, µg/L</b>	DRY	DRY	DRY	DRY	BRL	BRL	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>								
Chloroform, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>								
Methylene Chloride, µg/L	DRY	DRY	DRY	DRY	<1.0	<1.0	DRY	DRY
Chloromethane, µg/L	DRY	DRY	DRY	DRY	<2.0	<2.0	DRY	DRY
<b>Total Chlorinated Hydrocarbons, µg/L</b>	DRY	DRY	DRY	DRY	BRL	BRL	DRY	DRY
<b>Date Sampled</b>	NS	NS	NS	NS	06/07/17	06/07/17	NS	NS

**Notes:**

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 13. Eastern Plume Surface Water VOC Concentrations, June 2017  
Honea Path Plant, Honea Path, South Carolina

	Downgradient (cont.)		
	SS-13	SS-14	SD-3
<b>Two Carbon Chlorinated Hydrocarbons - Parent Products</b>			
Tetrachloroethene, µg/L	DRY	DRY	<1.0
Trichloroethene, µg/L	DRY	DRY	<b>5.0</b>
1,1,1-Trichloroethane, µg/L	DRY	DRY	<1.0
1,1,2-Trichloroethane, µg/L	DRY	DRY	<1.0
<b>Total Parent Products, µg/L</b>	DRY	DRY	<b>5.0</b>
<b>Two Carbon Chlorinated Hydrocarbons - Breakdown Products</b>			
1,1-Dichloroethane, µg/L	DRY	DRY	<1.0
1,2-Dichloroethane, µg/L	DRY	DRY	<1.0
1,1-Dichloroethene, µg/L	DRY	DRY	<1.0
cis-1,2-Dichloroethene, µg/L	DRY	DRY	<1.0
trans-1,2-Dichloroethene, µg/L	DRY	DRY	<1.0
Vinyl Chloride, µg/L	DRY	DRY	<2.0
<b>Total Breakdown Products, µg/L</b>	DRY	DRY	BRL
<b>One Carbon Chlorinated Hydrocarbons - Parent Products</b>			
Chloroform, µg/L	DRY	DRY	<1.0
<b>One Carbon Chlorinated Hydrocarbons - Breakdown Products</b>			
Methylene Chloride, µg/L	DRY	DRY	<1.0
Chloromethane, µg/L	DRY	DRY	<2.0
<b>Total Chlorinated Hydrocarbons, µg/L</b>	DRY	DRY	<b>5.0</b>
<b>Date Sampled</b>	NS	NS	06/07/17

Notes:

- BRL - Analytical results below laboratory reporting limit.
- NS - Not Sampled.
- DRY - Well or surface water body was dry and not sampled.
- µg/L - Micrograms per Liter.

Table 14. DHEC Groundwater and Surface Water Standards for Select Constituents of Concern

Contaminant of Concern	DHEC Groundwater Standard (µg/L) <sup>1</sup>	DHEC Surface Water Standard <sup>2</sup> (µg/L)	DHEC Surface Water Standard <sup>3</sup> (µg/L)
Tetrachloroethene	5	0.69	3.3
Trichloroethene	5	2.5	30
1,1,1-Trichloroethane	200	NSA	NSA
1,1,2-Trichloroethane	5	0.59	16
1,1-Dichloroethane	NSA	NSA	NSA
1,2-Dichloroethane	5	0.38	37
1,1-Dichloroethene	7	330	7,100
cis-1,2-Dichloroethene	70	NSA	NSA
trans-1,2-Dichloroethene	100	140	10,000
Vinyl Chloride	2	0.025	2.4
Acetone	NSA	NSA	NSA
Benzene	5	2.2	51
Carbon Tetrachloride	5	0.230	1.6
Chlorobenzene	100	130	1,600
Chloromethane	NSA	NSA	NSA
Dibromochloromethane	80	0.40	13
Dichlorodifluoromethane	NSA	NSA	NSA
Dichloromethane <sup>4</sup>	5	4.6	590
1,3-Dichlorobenzene	NSA	320	960
1,4-Dichlorobenzene	75	63	190
1,2-Dichloropropane	5	0.5	15
n-Butylbenzene	NSA	NSA	NSA
p-Butylbenzene	NSA	NSA	NSA
sec-Butylbenzene	NSA	NSA	NSA
Ethylbenzene	700	530	2,100
Isopropylbenzene	NSA	NSA	NSA
p-Isopropyltoluene	NSA	NSA	NSA
Toluene	1,000	1,300	15,000
Trichlorofluoromethane	NSA	NSA	NSA
Trichloromethane <sup>5</sup>	80	5.7	470
1,2,4-Trichlorobenzene	70	35	70
1,2,4-Trimethylbenzene	NSA	NSA	NSA
1,3,5-Trimethylbenzene	NSA	NSA	NSA
1,2-Dichloropropane	5	0.50	15
1,2,3-Trichloropropane	NSA	NSA	NSA
Xylenes	10,000	NSA	NSA

Notes:

<sup>1</sup>Maximum Contaminant Level, DHEC Regulations R61-68, June 27, 2014

<sup>2</sup>DHEC Surface Water Standard-Human Health for the Consumption of Water and Organism

<sup>3</sup>DHEC Surface Water Standard-Human Health for the Consumption of Organism Only

<sup>4</sup>Dichloromethane is also known as Methylene Chloride

<sup>5</sup>Trichloromethane is also known as Chloroform

µg/L= micrograms per liter

NSA= No Standard Available

Table 15. Average Monthly Flow Rates for the Phase I/II, Phase III and Phase IV Recovery Wells,  
October 2016 through September 2017  
Honea Path Plant, Honea Path, SC

	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Total	Phase Total	Avg Flow Rate (gpm)
<b>Phase IV</b>															
<b>RW-1</b>	214,801	258,275	272,581	196,010	239,247	215,287	155,582	276,344	266,169	292,196	227,040	236,284	2,849,816		5.42
<b>RW-2</b>	251,115	239,733	250,036	141,626	198,982	68,468	43,382	178,782	277,241	309,750	224,160	219,152	2,402,427		4.57
<b>RW-3</b>	214,295	260,270	269,578	197,288	260,826	482,105	118,999	188,532	377,772	377,024	274,701	322,475	3,343,865		6.36
<b>MW-17A</b>	52,080	41,664	47,616	46,128	41,664	41,664	49,104	44,604	41,664	52,080	41,664	49,104	549,036		1.04
<b>RW-12</b>	190,583	686,501	1,046,026	511,875	11,625	24,633	636,985	1,493,629	1,320,531	1,409,353	1,044,588	1,175,227	9,551,556		18.17
			4,295,154			2,677,428			5,469,320			6,254,798		18,696,700	
<b>Phase I/II</b>															
<b>RW-4</b>	403,912	428,016	397,911	281,230	250,191	180,910	45,019	81,995	409,012	438,818	415,091	409,115	3,741,220		7.12
<b>RW-5</b>	291,220	392,210	339,100	358,400	315,180	315,100	299,190	309,090	298,140	346,400	268,050	140,390	3,672,470		6.99
<b>RW-6</b>	169,050	170,956	173,295	152,089	132,764	149,720	186,158	234,048	239,409	232,078	164,693	175,436	2,179,696		4.15
<b>RW-7</b>	12,217	13,209	12,095	15,310	17,101	10,910	14,011	3,316	8,071	1,210	543	0	107,993		0.21
<b>MW-7A</b>	100,800	80,640	92,160	92,160	89,280	80,640	95,040	80,400	80,640	100,800	80,640	95,040	1,068,240		2.03
<b>MW-19A</b>	115,920	92,736	105,984	102,672	92,736	92,736	109,296	99,360	92,736	115,920	92,736	109,296	1,222,128		2.33
<b>RW-11</b>	389,306	316,303	323,691	0	0	241,190	221,910	253,417	218,400	273,000	218,400	233,400	2,689,017		5.12
			4,172,427			6,383,961			5,621,542			4,352,740		14,680,764	
<b>Phase III</b>															
<b>RW-8</b>	34,536	26,541	31,104	29,932	26,933	27,144	32,033	28,012	29,069	34,392	27,681	87,315	414,692		0.79
<b>RW-9</b>	81,236	77,034	50,921	35,581	19,690	47,021	22,055	1,496	206,701	398,892	282,525	291,500	1,514,652		2.88
<b>RW-10</b>	449,865	357,395	419,991	503,433	492,301	518,316	575,293	432,222	617,275	684,722	474,700	494,057	6,019,570		11.45
<b>MW-35</b>	59,054	43,785	49,987	46,330	43,417	40,746	52,453	39,643	56,654	65,973	52,011	58,634	608,685		1.16
<b>RW-13</b>	5,814	14,097	16,176	11,558	9,169	9,865	8,831	7,072	7,072	9,597	4,658	5,442	109,350		0.21
<b>Sump</b>	184,105	161,597	551,013	875,509	845,631	920,692	488,429	178,879	240,541	130,963	391,761	276,488	5,245,608		9.98
			2,614,250			4,503,268			3,023,729			3,771,310		13,912,557	
<b>Monthly Flow</b>	3,219,908	3,660,962	4,449,265	3,597,131	3,086,737	3,467,147	3,153,770	3,930,841	4,787,097	5,273,167	4,285,643	4,378,355		<b>47,290,021</b>	89.97
			11,330,135			10,151,015			11,871,707			13,937,164			

Table 16. Quarterly NPDES Sample Results, December 2016 through September 2017.  
Honea Path Plant, Honea Path, South Carolina

Date	Effluent (Outfall 001)					Phase I/II Influent			Phase IV Influent			Phase III Influent		
	TCE ug/L	PCE ug/L	pH S.U.	TSS mg/L	BOD-5 mg/L	TCE ug/L	PCE ug/L	pH S.U.	TCE ug/L	PCE ug/L	pH S.U.	TCE ug/L	PCE ug/L	pH S.U.
12/7/2016	<b>30.5</b>	<2.0	7.10	<2.5	<2.0	<b>106</b>	<b>9.80</b>	6.10	<b>869</b>	<20	5.80	<b>1,160</b>	<20	6.40
3/1/2017	<b>44.50</b>	<2.0	6.50	<2.5	<2.0	<b>101</b>	<b>4.80</b>	5.70	<b>1,160</b>	<20	5.70	<b>1,180</b>	<20	6.20
6/7/2017	<2.0	<2.0	7.20	<2.5	<2.0	<b>105</b>	<b>5.00</b>	6.10	<b>1,130</b>	<25	5.80	<b>549</b>	<10	5.60
9/6/2017	<b>3.2</b>	<2.0	6.40	<2.5	<2.0	<b>82.9</b>	<b>6.80</b>	6.10	<b>1,060</b>	<20	5.70	<b>854</b>	<10	7.30
<b>Max Avg</b>	<b>590</b>		<b>6.00</b>	<b>10.0</b>	<b>10</b>	<b>Avg. TCE</b>		<b>696</b>						
<b>Max Daily</b>	<b>1180</b>		<b>8.50</b>	<b>20.0</b>	<b>20</b>	<b>Avg. PCE</b>		<b>2.20</b>						

<1.0 - Less Than Laboratory Reporting Limit of 1.0 Micrograms Per Liter (ug/L).

NS - Not Sampled

S.U. - Standard Units

Table 17. VOC Mass Removal Calculations Phase I/II Treatment System,  
 October 2016 through September 2017.  
 Honea Path Plant, Honea Path, SC

<b>QUARTER 1 - Oct - Dec 16</b>				
lbs VOC removed through GW				
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal
869	1,000,000,000	3.79	0.454	4,172,427
	0.000000869	3.29351E-06	7.25443E-06	<b>30.3</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)

<b>QUARTER 2 - Jan - Mar 17</b>				
lbs VOC removed through GW				
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal
1,160	1,000,000,000	3.79	0.454	6,383,961
	0.00000116	4.3964E-06	9.6837E-06	<b>61.8</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)

<b>QUARTER 3 - Apr - Jun 17</b>				
lbs VOC removed through GW				
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal
1,130	1,000,000,000	3.79	0.454	5,621,542
	0.00000113	4.2827E-06	9.43326E-06	<b>53.0</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)

<b>QUARTER 4 - Jul - Sept 17</b>				
lbs VOC removed through GW				
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal
1,060	1,000,000,000	3.79	0.454	4,352,740
	0.00000106	4.0174E-06	8.8489E-06	<b>38.5</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)

<b>Total pounds of VOCs removed from Phase I/II groundwater in 2017</b>				<b>183.6</b>
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Table 18. VOC Mass Removal Calculations Phase III Treatment System,  
 October 2016 through September 2017.  
 Honea Path Plant, Honea Path, SC

<b>QUARTER 1 - Oct - Dec 16</b>				
lbs VOC removed through GW				
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal
1,160	1,000,000,000	3.79	0.454	2,614,250
	0.00000116	4.3964E-06	9.6837E-06	<b>25.3</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)

<b>QUARTER 2 - Jan - Mar 17</b>				
lbs VOC removed through GW				
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal
1,180	1,000,000,000	3.79	0.454	4,503,268
	0.00000118	4.4722E-06	9.85066E-06	<b>44.4</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)

<b>QUARTER 3 - Apr - Jun 17</b>				
lbs VOC removed through GW				
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal
549	1,000,000,000	3.79	0.454	3,023,729
	0.000000549	2.08071E-06	4.58306E-06	<b>13.9</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)

<b>QUARTER 4 - Jul - Sept 17</b>				
lbs VOC removed through GW				
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal
854	1,000,000,000	3.79	0.454	3,771,310
	0.000000854	3.23666E-06	7.12921E-06	<b>26.9</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)

<b>Total pounds of VOCs removed from Phase III groundwater in 2017</b>				<b>110.4</b>
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Table 19. VOC Mass Removal Calculations Phase IV Treatment System,  
 October 2016 through September 2017.  
 Honea Path Plant, Honea Path, SC

<b>QUARTER 1 - Oct - Dec 16</b>					
lbs VOC removed through GW					
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal	
116	1,000,000,000	3.79	0.454	4,295,154	
	1.158E-07	4.38882E-07	9.667E-07		<b>4.2</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)	

<b>QUARTER 2 - Jan - Mar 17</b>					
lbs VOC removed through GW					
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal	
106	1,000,000,000	3.79	0.454	2,677,428	
	1.058E-07	4.00982E-07	8.8322E-07		<b>2.4</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)	

<b>QUARTER 3 - Apr - Jun 17</b>					
lbs VOC removed through GW					
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal	
110	1,000,000,000	3.79	0.454	5,469,320	
	0.00000011	4.169E-07	9.18282E-07		<b>5.0</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)	

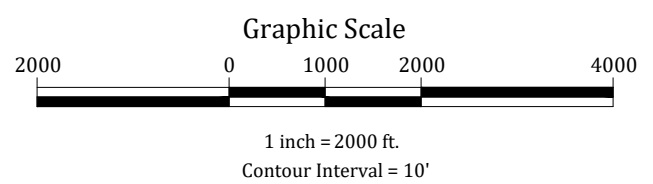
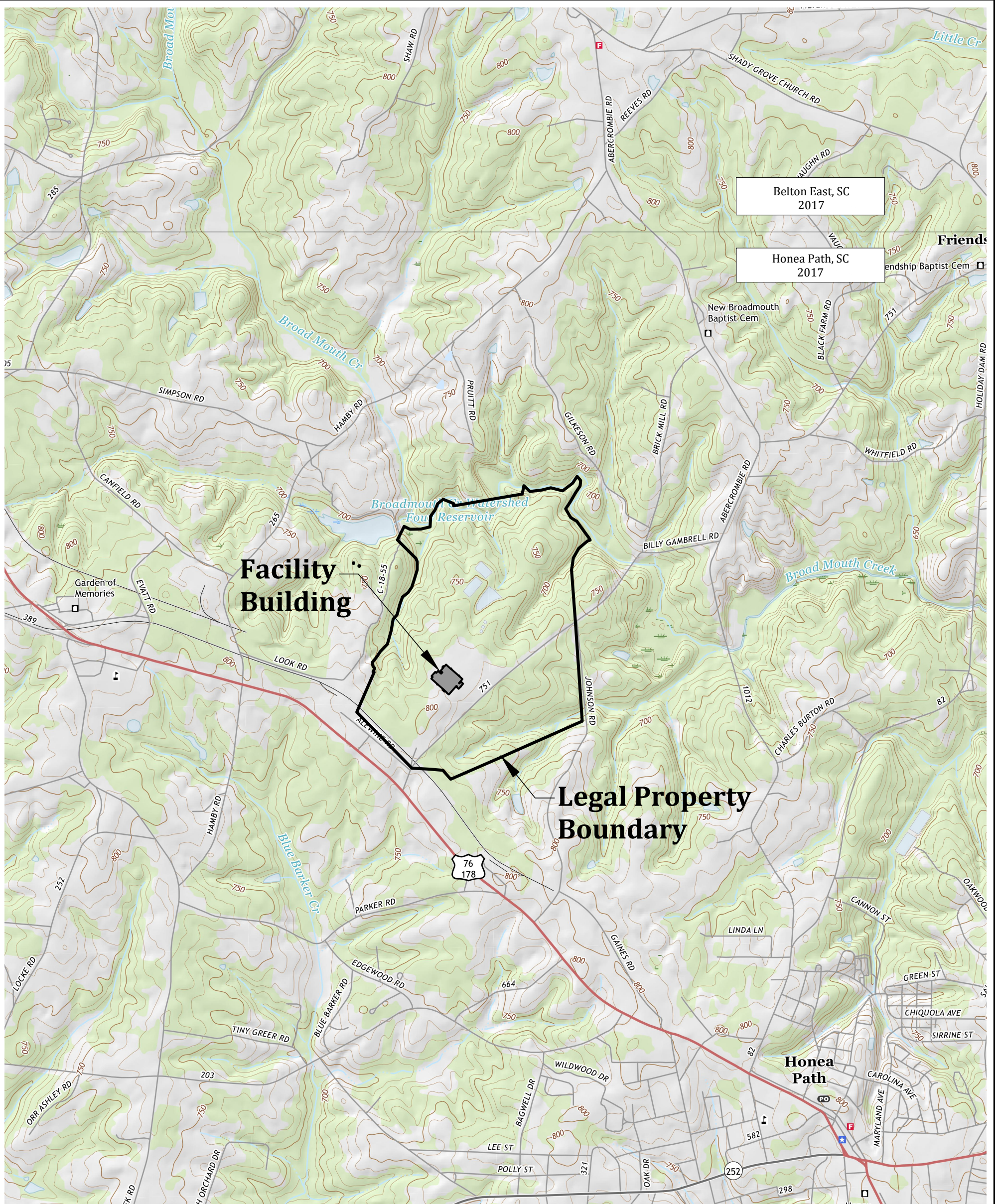
<b>QUARTER 4 - Jul - Sept 17</b>					
lbs VOC removed through GW					
concen (ug/l)	ug/gr	l/gal	kg/lb	Gal	
90	1,000,000,000	3.79	0.454	6,254,798	
	8.97E-08	3.39963E-07	7.48817E-07		<b>4.7</b>
	gr/l	g/gal	lb/gal	lbs removed (ttl)	


<b>Total pounds of VOCs removed from Phase IV groundwater in 2017</b>					<b>16.2</b>
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# FIGURES



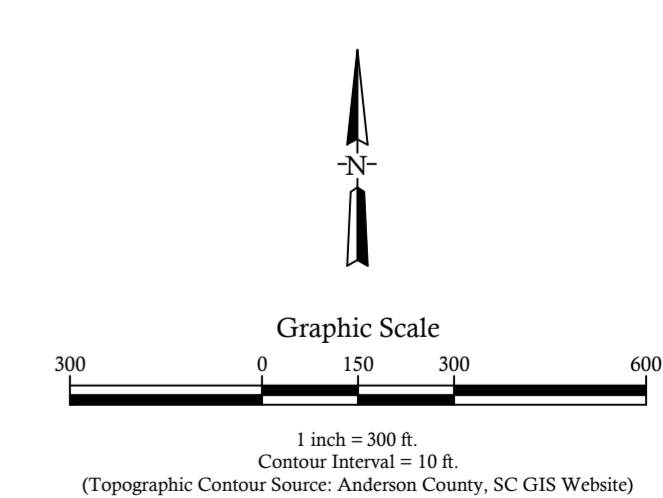
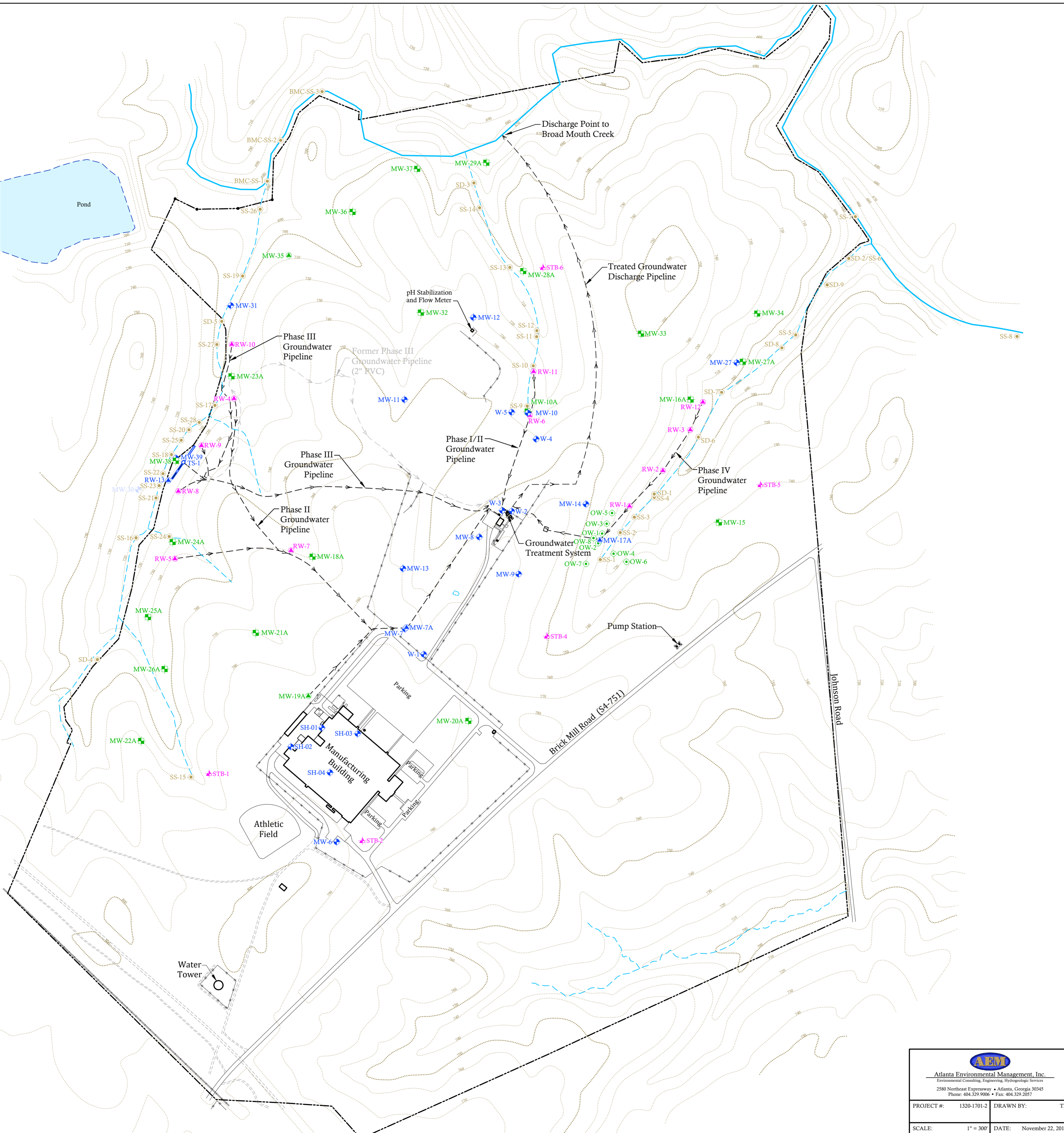



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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 2000'	DATE:	November 8, 2017
<b>Site Location</b> Belton East, SC and Honea Path, SC Quadrangles			<b>Figure</b> <b>1</b>
G:\DWG\1320-1701 Honea Path\02\01 Topo			



**Legend**

- Residuum Aquifer Zone Monitoring Well
- Residuum Aquifer Zone Monitoring Well (Abandoned) (MW-30 Abandoned on February 28, 2012)
- Residuum Aquifer Zone Recovery Well
- Partially Weathered Rock Aquifer Zone Monitoring Well
- Partially Weathered Rock Aquifer Zone Observation Well
- Partially Weathered Rock Aquifer Zone Recovery Well
- Bedrock Aquifer Zone Monitoring Well (Former Soil Test Boring)
- Recovery Well (Screened Across Three Zones)
- Surface Water Sample Location
- Site Boundary
- Topographic Contour (ft. AMSL) Contour Interval = 50 ft.
- Topographic Contour (ft. AMSL) Contour Interval = 10 ft.
- Fenceline
- Creek
- Intermittent Stream
- Piping (With Flow Direction)
- Railroad
- Trail



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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	November 22, 2017
<b>Monitoring and Recovery Well Locations and Site Layout</b>			Figure <b>2</b>

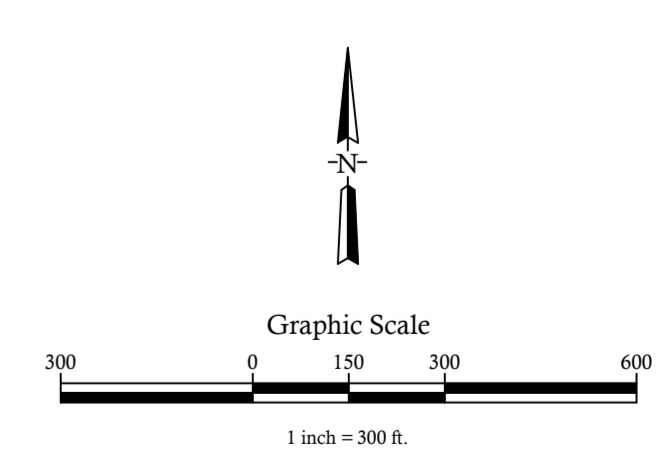
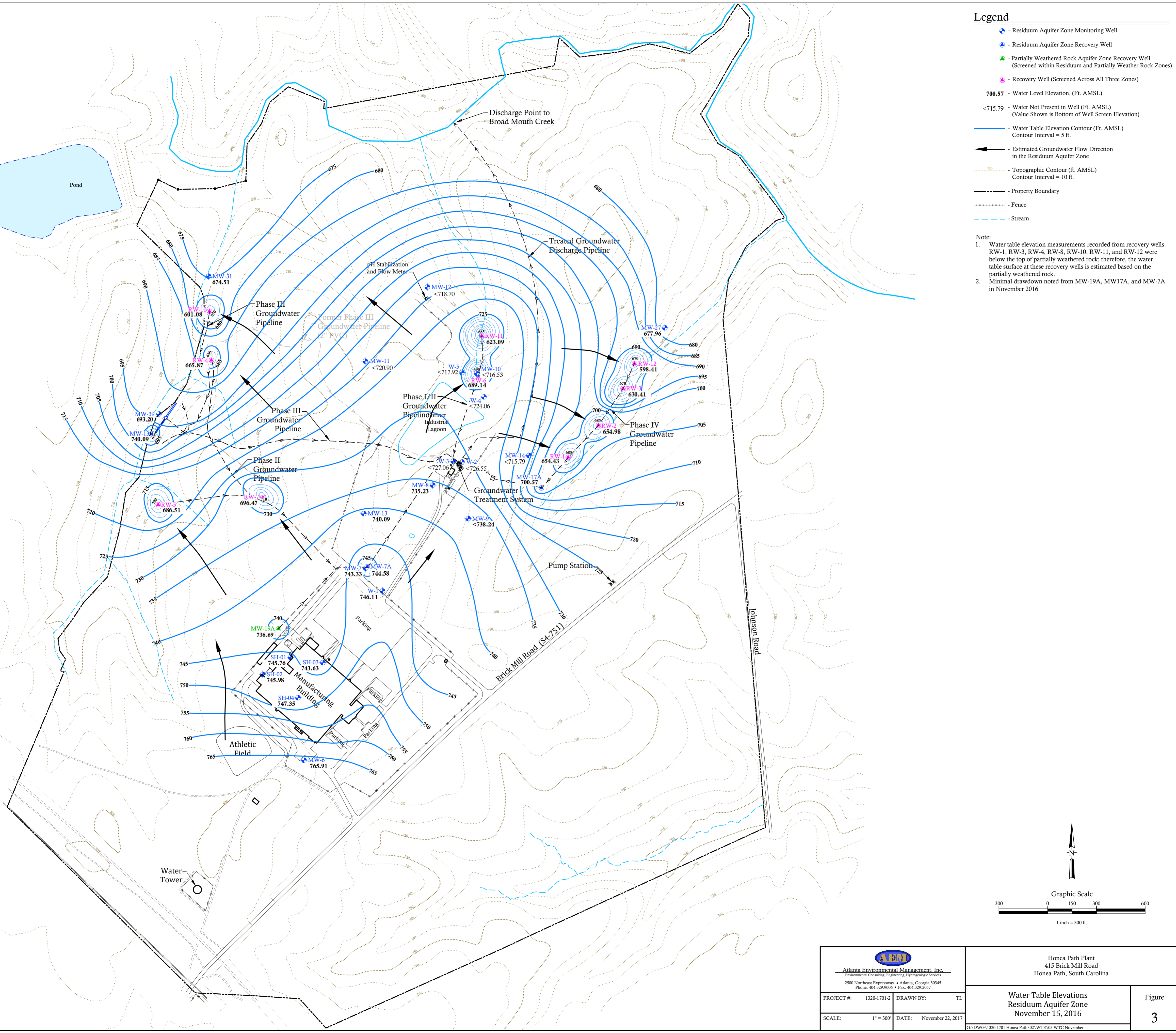
G:\DWG\1320-1701 Honea Path\02\02 Basemap



**Legend**

- ◆ - Residuum Aquifer Zone Monitoring Well
- ▲ - Residuum Aquifer Zone Recovery Well
- ▲ - Partially Weathered Rock Aquifer Zone Recovery Well (Screened within Residuum and Partially Weathered Rock Zones)
- ▲ - Recovery Well (Screened Across All Three Zones)
- 700.57** - Water Level Elevation, (Ft. AMSL)
- <715.79** - Water Not Present in Well (Ft. AMSL) (Value Shown is Bottom of Well Screen Elevation)
- - Water Table Elevation Contour (Ft. AMSL) Contour Interval = 5 ft.
- - Estimated Groundwater Flow Direction in the Residuum Aquifer Zone
- - Topographic Contour (ft. AMSL) Contour Interval = 10 ft.
- - Property Boundary
- - - - Fence
- - - - Stream

- Note:**
1. Water table elevation measurements recorded from recovery wells RW-1, RW-3, RW-4, RW-8, RW-10, RW-11, and RW-12 were below the top of partially weathered rock; therefore, the water table surface at these recovery wells is estimated based on the partially weathered rock.
  2. Minimal drawdown noted from MW-19A, MW17A, and MW-7A in November 2016



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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	November 22, 2017
<b>Water Table Elevations                  Residuum Aquifer Zone                  November 15, 2016</b>			Figure <b>3</b>

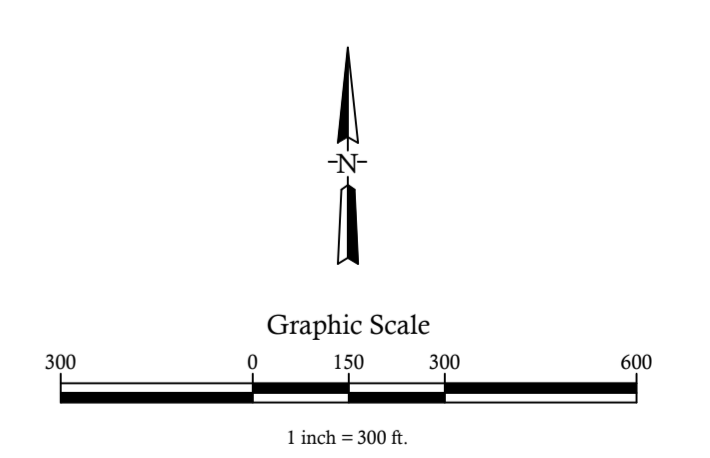
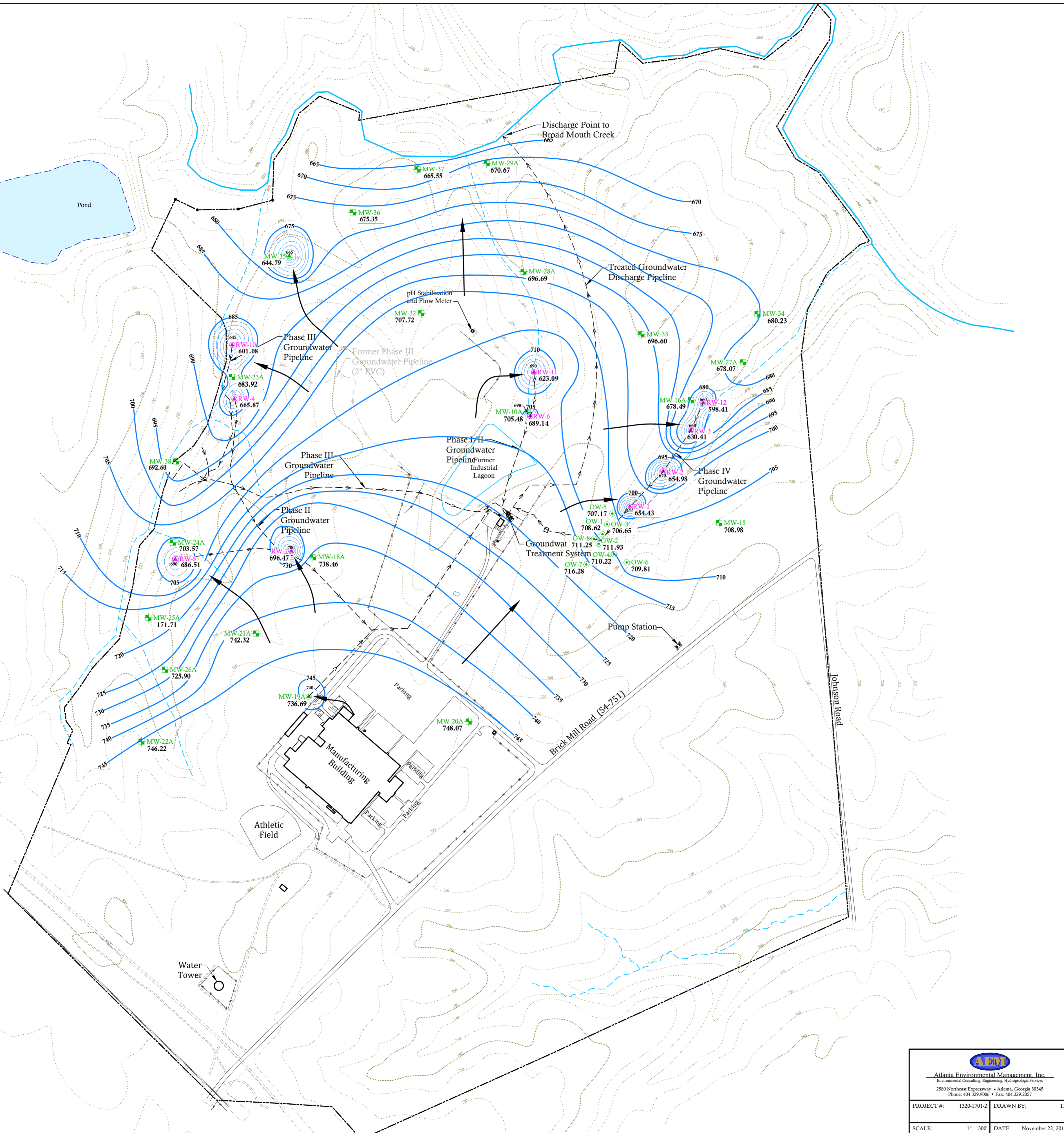
G:\DWG\1320-1701 Honea Path\02\WTE\03 WTC November



**Legend**

- Partially Weathered Rock Aquifer Zone Monitoring Well
- Partially Weathered Rock Aquifer Zone Observation Well
- ▲ Partially Weathered Rock Aquifer Zone Recovery Well (Screened Across Residuum and Partially Weathered Rock Zones)
- ▲ Recovery Well (Screened Across All Three Zones)
- 705.48** - Potentiometric Surface Elevation (Ft. AMSL)
- Potentiometric Surface (Ft. AMSL)  
Contour Interval = 5 ft.
- Estimated Groundwater Flow Direction in the Partially Weathered Rock Aquifer Zone
- Topographic Contour (Ft. AMSL)  
Contour Interval = 10 ft.
- Property Boundary
- - - Fence
- - - Stream









- Note:
1. MW-35 is screened within the partially weathered rock zone only
  2. Potentiometric surface elevation recorded in recovery wells RW-1, RW-3, RW-4, RW-10, and RW-12 were below top of competent bedrock; therefore, the partially weathered rock potentiometric elevations are estimated based on top of competent bedrock.
  3. Recovery wells RW-6 pumping but generating minimal drawdown.



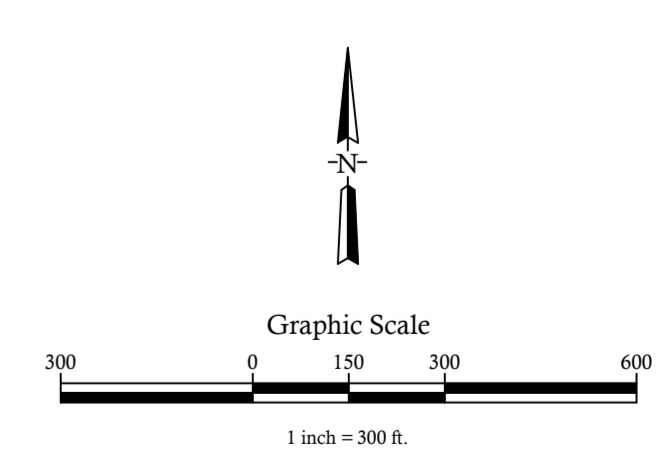
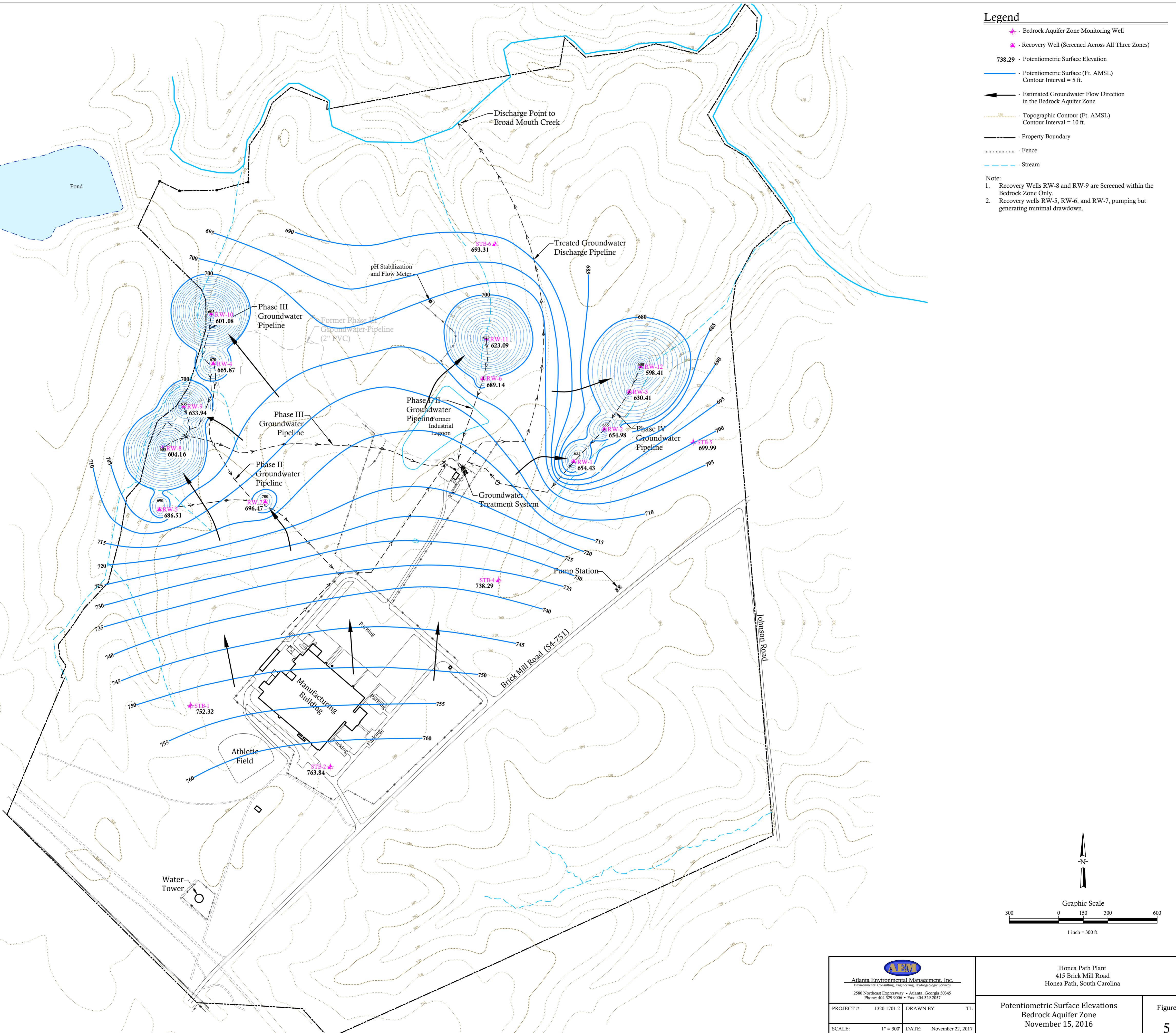
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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	November 22, 2017
Potentiometric Surface Elevations Partially Weathered Rock Aquifer Zone November 15, 2016			Figure <b>4</b>




**Legend**

-  Bedrock Aquifer Zone Monitoring Well
-  Recovery Well (Screened Across All Three Zones)
- 738.29** - Potentiometric Surface Elevation
-  Potentiometric Surface (Ft. AMSL)  
Contour Interval = 5 ft.
-  Estimated Groundwater Flow Direction  
in the Bedrock Aquifer Zone
-  Topographic Contour (Ft. AMSL)  
Contour Interval = 10 ft.
-  Property Boundary
-  Fence
-  Stream

- Note:
1. Recovery Wells RW-8 and RW-9 are Screened within the Bedrock Zone Only.
  2. Recovery wells RW-5, RW-6, and RW-7, pumping but generating minimal drawdown.



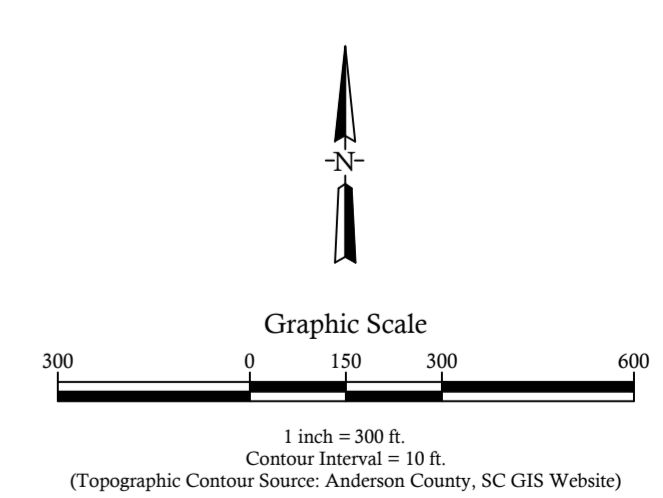
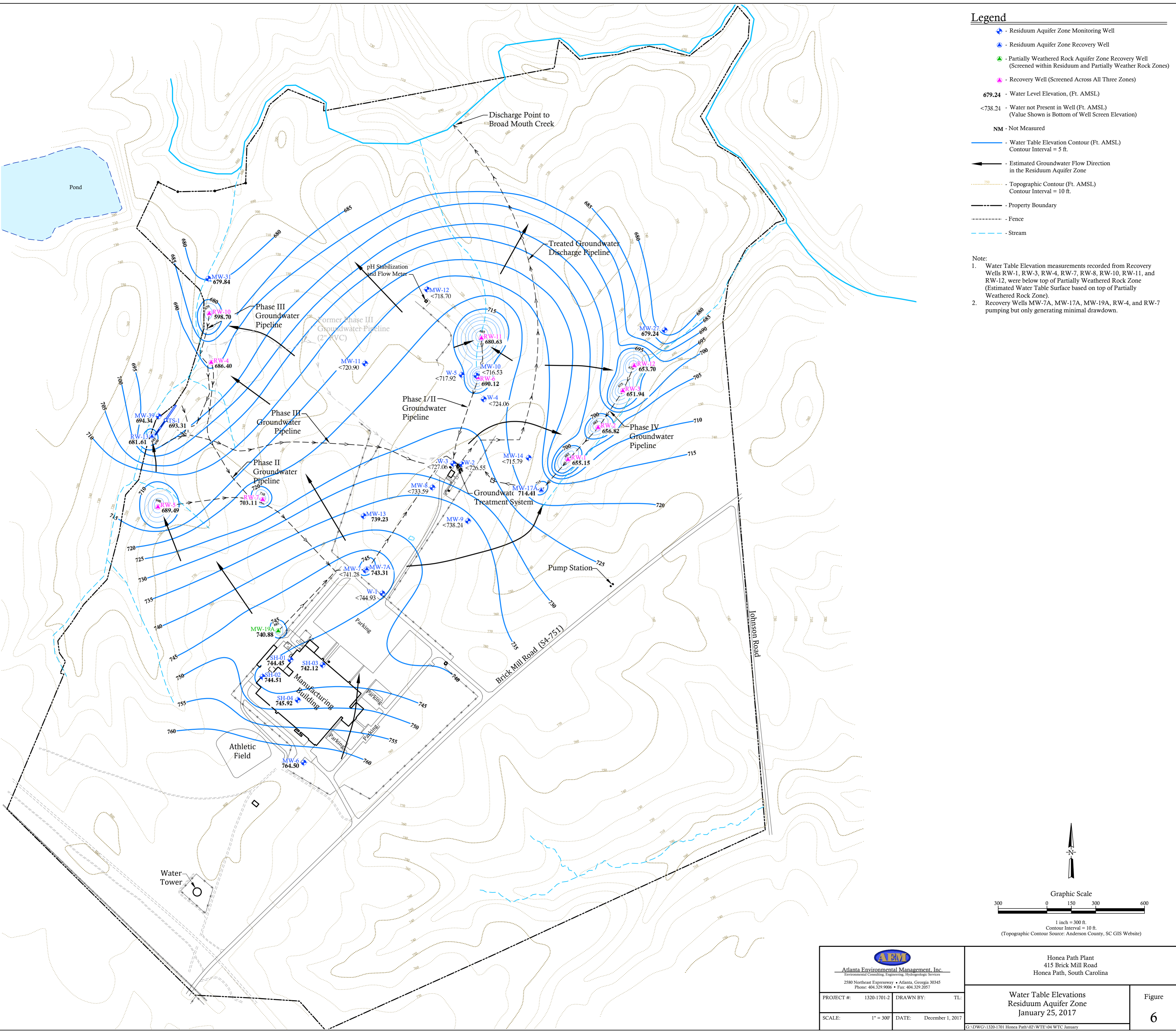
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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	November 22, 2017
Potentiometric Surface Elevations Bedrock Aquifer Zone November 15, 2016			Figure <b>5</b>
G:\DWG\1320-1701 Honea Path\02\WTE\03 WTC November			




**Legend**

- Residuum Aquifer Zone Monitoring Well
- Residuum Aquifer Zone Recovery Well
- Partially Weathered Rock Aquifer Zone Recovery Well (Screened within Residuum and Partially Weather Rock Zones)
- Recovery Well (Screened Across All Three Zones)
- 679.24 - Water Level Elevation, (Ft. AMSL)
- <738.24 - Water not Present in Well (Ft. AMSL) (Value Shown is Bottom of Well Screen Elevation)
- NM - Not Measured
- Water Table Elevation Contour (Ft. AMSL) Contour Interval = 5 ft.
- Estimated Groundwater Flow Direction in the Residuum Aquifer Zone
- Topographic Contour (Ft. AMSL) Contour Interval = 10 ft.
- Property Boundary
- Fence
- Stream

- Note:
1. Water Table Elevation measurements recorded from Recovery Wells RW-1, RW-3, RW-4, RW-7, RW-8, RW-10, RW-11, and RW-12, were below top of Partially Weathered Rock Zone (Estimated Water Table Surface based on top of Partially Weathered Rock Zone).
  2. Recovery Wells MW-7A, MW-17A, MW-19A, RW-4, and RW-7 pumping but only generating minimal drawdown.



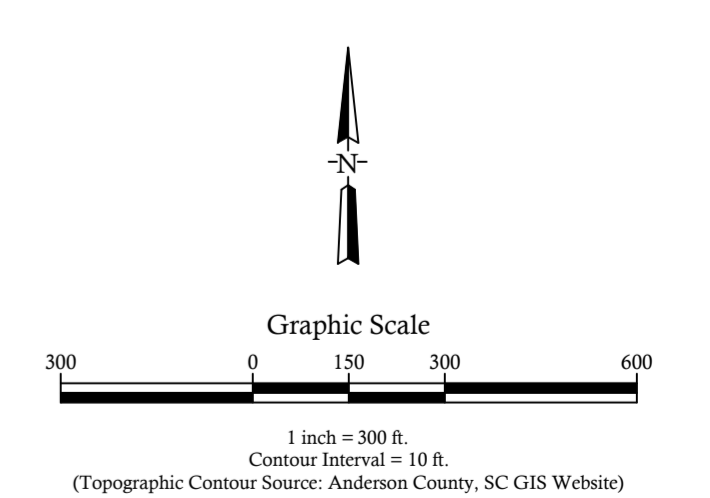
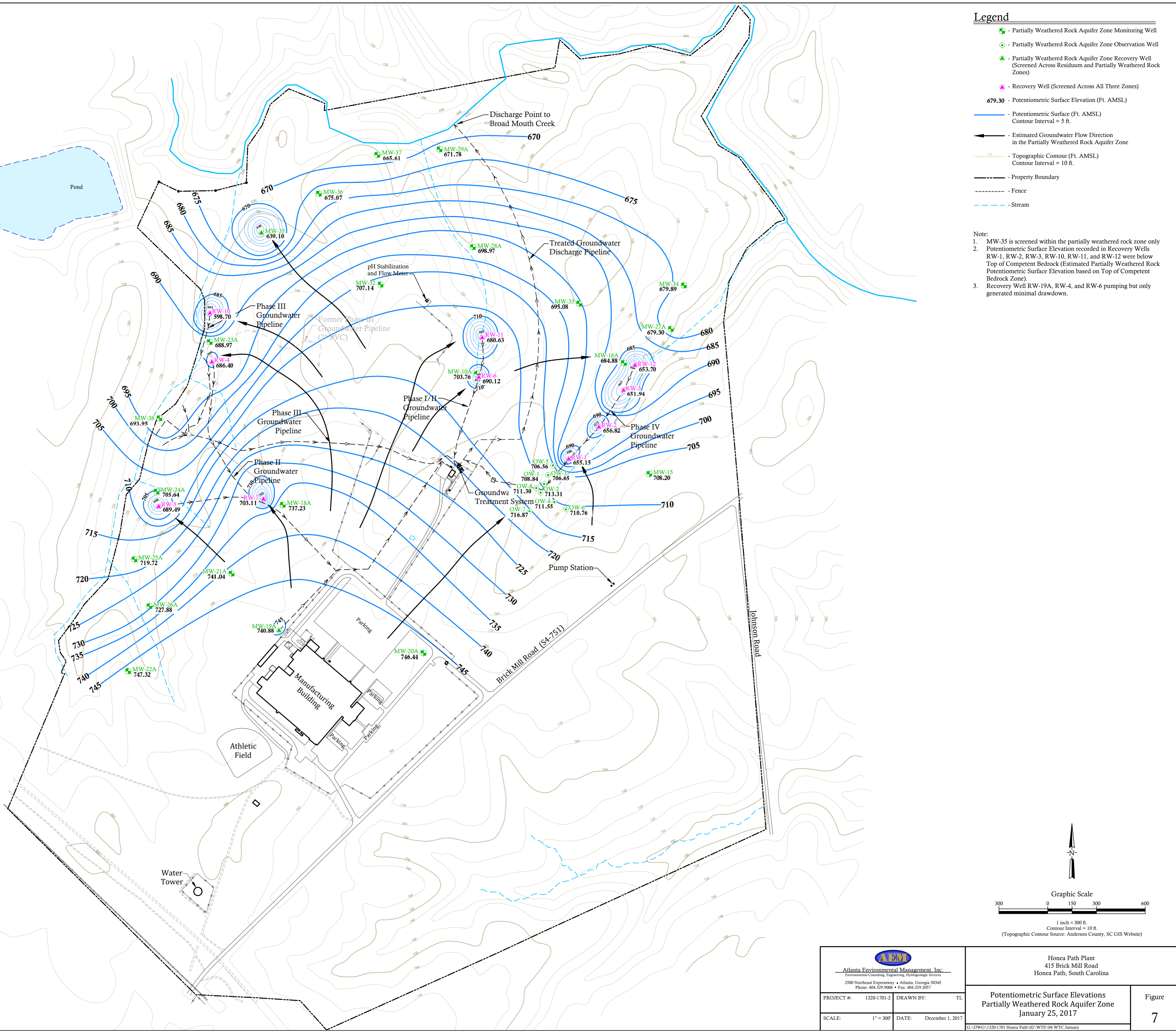
 <b>Atlanta Environmental Management, Inc.</b> <small>Environmental Consulting, Engineering, Hydrogeologic Services</small> <small>2580 Northeast Expressway • Atlanta, Georgia 30345</small> <small>Phone: 404.329.9006 • Fax: 404.329.2057</small>		Honea Path Plant 415 Brick Mill Road Honea Path, South Carolina	
PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	December 1, 2017
<b>Water Table Elevations                  Residuum Aquifer Zone                  January 25, 2017</b>			Figure <b>6</b>
G:\DWG\1320-1701 Honea Path\02\WTE\04 WTC January			



**Legend**

- Partially Weathered Rock Aquifer Zone Monitoring Well
- Partially Weathered Rock Aquifer Zone Observation Well
- Partially Weathered Rock Aquifer Zone Recovery Well (Screened Across Residuum and Partially Weathered Rock Zones)
- Recovery Well (Screened Across All Three Zones)
- 679.30** - Potentiometric Surface Elevation (Ft. AMSL)
- Potentiometric Surface (Ft. AMSL) Contour Interval = 5 ft.
- Estimated Groundwater Flow Direction in the Partially Weathered Rock Aquifer Zone
- Topographic Contour (Ft. AMSL) Contour Interval = 10 ft.
- Property Boundary
- Fence
- Stream

- Note:
1. MW-35 is screened within the partially weathered rock zone only
  2. Potentiometric Surface Elevation recorded in Recovery Wells RW-1, RW-2, RW-3, RW-10, RW-11, and RW-12 were below Top of Competent Bedrock (Estimated Partially Weathered Rock Potentiometric Surface Elevation based on Top of Competent Bedrock Zone).
  3. Recovery Well RW-19A, RW-4, and RW-6 pumping but only generated minimal drawdown.



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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	December 1, 2017
<b>Potentiometric Surface Elevations          Partially Weathered Rock Aquifer Zone          January 25, 2017</b>			<b>Figure          7</b>

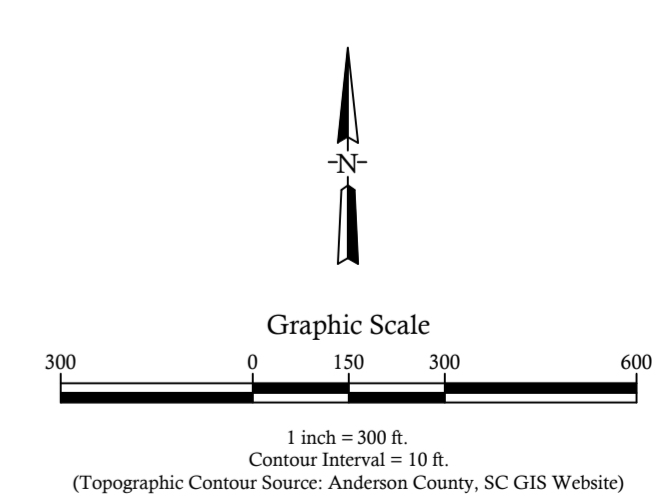
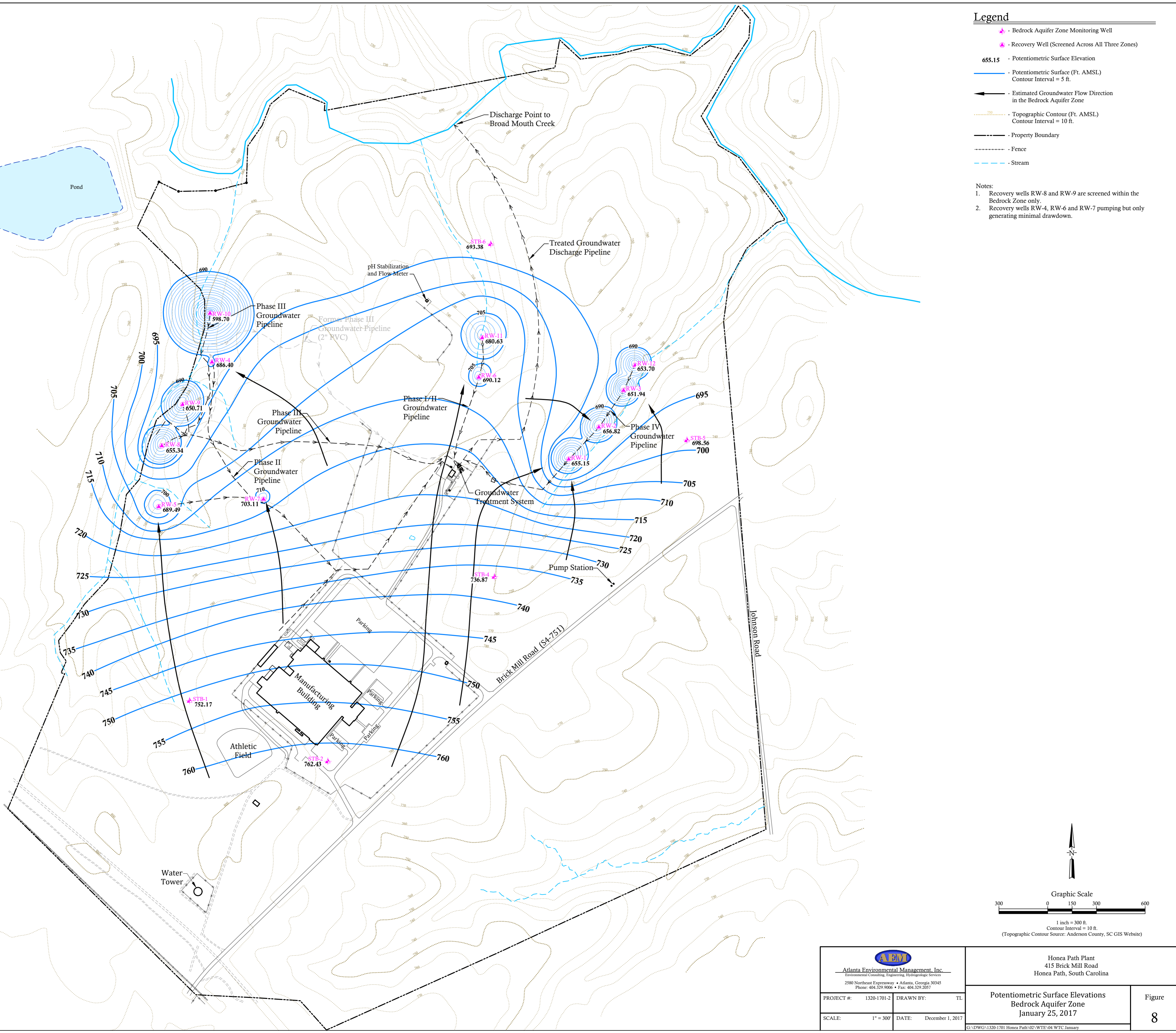
G:\DWG\1320-1701 Honea Path\02\WTE\04 WTC January



**Legend**

- Bedrock Aquifer Zone Monitoring Well
- Recovery Well (Screened Across All Three Zones)
- 655.15 - Potentiometric Surface Elevation
- Potentiometric Surface (Ft. AMSL)  
Contour Interval = 5 ft.
- Estimated Groundwater Flow Direction  
in the Bedrock Aquifer Zone
- Topographic Contour (Ft. AMSL)  
Contour Interval = 10 ft.
- Property Boundary
- Fence
- Stream

- Notes:
1. Recovery wells RW-8 and RW-9 are screened within the Bedrock Zone only.
  2. Recovery wells RW-4, RW-6 and RW-7 pumping but only generating minimal drawdown.



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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	December 1, 2017
<b>Potentiometric Surface Elevations                  Bedrock Aquifer Zone                  January 25, 2017</b>			Figure <b>8</b>

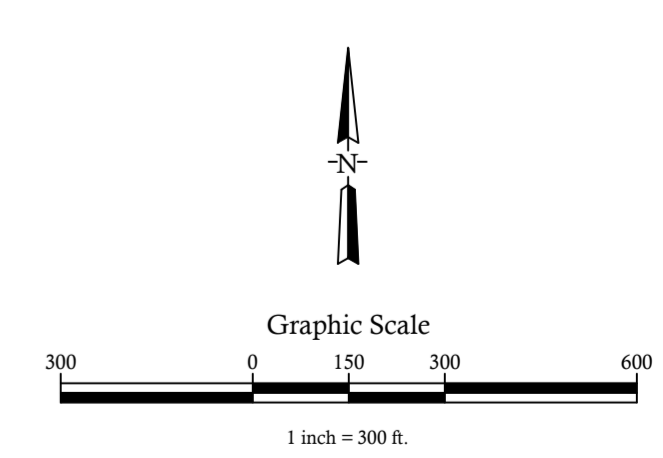
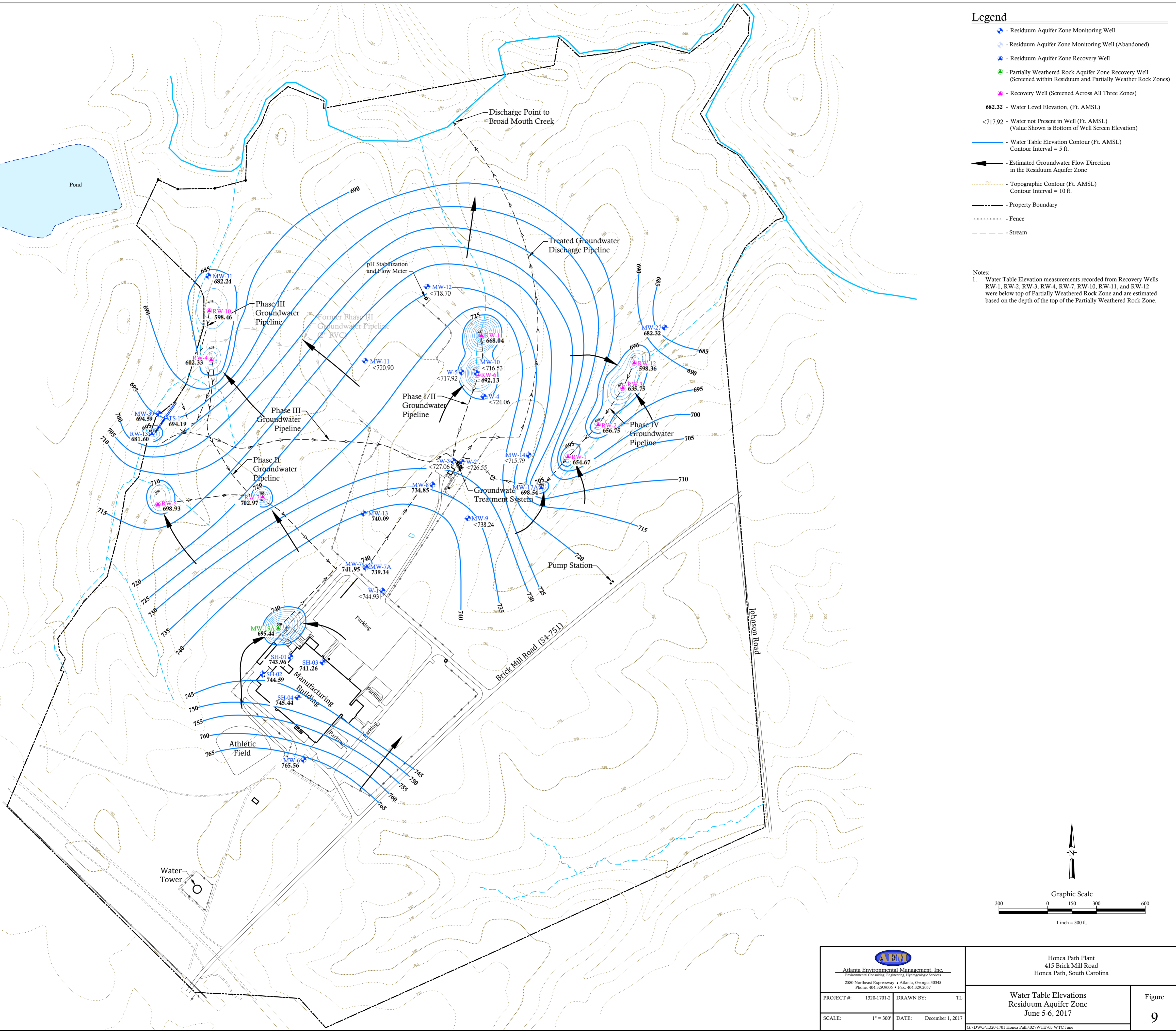
G:\DWG\1320-1701 Honea Path\02\WTE\04 WTC January




**Legend**

- ◆ - Residuum Aquifer Zone Monitoring Well
- ◆ - Residuum Aquifer Zone Monitoring Well (Abandoned)
- ▲ - Residuum Aquifer Zone Recovery Well
- ▲ - Partially Weathered Rock Aquifer Zone Recovery Well (Screened within Residuum and Partially Weather Rock Zones)
- ▲ - Recovery Well (Screened Across All Three Zones)
- 682.32** - Water Level Elevation, (Ft. AMSL)
- <717.92** - Water not Present in Well (Ft. AMSL) (Value Shown is Bottom of Well Screen Elevation)
- - Water Table Elevation Contour (Ft. AMSL) Contour Interval = 5 ft.
- - Estimated Groundwater Flow Direction in the Residuum Aquifer Zone
- - Topographic Contour (Ft. AMSL) Contour Interval = 10 ft.
- - Property Boundary
- - - - Fence
- - - - Stream

Notes:  
 1. Water Table Elevation measurements recorded from Recovery Wells RW-1, RW-2, RW-3, RW-4, RW-7, RW-10, RW-11, and RW-12 were below top of Partially Weathered Rock Zone and are estimated based on the depth of the top of the Partially Weathered Rock Zone.



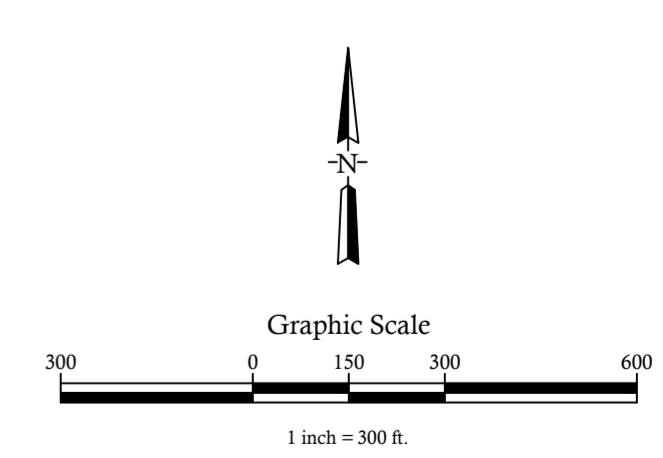
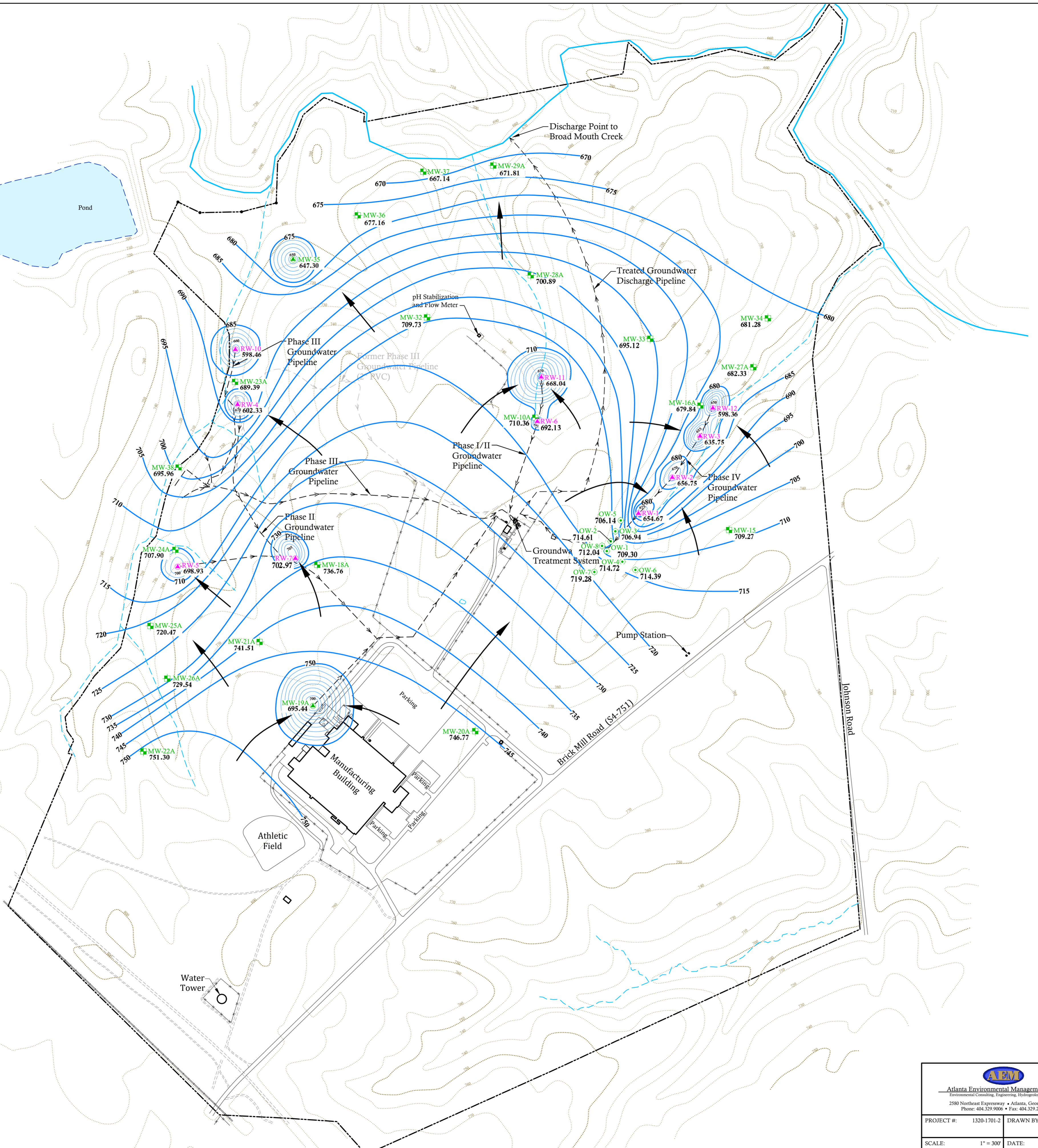
 <b>Atlanta Environmental Management, Inc.</b> <small>Environmental Consulting, Engineering, Hydrogeologic Services</small> 2580 Northeast Expressway • Atlanta, Georgia 30345 Phone: 404.329.9006 • Fax: 404.329.2057		Honea Path Plant 415 Brick Mill Road Honea Path, South Carolina	
PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	December 1, 2017
<b>Water Table Elevations                  Residuum Aquifer Zone                  June 5-6, 2017</b>			Figure <b>9</b>




**Legend**

- Partially Weathered Rock Aquifer Zone Monitoring Well
- Partially Weathered Rock Aquifer Zone Observation Well
- ▲ Partially Weathered Rock Aquifer Zone Recovery Well (Screened Across Residuum and Partially Weathered Rock Zones)
- ▲ Recovery Well (Screened Across All Three Zones)
- 710.36** - Potentiometric Surface Elevation (Ft. AMSL)
- Potentiometric Surface (Ft. AMSL) Contour Interval = 5 ft.
- Estimated Groundwater Flow Direction in the Partially Weathered Rock Aquifer Zone
- Topographic Contour (Ft. AMSL) Contour Interval = 10 ft.
- - - Property Boundary
- - - - Fence
- - - Stream

- Notes:
1. MW-35 is screened within the partially weathered rock zone only.
  2. Potentiometric Surface Elevation recorded in Recovery Wells RW-1, RW-2, RW-3, RW-4, RW-10, RW-11, and RW-12 were at or below Top of Competent Bedrock and are estimated based on the Top of the Competent Bedrock Zone.











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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	December 1, 2017
Potentiometric Surface Elevations Partially Weathered Rock Aquifer Zone June 5-6, 2017			Figure <b>10</b>

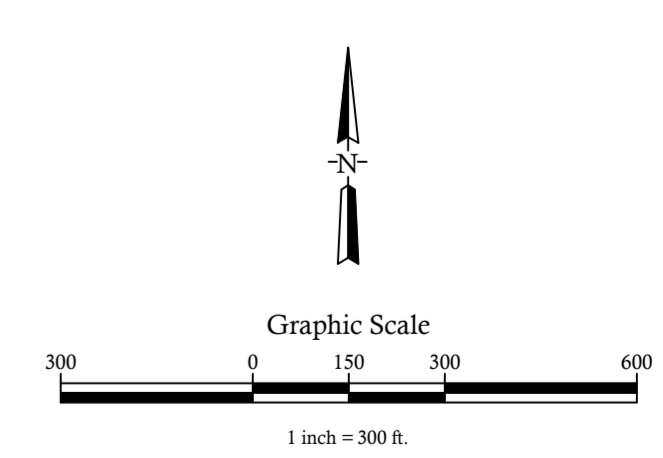
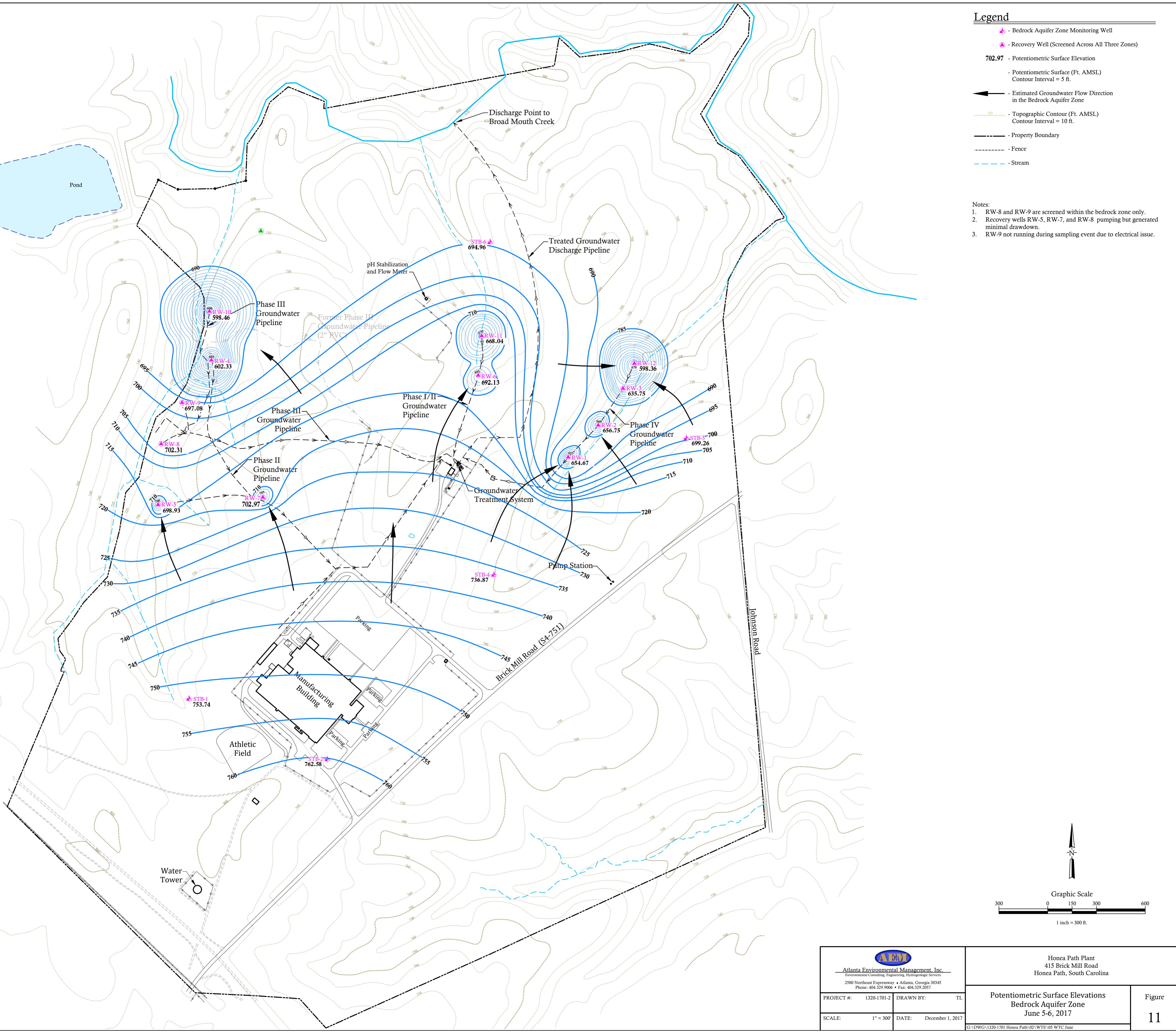
G:\DWG\1320-1701 Honea Path\02\WTE\05 WTC June




**Legend**

-  Bedrock Aquifer Zone Monitoring Well
-  Recovery Well (Screened Across All Three Zones)
- 702.97** - Potentiometric Surface Elevation
-  Potentiometric Surface (Ft. AMSL)  
Contour Interval = 5 ft.
-  Estimated Groundwater Flow Direction  
in the Bedrock Aquifer Zone
-  Topographic Contour (Ft. AMSL)  
Contour Interval = 10 ft.
-  Property Boundary
-  Fence
-  Stream

- Notes:
1. RW-8 and RW-9 are screened within the bedrock zone only.
  2. Recovery wells RW-5, RW-7, and RW-8 pumping but generated minimal drawdown.
  3. RW-9 not running during sampling event due to electrical issue.



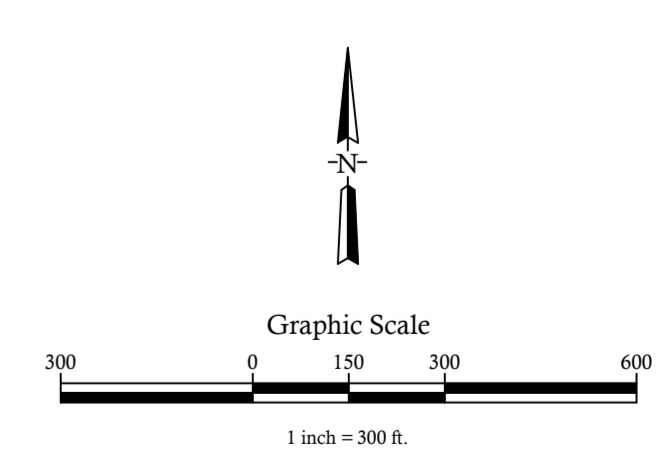
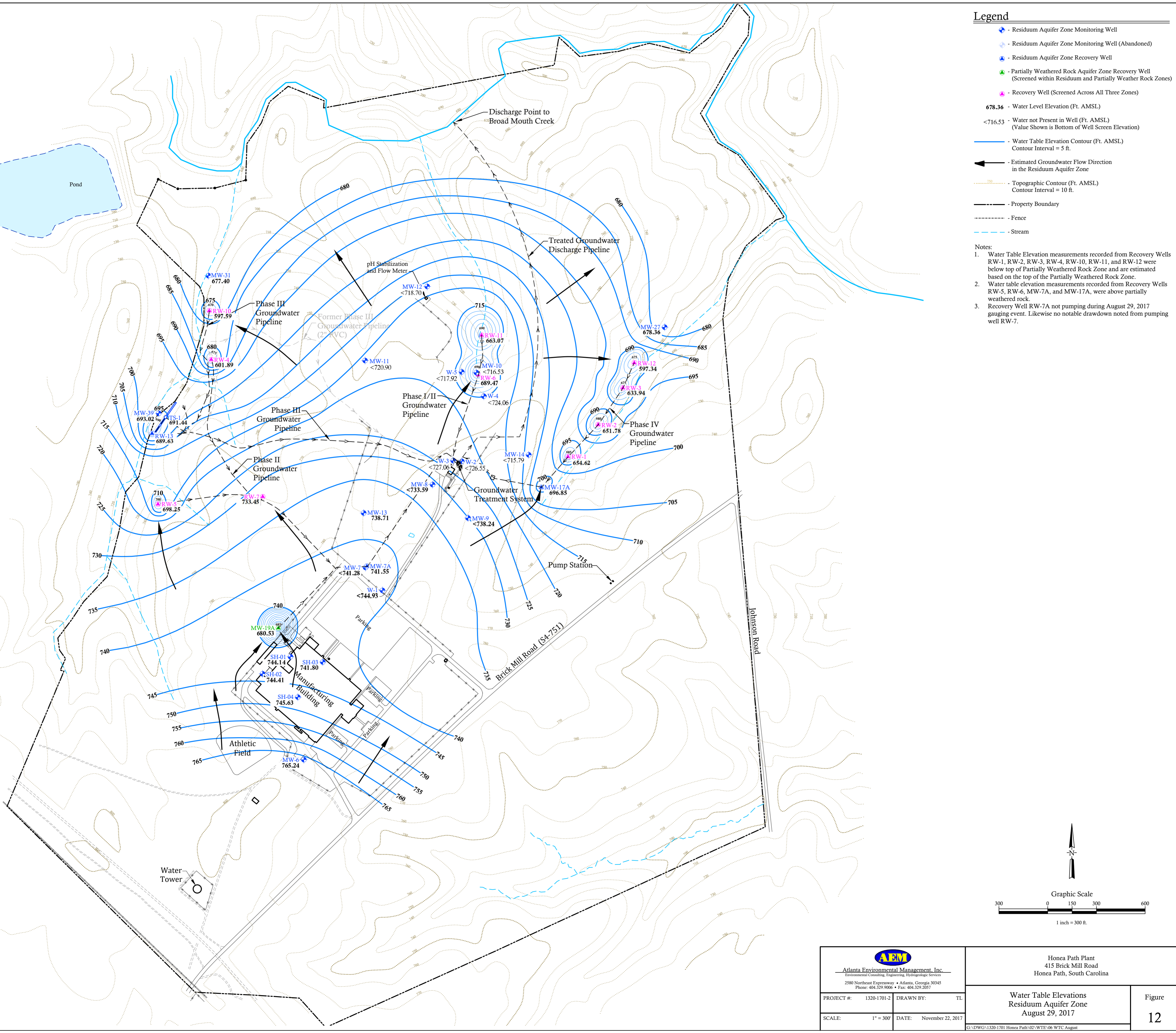
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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	December 1, 2017
Potentiometric Surface Elevations Bedrock Aquifer Zone June 5-6, 2017			Figure <b>11</b>



**Legend**

- Residuum Aquifer Zone Monitoring Well
- Residuum Aquifer Zone Monitoring Well (Abandoned)
- Residuum Aquifer Zone Recovery Well
- Partially Weathered Rock Aquifer Zone Recovery Well (Screened within Residuum and Partially Weathered Rock Zones)
- Recovery Well (Screened Across All Three Zones)
- 678.36** - Water Level Elevation (Ft. AMSL)
- <716.53** - Water not Present in Well (Ft. AMSL) (Value Shown is Bottom of Well Screen Elevation)
- Water Table Elevation Contour (Ft. AMSL) Contour Interval = 5 ft.
- Estimated Groundwater Flow Direction in the Residuum Aquifer Zone
- Topographic Contour (Ft. AMSL) Contour Interval = 10 ft.
- Property Boundary
- Fence
- Stream

- Notes:**
1. Water Table Elevation measurements recorded from Recovery Wells RW-1, RW-2, RW-3, RW-4, RW-10, RW-11, and RW-12 were below top of Partially Weathered Rock Zone and are estimated based on the top of the Partially Weathered Rock Zone.
  2. Water table elevation measurements recorded from Recovery Wells RW-5, RW-6, MW-7A, and MW-17A, were above partially weathered rock.
  3. Recovery Well RW-7A not pumping during August 29, 2017 gauging event. Likewise no notable drawdown noted from pumping well RW-7.



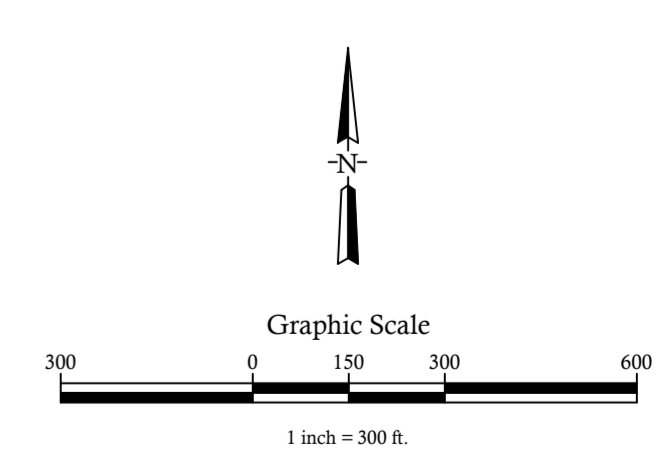
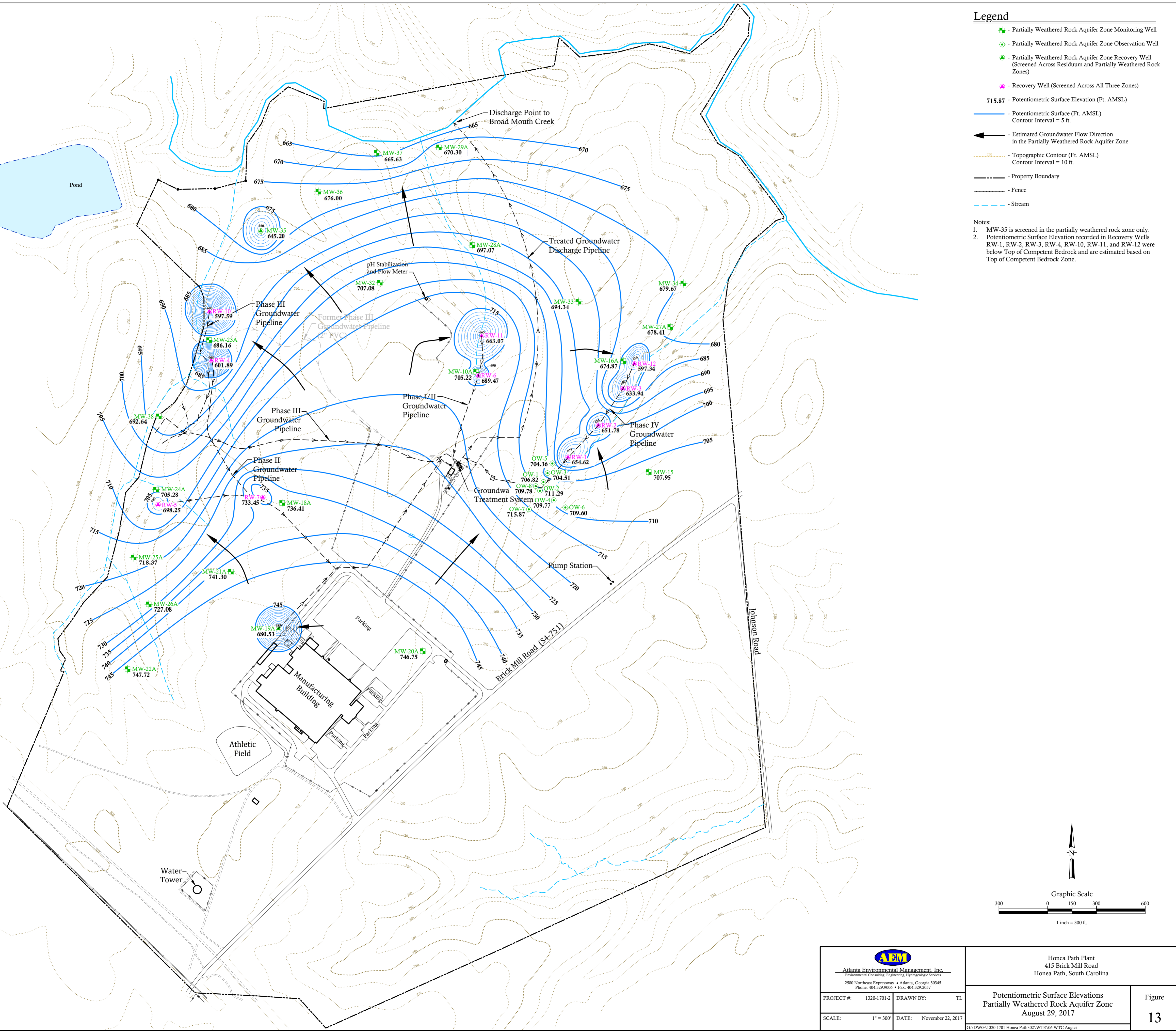
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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	November 22, 2017
<b>Water Table Elevations                  Residuum Aquifer Zone                  August 29, 2017</b>			Figure <b>12</b>
G:\DWG\1320-1701 Honea Path\02\WTE\06 WTC August			



**Legend**

- Partially Weathered Rock Aquifer Zone Monitoring Well
- Partially Weathered Rock Aquifer Zone Observation Well
- Partially Weathered Rock Aquifer Zone Recovery Well (Screened Across Residuum and Partially Weathered Rock Zones)
- Recovery Well (Screened Across All Three Zones)
- 715.87** - Potentiometric Surface Elevation (Ft. AMSL)
- Potentiometric Surface (Ft. AMSL) Contour Interval = 5 ft.
- Estimated Groundwater Flow Direction in the Partially Weathered Rock Aquifer Zone
- Topographic Contour (Ft. AMSL) Contour Interval = 10 ft.
- Property Boundary
- Fence
- Stream

- Notes:
- MW-35 is screened in the partially weathered rock zone only.
  - Potentiometric Surface Elevation recorded in Recovery Wells RW-1, RW-2, RW-3, RW-4, RW-10, RW-11, and RW-12 were below Top of Competent Bedrock and are estimated based on Top of Competent Bedrock Zone.











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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	November 22, 2017
<b>Potentiometric Surface Elevations          Partially Weathered Rock Aquifer Zone          August 29, 2017</b>			Figure <b>13</b>

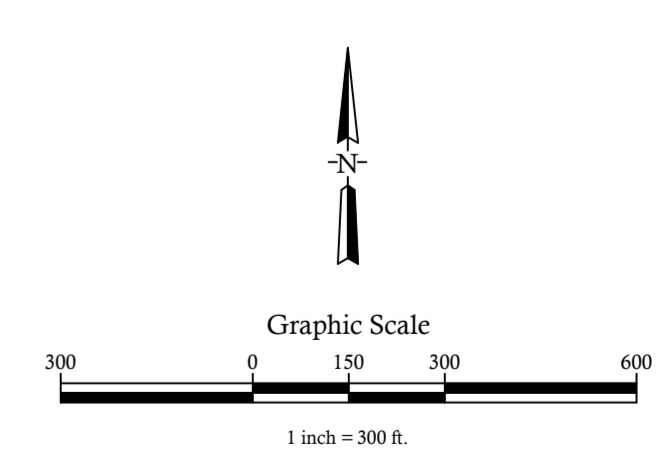
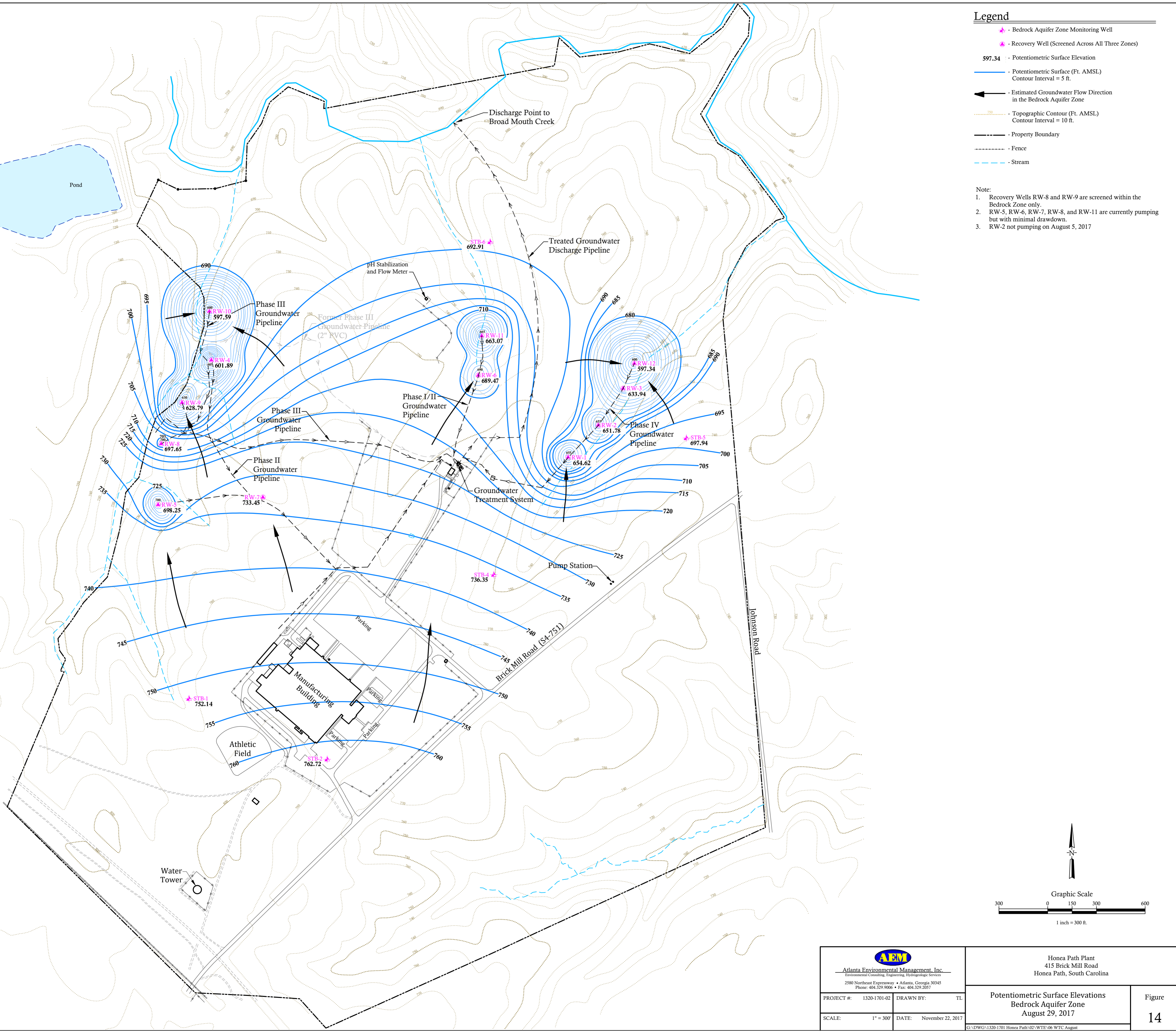
G:\DWG\1320-1701 Honea Path\02\WTE\06 WTC August




**Legend**

-  Bedrock Aquifer Zone Monitoring Well
-  Recovery Well (Screened Across All Three Zones)
- 597.34** Potentiometric Surface Elevation
-  Potentiometric Surface (Ft. AMSL)  
Contour Interval = 5 ft.
-  Estimated Groundwater Flow Direction  
in the Bedrock Aquifer Zone
-  Topographic Contour (Ft. AMSL)  
Contour Interval = 10 ft.
-  Property Boundary
-  Fence
-  Stream

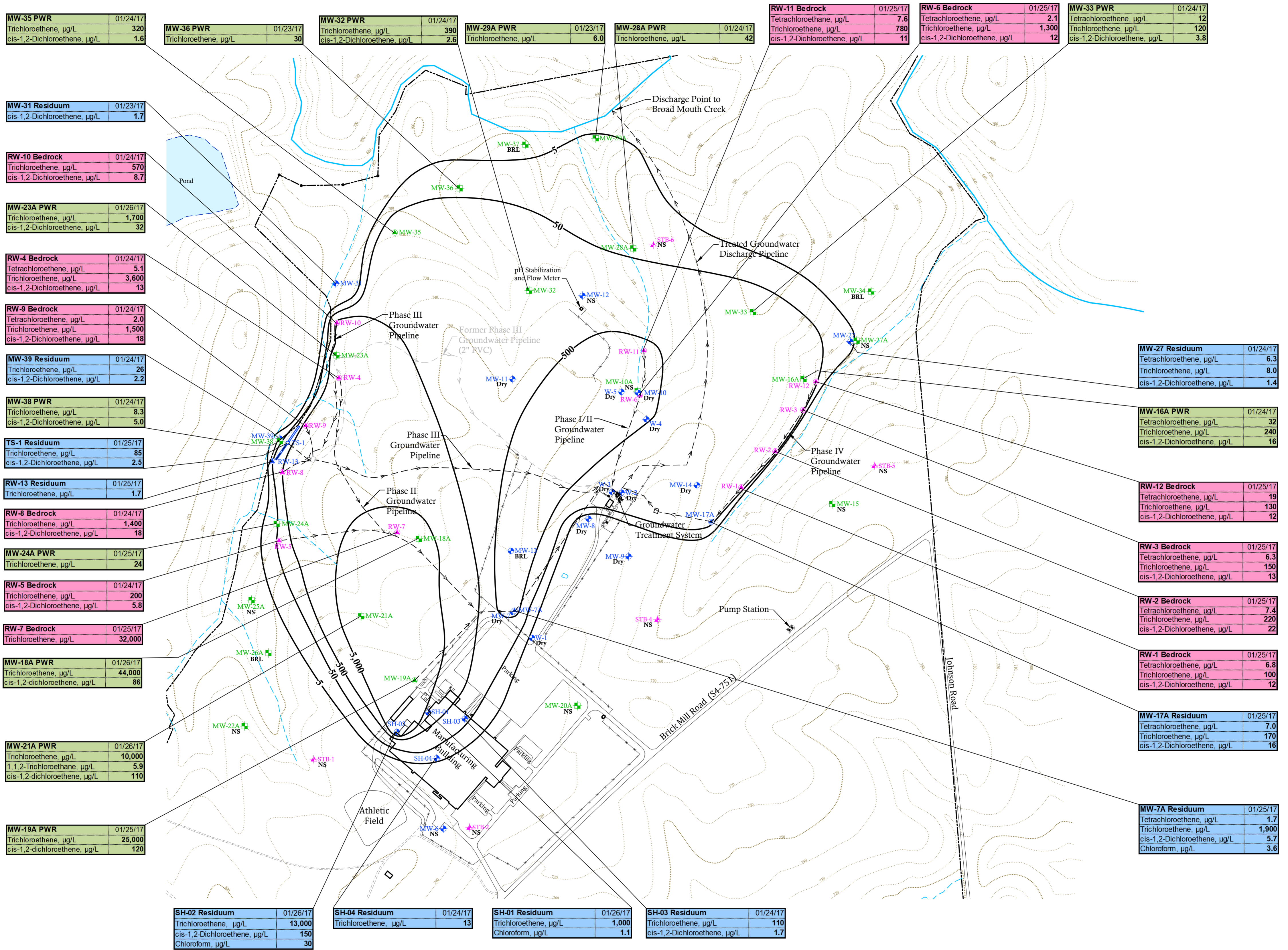
- Note:
1. Recovery Wells RW-8 and RW-9 are screened within the Bedrock Zone only.
  2. RW-5, RW-6, RW-7, RW-8, and RW-11 are currently pumping but with minimal drawdown.
  3. RW-2 not pumping on August 5, 2017



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PROJECT #:	1320-1701-02	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	November 22, 2017
Potentiometric Surface Elevations Bedrock Aquifer Zone August 29, 2017			Figure <b>14</b>

G:\DWG\1320-1701 Honea Path\02\WTE\06 WTC August

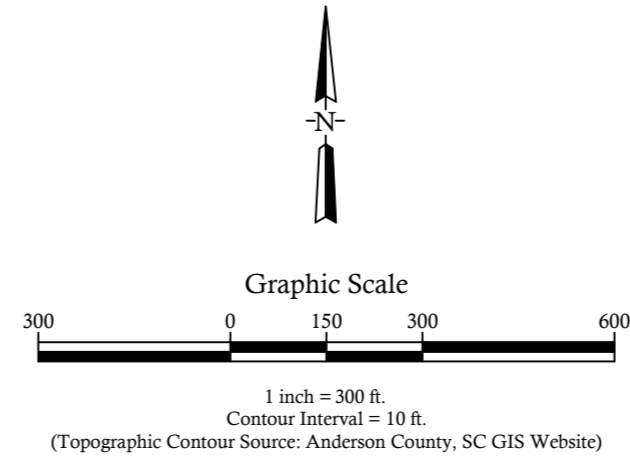




**Legend**

- Residuum Aquifer Zone Monitoring Well
- Partially Weathered Rock Aquifer Zone Monitoring Well
- Bedrock Aquifer Zone Monitoring Well
- Recovery Well
- Trichloroethene Isoconcentration Contour in µg/L
- Trench and Sump System
- Site Boundary
- Topographic Contour (50 ft.)
- Topographic Contour (10 ft.)
- Fenceline
- Stream

- BRL - Below Reporting Limit
  - NS - Not Sampled
  - Dry - Well Was Dry
  - µg/L - Micrograms per Liter
- Notes:**
- Data Table Color matches Well Symbol Aquifer Zone
    - Blue = Residuum Aquifer Zone
    - Green = Partially Weathered Rock Aquifer Zone
    - Pink = Bedrock Aquifer Zone
  - Constituents sampled for but below Reporting Limit are not shown
  - Contour Interval = 10 ft.
  - Depicted Trichloroethene (TCE) plume denotes extent of impacted groundwater within one or more water-bearing zones. TCE concentration within the dry residuum well may be lower than depicted.



**AEM**  
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PROJECT #: 1320-1701-2 DRAWN BY: TL  
SCALE: 1" = 300' DATE: December 1, 2017

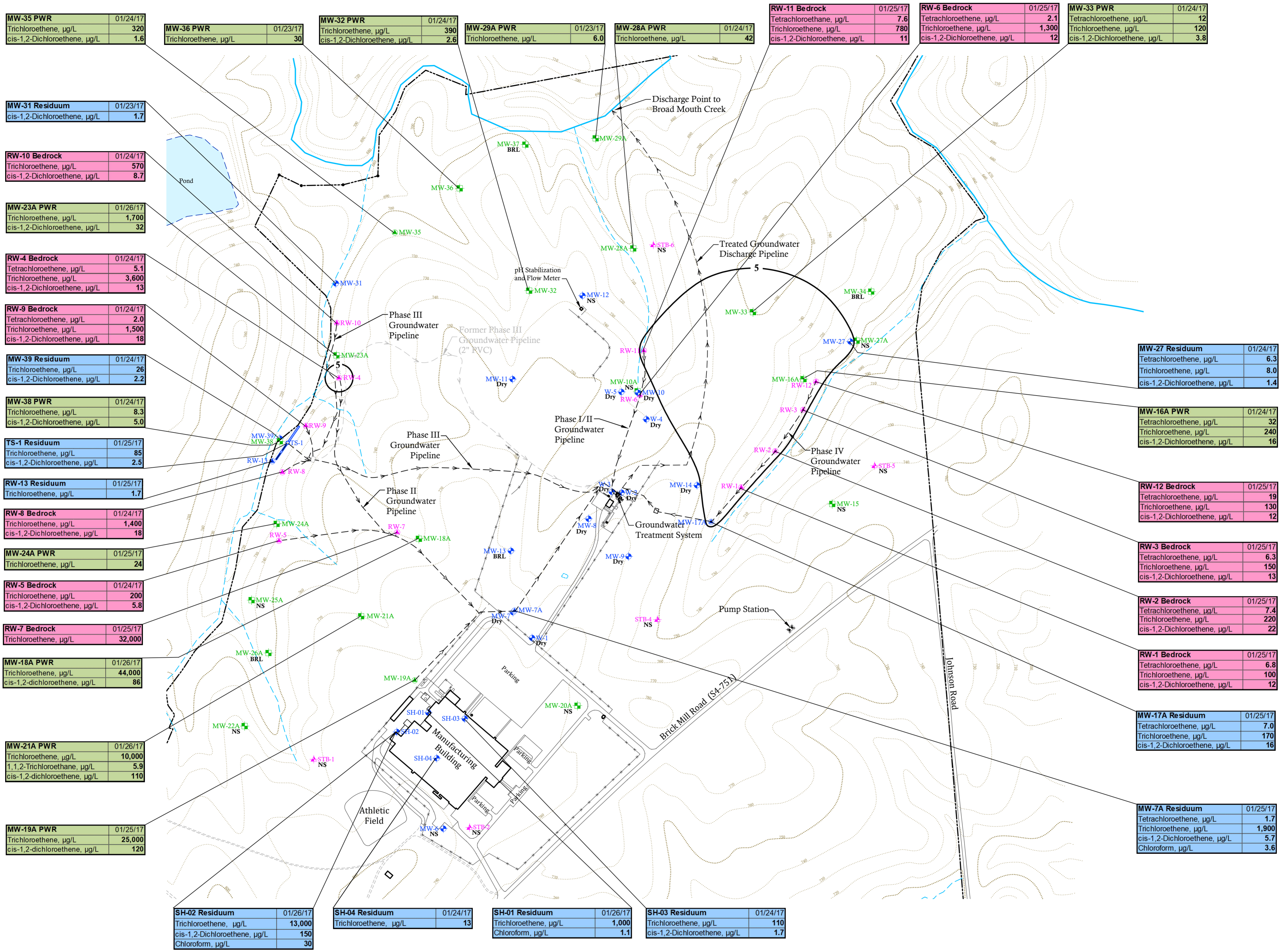
Honea Path Plant  
415 Brick Mill Road  
Honea Path, South Carolina

Approximate Extent of  
Trichloroethene in Groundwater  
January 2017

Figure  
15

G:\DWG\1320-1701 Honea Path\02\09 VOCs January





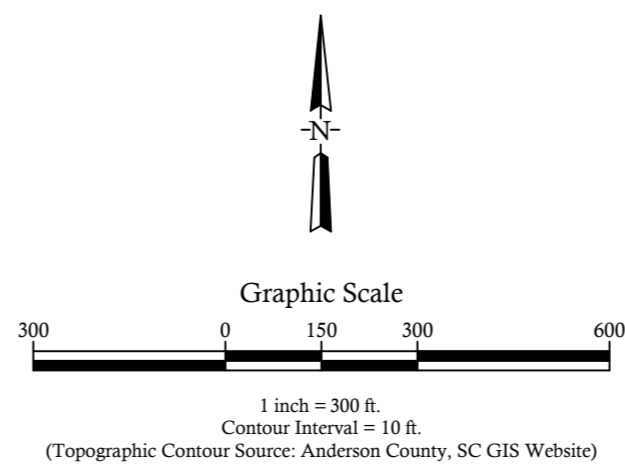
**Legend**

- Residuum Aquifer Zone Monitoring Well
- Partially Weathered Rock Aquifer Zone Monitoring Well
- Bedrock Aquifer Zone Monitoring Well
- Recovery Well
- 5 - Tetrachloroethene Isoconcentration Contour in µg/L
- Trench and Sump System
- Site Boundary
- Topographic Contour (50 ft.)
- Topographic Contour (10 ft.)
- Fenceline
- Stream

- BRL - Below Reporting Limit
- NS - Not Sampled
- Dry - Well Was Dry
- µg/L - Micrograms per Liter

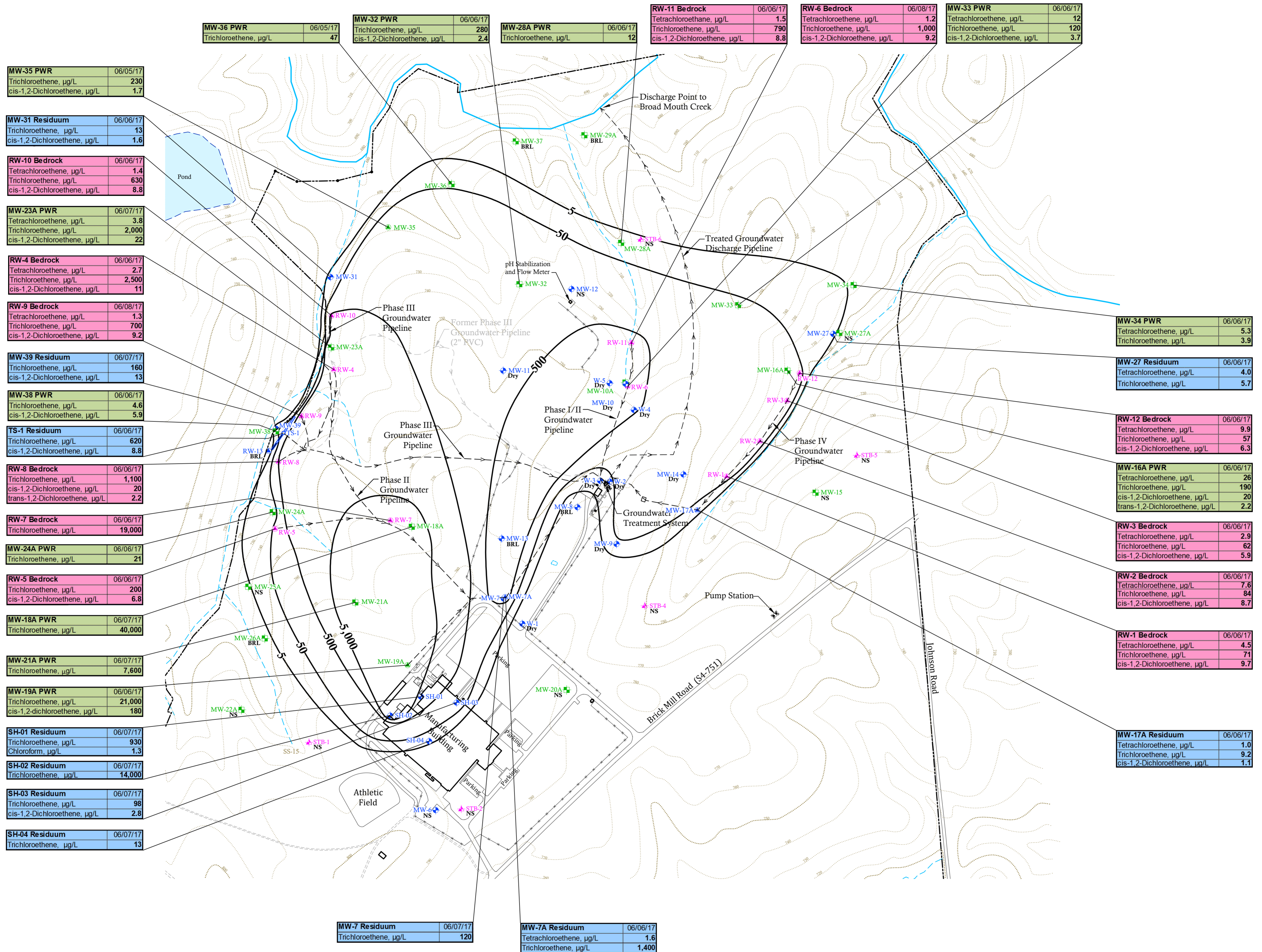
**Notes:**

1. Data Table Color matches Well Symbol Aquifer Zone  
Blue = Residuum Aquifer Zone  
Green = Partially Weathered Rock Aquifer Zone  
Pink = Bedrock Aquifer Zone
2. Constituents sampled for but below Reporting Limit are not shown
3. Depicted Trichloroethene (TCE) plume denotes extent of impacted groundwater within one or more water-bearing zones. TCE concentration within the dry residuum well may be lower than depicted.



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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	December 1, 2017
<b>Approximate Extent of Tetrachloroethene in Groundwater January 2017</b>			<b>Figure 16</b>
G:\DWG\1320-1701 Honea Path\02\09 VOCs January			





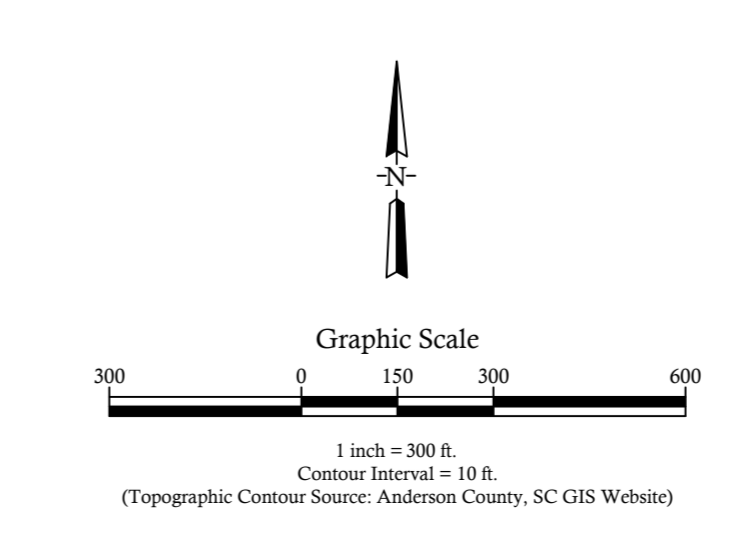
### Legend

- ◆ - Residuum Aquifer Zone Monitoring Well
- ◆ - Partially Weathered Rock Aquifer Zone Monitoring Well
- ◆ - Bedrock Aquifer Zone Monitoring Well
- ◆ - Recovery Well
- 50 - Trichloroethene Isoconcentration Contour in µg/L
- - Trench and Sump System
- - - - Site Boundary
- - Topographic Contour (50 ft.)
- - Topographic Contour (10 ft.)
- - - - Fenceline
- - Stream

### Notes:

- Data Table Color matches Well Symbol Aquifer Zone
  - Blue = Residuum Aquifer Zone
  - Green = Partially Weathered Rock Aquifer Zone
  - Pink = Bedrock Aquifer Zone
- Constituents sampled for but below Reporting Limit are not shown
- Depicted Trichloroethene (TCE) plume denotes extent of impacted groundwater within one or more water-bearing zones. TCE concentration within the dry residuum well may be lower than depicted.

<b>MW-7 Residuum</b>	06/07/17
Trichloroethene, µg/L	120
<b>MW-7A Residuum</b>	06/06/17
Tetrachloroethene, µg/L	1.6
Trichloroethene, µg/L	1,400
cis-1,2-Dichloroethene, µg/L	12



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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	December 1, 2017
Approximate Extent of Trichloroethene in Groundwater June 2017			Figure <b>17</b>
G:\DWG\1320-1701 Honea Path\02\10 VOCs June			





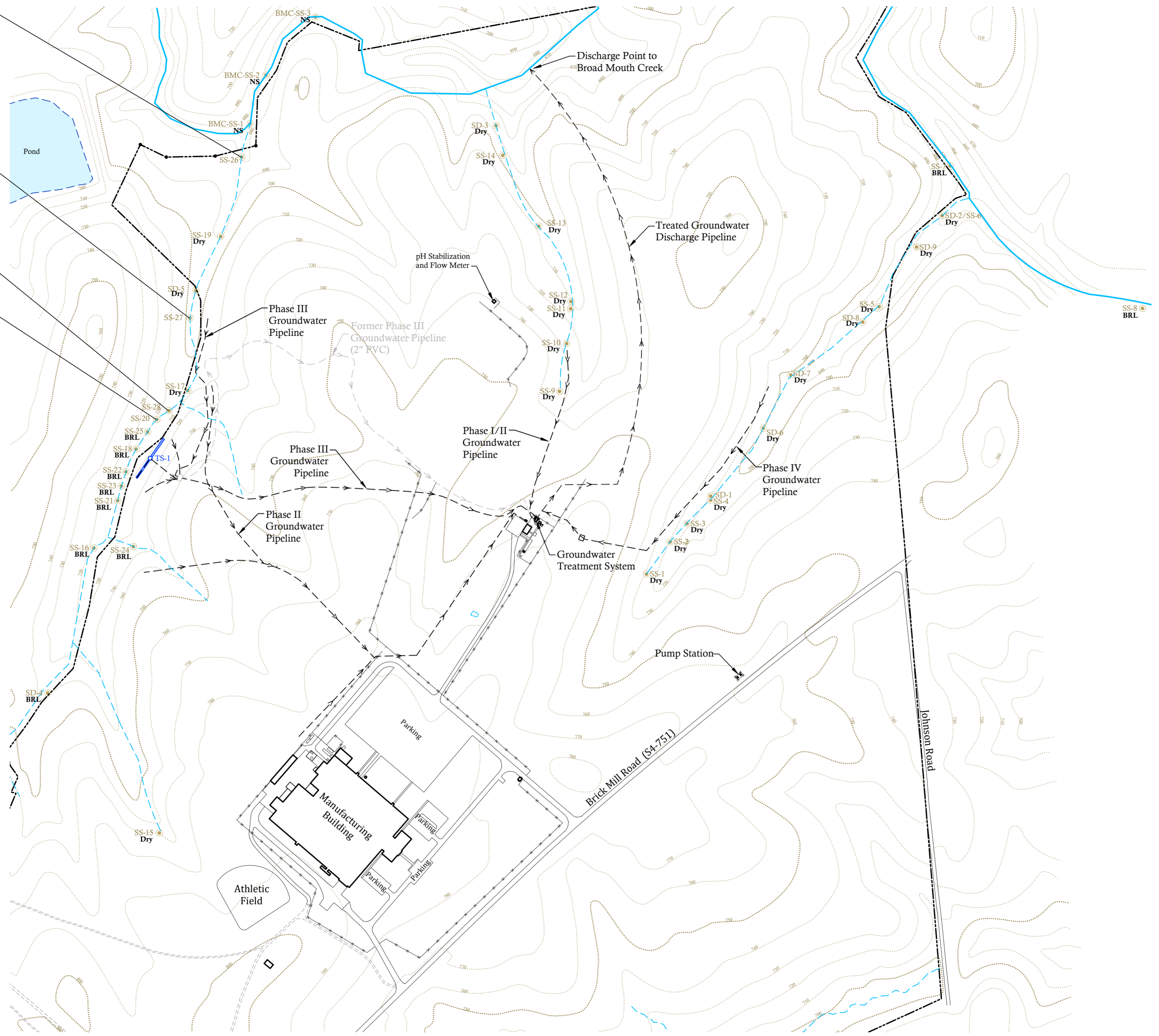


<b>SS-26 SW</b>	01/26/17
Trichloroethene, µg/L	6.2
cis-1,2-Dichloroethene, µg/L	3.7

<b>SS-27 SW</b>	01/26/17
Trichloroethene, µg/L	14

<b>SS-28 SW</b>	01/26/17
Trichloroethene, µg/L	17
cis-1,2-Dichloroethene, µg/L	2.7

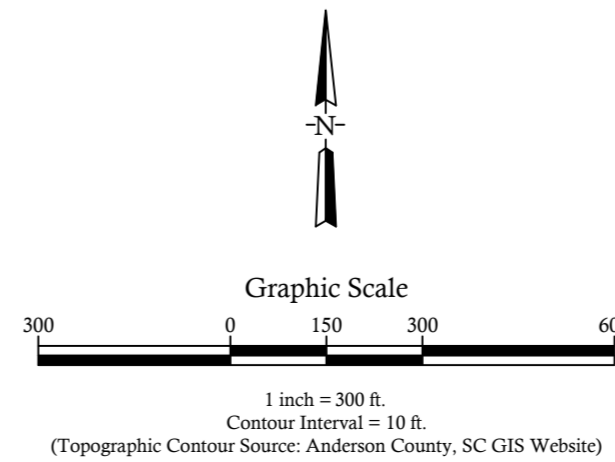
<b>SS-20 SW</b>	01/26/17
Trichloroethene, µg/L	16
cis-1,2-Dichloroethene, µg/L	2.9




**Legend**

- - Surface Water Sample
- - Trench and Sump System
- - Site Boundary
- - Topographic Contour (50 ft.)
- - Topographic Contour (10 ft.)
- - Fenceline
- - Stream
- BRL - Below Reporting Limit
- NS - Not Sampled
- Dry - Dry Stream Bed
- µg/L - Micrograms per Liter

**Notes:**  
1. Constituents sampled for but below Reporting Limit are not shown

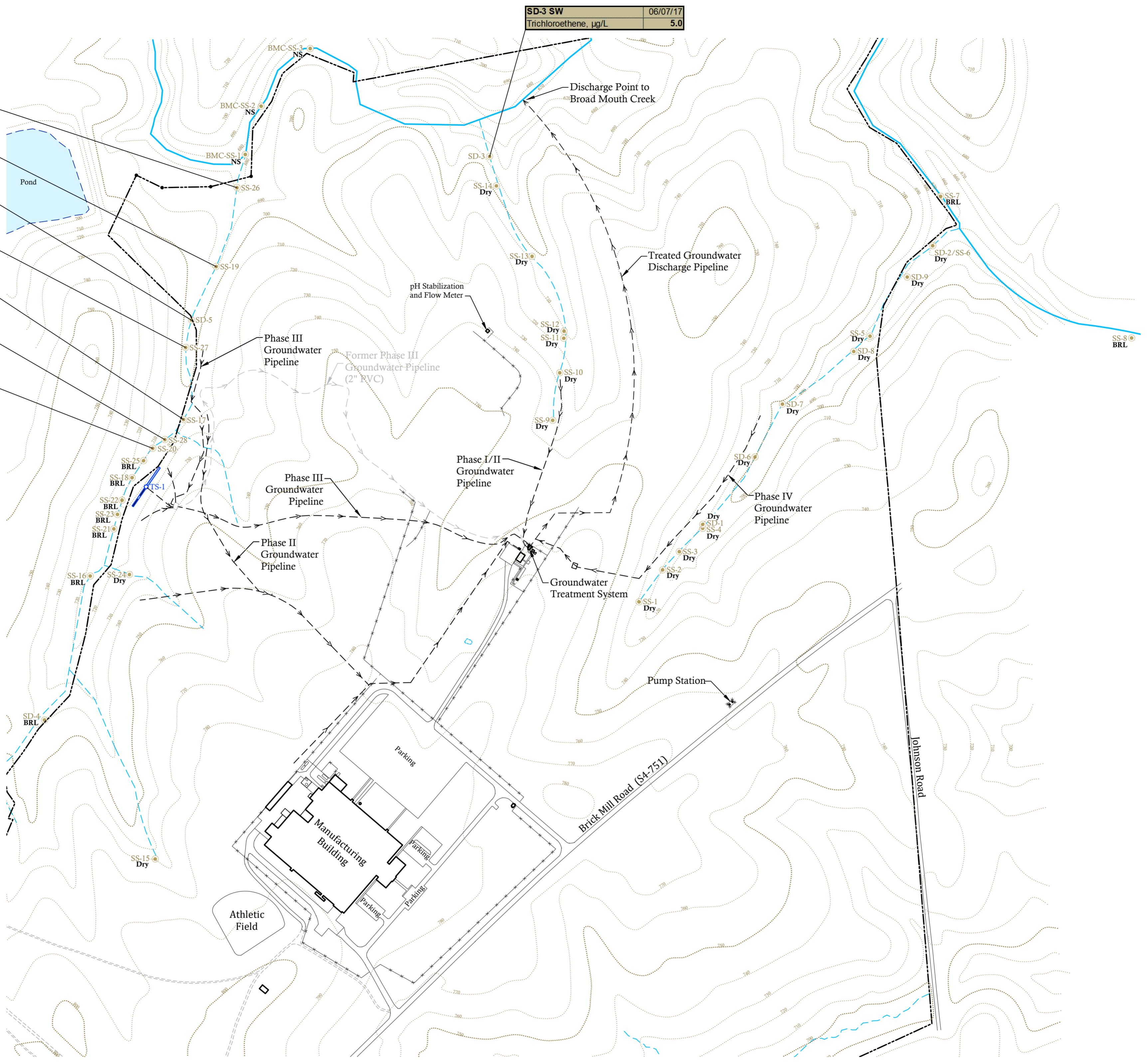


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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	December 1, 2017
<b>Surface Water Sample Results</b> January 2017			<b>Figure</b> 19



<b>SS-26 SW</b>	06/08/17
Trichloroethene, µg/L	6.7
cis-1,2-Dichloroethene, µg/L	4.4
<b>SS-19 SW</b>	06/08/17
Trichloroethene, µg/L	14
cis-1,2-Dichloroethene, µg/L	8.9
<b>SD-5 SW</b>	06/08/17
Trichloroethene, µg/L	31
cis-1,2-Dichloroethene, µg/L	15
<b>SS-27 SW</b>	06/08/17
Trichloroethene, µg/L	41
cis-1,2-Dichloroethene, µg/L	20
<b>SS-17 SW</b>	06/08/17
Trichloroethene, µg/L	8.1
cis-1,2-Dichloroethene, µg/L	6.7
<b>SS-28 SW</b>	06/08/17
Trichloroethene, µg/L	14
cis-1,2-Dichloroethene, µg/L	7.1
<b>SS-20 SW</b>	06/08/17
Trichloroethene, µg/L	8.0
cis-1,2-Dichloroethene, µg/L	4.0

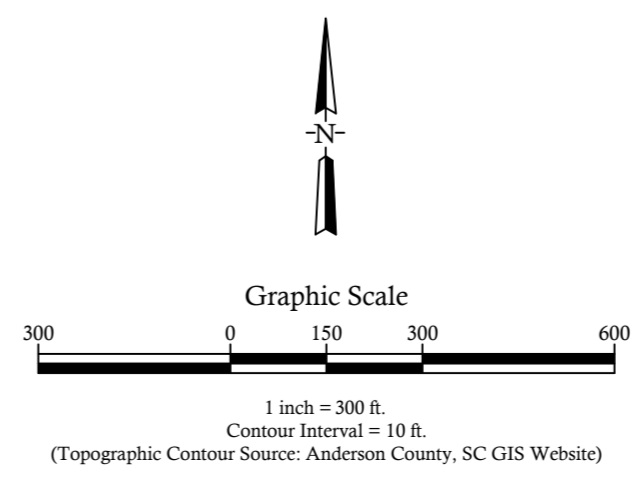
<b>SD-3 SW</b>	06/07/17
Trichloroethene, µg/L	5.0



**Legend**

- - Surface Water Sample
- - Trench and Sump System
- - Site Boundary
- ..... - Topographic Contour (50 ft.)
- ..... - Topographic Contour (10 ft.)
- - Fenceline
- - Stream
- BRL - Below Reporting Limit
- NS - Not Sampled
- Dry - Dry Stream Bed
- µg/L - Micrograms per Liter

Notes:  
1. Constituents sampled for but below Reporting Limit are not shown



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PROJECT #:	1320-1701-2	DRAWN BY:	TL
SCALE:	1" = 300'	DATE:	December 1, 2017
<b>Surface Water Sample Results</b> June 2017			Figure <b>20</b>

G:\DWG\1320-1701 Honea Path\02\10 VOCs June