Voluntary Remediation Program
Semiannual Progress Report

Prepared for

Former MacGregor Golf Company Site
HSI Site No. 10398
Albany, Georgia

July 30, 2014

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Submitted to the Georgia Environmental Protection Division

on behalf of
Brunswick Corporation
Albany Sport Co.
Albany Partners, LLC

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Section 1

Introduction

This Semiannual Progress Report for the Former MacGregor Golf Company Site (Site) was prepared by Brown and Caldwell (BC) on behalf of Brunswick Corporation, Albany Sport, Co., and Albany Partners, LLC (the Group) for submittal to the Response and Remediation Program of the Land Protection Branch of the Georgia Environmental Protection Division (EPD). The Site is located at 1601 South Slappey Drive in Albany, Dougherty County, Georgia (Figure 1). The Site is a participant in EPD's Voluntary Remediation Program (VRP) and is listed on EPD's Hazardous Site Inventory (HSI) as Site No. 10398. This report describes the work performed related to the Site from the last Semiannual Progress Report dated January 30, 2014 through July 30, 2014.

1.1 Background

The Site was accepted into the VRP on July 30, 2012. The Site history, description, regulatory history, and previous environmental work are described in detail in the Compliance Status Report (CSR [BC 2006]), Revised CSR and Corrective Action Plan (CAP [BC 2008]), and Revised CSR and CAP Addendum (BC 2009) submitted in compliance with the former Hazardous Site Response Act (HSRA) Program (now part of EPD's Response and Remediation Program). Additionally, soil and groundwater data were also submitted to the EPD in the April 2011 VRP Application, February 2012 Revised VRP Application, and Semiannual Progress Reports since January 2013. In summary, since 2002, the Group has conducted zero valent iron pilot testing in the source area, soil and groundwater delineation, and groundwater monitoring.

1.2 Report Organization

This report presents the work conducted from January 30, 2014 to July 30, 2014, and includes the results of groundwater level measurements, temporary well installation, and groundwater sampling.

This report is organized into eight sections. The present section references the project background and provides an outline of the report. The work performed during this period is described in Section 2.0, and Section 3.0 presents the results of the work conducted this period. Section 4.0 presents the updated Conceptual Site Model (CSM). Future work presently anticipated to complete the VRP objectives is presented in Section 5.0. The project Professional Engineer's services this period are summarized in Section 6.0. Limitations associated with the use of this report are noted in Section 7.0 and references cited are provided in Section 8.0.

Section 2

Work Performed this Period

Work at the Site since the submittal of the last Semiannual Progress Report dated January 30, 2014 involved groundwater assessment and consisted of the following tasks:

- Acquisition of a Utility Encroachment Permit from the City of Albany for drilling in a road right-of-way
- Groundwater level measurements
- Installation and sampling of temporary monitoring wells in the vicinity of monitoring wells MW-11, MW-19, and MW-24.

The work conducted this period was designed to delineate chromium to the south of monitoring well MW-19, to the west northwest of monitoring well MW-24, and to characterize the extent of chromium in groundwater around monitoring wells MW-11, MW-19, and MW-24 in support of remedial design. These activities are discussed in the following sections and a Site plan showing the existing monitoring well locations is provided as Figure 2. The field work was completed in March and June 2014.

2.1 Permitting

An application for a Utility Encroachment Permit was made to the City of Albany requesting authorization to install temporary monitoring wells in the right-of-way along the north and south sides of Industry Avenue in order to delineate groundwater concentrations south of monitoring well MW-19. The permit was approved by the City on March 12, 2014.

2.2 Groundwater Level Measurements

Groundwater levels were measured in the monitoring wells at the Site and in off-site Spartan wells MW-1 and MW-2 on March 26 and June 4, 2014. The depth to groundwater was measured in 14 upper water bearing zone wells (MW-1 through MW-4, MW-10 through MW-14, MW-18, MW-19, MW-22, MW-23 and MW-25) and 11 lower water bearing zone wells (MW-5 through MW-7, MW-9, MW-15 through MW-17, MW-24, MW-26, Spartan MW-1 and Spartan MW-2) at the Site. Groundwater levels were also measured in four upper water bearing temporary wells (TW-2, TW-9, TW-10 and TW-15) and three lower water bearing temporary wells (TW-11, TW-23 and TW-24) installed in March 2014, and four upper water bearing temporary wells (TW-31, TW-35, TW-41 and TW-42) installed in June 2014. All measurements were completed using a Heron 100-foot water level meter. The temporary wells were allowed to equilibrate for at least 24 hours following purging and other monitoring activities prior to gauging. The measured depths to water were recorded as shown on Table 1. The downhole portion of the water level meter was decontaminated with Alconox® and rinsed with distilled water between wells.

The measured depths to water and the surveyed elevations of the existing and temporary monitoring wells were used to calculate the groundwater elevations and prepare potentiometric surface maps for the upper and lower water bearing zones.

2.3 Temporary Monitoring Well Installation

Twenty-eight temporary wells (TW-1 through TW-15, TW-17, TW-18, TW-20 and TW-22 through TW-30) were installed in March 2014, and 13 temporary wells (TW-16 and TW-31 through TW-42) were installed in June 2014. The temporary well construction details are shown in Table 2.

The temporary wells installed in March 2014 were installed in two phases. First at locations close to the existing wells MW-11, MW-19 and MW-24, and then outward as necessary based on the groundwater sample results from the first locations. During the June 2014 event, the same approach was used, with the location of the initial temporary borings being outward from the March temporary wells that exceeded the chromium delineation standard, and then proceeding outward as necessary. Temporary wells were not installed in the area of monitoring well MW-24 during the June event as sufficient delineation was achieved in the March mobilization. The use of this tiered approach was designed to strategically assess the extent of chromium impact in groundwater around the existing permanent monitoring wells.

MW-11. In an effort to further characterize the extent of chromium in groundwater around monitoring well MW-11 for remedial design, seven temporary wells (TW-6 through TW-10, TW-22 and TW-28) were installed in March and five temporary wells (TW-31 through TW-35) were installed in June by solid stem auger (SSA) methods, with the exception that TW-6 was initially attempted by GeoProbe® direct push technology (DPT) and when refusal was encountered prior to reaching the total depth, the remainder of the boring was installed by SSA methods. The temporary wells were installed to a depth of approximately 45 feet below ground surface (bgs) and completed with 1-inch Schedule 40 polyvinyl chloride (PVC) riser and ten feet of ultra-fine pre-packed 0.01-slot PVC screen.

MW-19. In an effort to delineate chromium in groundwater around monitoring well MW-19, 13 temporary wells (TW-1 through TW-5, TW-15, TW-17, TW-18, TW-20, TW-25 through TW-27 and TW-30) were installed in March and eight temporary wells (TW-16, TW-36 through TW-42) were installed in June by DPT, SSA and/or hollow stem auger (HSA) methods to depths between 35 feet and 45 feet bgs. The temporary wells were completed in a similar manner to those around MW-11. Sampling locations in the southern right-of-way of Industry Avenue were also planned; however, they could not be installed due to the presence of overhead and underground utilities already present in the right-of way.

MW-24. To further characterize the extent of chromium in groundwater around monitoring well MW-24 for remedial design, seven temporary wells (TW-11 through TW-14, TW-23, TW-24 and TW-29) were installed in March by DPT and/or SSA methods to a depth of approximately 60 feet bgs. The temporary wells were completed in a similar method to those around MW-11.

Associated Activities. To characterize the soil at the Site to support future remedial design, continuous 5-foot cores were collected from two borings, TW-1 and TW-11. Soil type, moisture content, and odor were observed and recorded for these borings. The boring logs for these two wells and the well construction diagrams for all temporary wells are included as Appendix A.

One equipment blank was collected during from the decontaminated GeoProbe® sampling rods during each drilling event in March and June 2014, and these were analyzed for the same constituents as the groundwater samples.

The horizontal locations of the temporary wells were measured using a Trimble GPS unit with sub-foot accuracy. In addition, six temporary wells (two wells from each area of MW-11, MW-19 and MW-24) were surveyed using laser level surveying equipment to establish vertical elevations, such that groundwater elevations could be calculated and used for potentiometric maps.

2.4 Groundwater Sampling

Groundwater samples from the temporary wells were collected and analyzed as described below.

2.4.1 Sample Collection

Following installation of the temporary wells, the wells were developed using a peristaltic pump until the turbidity of the purged groundwater had been reduced and the water was visually free of suspended sediment. Following development, the temporary wells were purged using low flow/low volume (micro

purging) techniques (i.e., bladder pump with disposable polyethylene tubing). During purging, groundwater parameters (turbidity, dissolved oxygen [DO], pH, conductivity, oxidation-reduction potential [ORP] and temperature) were continuously monitored and recorded on the Field Data Sheets included in Appendix B. A summary of the field measurements is provided in Table 3. Water level measurements were also recorded during purging to limit drawdown and effort was made to ensure that the rate of groundwater withdrawal did not exceed the rate of recharge in the wells.

The groundwater samples were collected once stabilization occurred, which was indicated by no increasing or decreasing trends in groundwater parameters for three successive readings and a turbidity of less than 10 Nephelometric turbidity units (NTUs). Turbidity of less than 10 NTU was achieved prior to collection of all the groundwater samples with the exception of the samples collected from temporary wells TW-7 and TW-35, where measured turbidities were 29.1 NTU and 33.10 NTU, respectively. Since at least five well volumes of groundwater had been removed and the remaining water quality parameters had stabilized, groundwater samples were collected even though turbidity was measured greater than 10 NTU in these temporary wells. In addition, samples were collected from these temporary wells for dissolved chromium analysis if needed. The samples were collected directly from the pump discharge into the laboratory-prepared sample bottles, sealed, placed on ice, and delivered to a certified laboratory for analysis. The groundwater samples were also field-analyzed for hexavalent chromium using HACH test kits and the results were recorded on the groundwater sampling forms included in Appendix B. The HACH test results were used as a screening tool to facilitate planning for subsequent well placement prior to receiving the laboratory results and making final decisions.

Quality assurance/quality control (QA/QC) samples were also collected as follows:

- Duplicate samples were collected from TW-2 and TW-11 during the March 2014 sampling event and from TW-33 and TW-41 during the June 2014 sampling event.
- Two equipment blanks were collected during the March 2014 sampling event and one equipment blank was collected during the June 2014 sampling event.

2.4.2 Sample Analysis

After collection, the samples were immediately placed on ice and delivered to Analytical Environmental Services, Inc. (AES) in Atlanta, Georgia for analysis. Copies of the completed chain-of-custody forms are included in Appendix C with the laboratory reports. The groundwater samples collected from the temporary wells in March and June 2014 and associated duplicate and equipment blank samples were analyzed for total chromium using United States Environmental Protection Agency (USEPA) Method 6010B, and total hexavalent chromium using USEPA Method SW 7196.

The stipulation letter documenting AES's certification to perform these analyses is provided in Appendix D.

2.5 Temporary Well Abandonment

The temporary wells were abandoned following groundwater sample collection. The well casing and screen were removed, and the boreholes were filled with a grout/bentonite mixture.

Section 3

Results of Work this Period

This section presents the results of the work completed this period outlined in Section 2. Results of the groundwater level measurements and groundwater sampling are discussed below.

3.1 Groundwater Elevation Data

The well construction data, top of casing elevations and groundwater level measurements for the permanent monitoring wells and the temporary wells that were surveyed are presented in Table 1. The measured depths to water and the surveyed elevations of the monitoring wells were used to calculate the groundwater elevations in the upper and lower water bearing zones. Potentiometric maps of the groundwater surface in the upper and lower water bearing zones in March and June 2014 are presented on Figures 3 through 6.

The groundwater elevations measured in this reporting period were lower than those measured earlier in 2014 and over the past two years. On average, the difference in groundwater elevations between the January and June 2014 gauging events was between 4 feet and 7 feet. The mounding of the upper water bearing zone in the area of wells MW-4, MW-22, MW-23 and MW-25 that was observed from January 2012 to July 2013 was not present in the March and June 2014 gauging events.

The groundwater flow in the upper water bearing zone appears to be predominantly to the south; however, given the flat groundwater gradient at this Site, small water level fluctuations between gauging events result in the appearance of very localized changes in groundwater flow direction. The flat groundwater gradient is easily influenced by rainfall as large portions of the Site are impervious, resulting in uneven recharge of the upper water bearing zone during rain events. In the March 2014 sampling event, the groundwater gradient is primarily to the south-southeast in the western portion of the Site, with some northwesterly flow in the eastern portion of the Site in the area of wells MW-1, MW-2, MW-12 and MW-13 (Figure 3). In the June 2014 event, the groundwater in the upper water bearing zone appears to flow more to the southwest, except in the area of monitoring wells MW-1, MW-2, MW-3, MW-12 and MW-13 where groundwater flows radially from MW-1 (Figure 4).

The groundwater in the lower water bearing zone appears to flow predominantly toward the northeast. As with the upper water bearing zone, the groundwater gradient is fairly flat and subject to fluctuations in response to localized events (e.g., rainfall). In the March 2014 event, water level elevations indicate east to northeasterly groundwater flow across the Site except at the northern boundary (around MW-24, Spartan MW-1 and Spartan MW-2) where a very localized flow to the southeast is indicated (Figure 5). In June 2014, the groundwater gradient flows outward from the area of wells MW-5, MW-6, Spartan MW-1 and Spartan MW-2 to the northeast and southwest (Figure 6).

Outside of localized water level fluctuations, the groundwater gradients observed in this reporting period were similar to those observed in previous reporting period and the predominant groundwater flow directions appear consistent.

3.2 Groundwater Sampling Results

Groundwater samples were collected from temporary wells TW-1 through TW-15 and TW-17, TW-18, TW-20 and TW-22 through TW-30 in March 2014 and from temporary wells TW-16 and TW-31 through TW-42 in June 2014. The results of groundwater parameters measured in the field are summarized in Table 3, and

chemicals detected in laboratory analyses for these sampling events are summarized in Table 4. Chemical detections from historical groundwater sampling events are presented in Table 5. The tables show the sample collection dates, reported concentrations, laboratory reporting limits where a specific constituent was not detected, and the applicable site-specific delineation and cleanup standards. Figures 7, 8 and 9 present the groundwater chromium concentrations for the temporary wells installed around MW-11, MW-19 and MW-24, respectively. The groundwater sampling field forms and the laboratory analytical reports are included as Appendices B and C, respectively. The results of the laboratory analyses are discussed below.

3.2.1 Area Around Monitoring Well MW-11

Groundwater samples collected from temporary wells TW-6 through TW-10, TW-22 and TW-28 in March 2014 contained total chromium concentrations ranging from less than the laboratory reporting limit of 0.01 milligrams per liter (mg/L, TW-7) to 0.039 mg/L (TW-28). Trivalent chromium was detected in four (TW-6, TW-9, TW-10 and TW-28) of the seven temporary wells at concentrations ranging from 0.011 mg/L (TW-10) to 0.019 mg/L (TW-6). Hexavalent chromium was detected in three (TW-8, TW-22 and TW-28) of the seven temporary wells at concentrations of 0.013 mg/L, 0.017 mg/L and 0.024 mg/L, respectively. The total chromium delineation standard (0.10 mg/L) and trivalent chromium delineation standard (0.01 mg/L) were met in all the temporary wells sampled during the March event. The groundwater samples collected from all the temporary wells sampled during the March event also met the hexavalent chromium delineation standard (0.01 mg/L) except for the samples collected from temporary wells TW-8, TW-22 and TW-28 located southeast of monitoring well MW-11.

Based on the March 2014 groundwater results, five additional temporary wells (TW-31 through TW-35) were installed further southeast of MW-11 in June 2014 in an effort to delineate the hexavalent chromium concentrations detected above the standards in the samples from temporary wells TW-8, TW-22 and TW-28. The groundwater samples collected in June 2014 from these new temporary wells contained total chromium concentrations ranging from less than the laboratory detection limit (TW-32 through TW-35) to 0.024 mg/L (TW-31). Trivalent and hexavalent chromium were detected in one (TW-31) of the five temporary wells at concentrations of 0.011 mg/L and 0.013 mg/L, respectively. The total chromium delineation and cleanup standards as well as the trivalent chromium cleanup standard were met in all temporary wells sampled. The delineation and cleanup standard for hexavalent chromium, and the delineation standard for trivalent chromium were met in samples from all temporary wells except that from temporary well TW-31.

3.2.2 Area Around Monitoring Well MW-19

In March 2014, groundwater samples collected from temporary wells TW-1 through TW-5, TW-15, TW-17, TW-18, TW-20, TW-25 through TW-27 and TW-30 contained total chromium concentrations ranging from less than the laboratory reporting limit of 0.01 mg/L (TW-15) to 0.199 mg/L (TW-20). Trivalent chromium was detected in nine of the 13 temporary wells at concentrations ranging from 0.011 mg/L (TW-25) to 0.022 mg/L (TW-27). Hexavalent chromium was detected in 12 of the 13 temporary wells at concentrations ranging from 0.020 mg/L (TW-2) to 0.185 mg/L (TW-20). Total chromium concentrations were above the cleanup standard in samples from temporary wells TW-1, TW-4, TW-17, TW-18 and TW-20. Trivalent chromium was not detected above the cleanup standard in any of the temporary wells sampled. Hexavalent chromium was detected above the cleanup standard in all the temporary wells sampled except TW-15.

Based on the March 2014 groundwater results, eight additional temporary wells (TW-16 and TW-36 through TW-42) were installed further beyond monitoring well MW-19 in June 2014 in an effort to delineate the total and/or hexavalent chromium detected above the cleanup standards in the initial round of temporary well installation. The June 2014 groundwater results indicated concentrations of total chromium in the temporary wells ranging from less than the reporting limit (TW-38, TW-40 and TW-42) to 0.049 mg/L (TW-41); all detections were less than both the cleanup and delineation levels for total chromium. Trivalent chromium was detected in three (TW-16, TW-36 and TW-41) of the eight temporary wells at concentrations

of 0.018 mg/L, 0.012 mg/L and 0.012 mg/L, respectively; these concentrations are below the cleanup standard but exceed the delineation standard. Hexavalent chromium was detected in three (TW-36, TW-39 and TW-41) of the eight temporary wells at concentrations of 0.028 mg/L, 0.034 mg/L and 0.037 mg/L, respectively, which exceed both the delineation and cleanup standards .

3.2.3 Area Around Monitoring Well MW-24

Groundwater samples collected from temporary wells TW-11 through TW-14, TW-23, TW-24 and TW-29 in March 2014 contained total chromium concentrations ranging from less than the laboratory reporting limit (TW-23 and TW-29) to 1.74 mg/L (TW-11). Trivalent chromium was detected in two of the seven temporary wells at concentrations of 0.011 mg/L (TW-12) and 0.250 mg/L (TW-11). Hexavalent chromium was detected in four (TW-11, TW-13, TW-14 and TW-24) of the seven temporary wells at concentrations ranging from 0.013 mg/L (TW-24) to 1.49 mg/L (TW-11). The total and trivalent chromium cleanup standards were met in all the temporary wells sampled except TW-11 (total chromium only). Hexavalent chromium was detected above the cleanup standard in the groundwater samples collected from temporary wells TW-11, TW-13, TW-14 and TW-24.

3.2.4 Quality Assurance/Quality Control Samples

No chemicals were detected in the equipment blank samples and the results from analysis of the duplicate samples were similar to those from the original samples. Thus, the QA/QC samples did not indicate impact to the Site results from field or laboratory methods.

3.2.5 Summary

Based on analysis of samples collected in the temporary wells and previous groundwater sampling results, delineation has been achieved for chromium in groundwater to the north, east and west. However, delineation has not yet been achieved at the south end of the Site beyond temporary wells TW-2, TW-16, and TW-41.

Section 4

Updated Conceptual Site Model

This section presents the updated CSM developed for the Site in order to facilitate development of the Site remedial action objectives. Also discussed in this section is the fate and transport model that may be used to help demonstrate compliance with the Site cleanup standards under the VRP.

4.1 Elements of the Conceptual Site Model

A three-dimensional CSM was originally developed for the Site's VRP Application to illustrate the approximate extent of volatile organic compounds (VOCs) and inorganics in the subsurface, and the potential exposure pathways and receptors at the Site. The CSM has been updated to reflect current conditions at the Site. Figures 10 and 11 illustrate plan view and profile diagrams of the CSM, respectively.

4.1.1 Ground Surface Features

The Site topography is relatively flat with elevations ranging from 191 to 204 feet above mean sea level (amsl). Stormwater run-off flows primarily towards the intermittent drainage ditch that runs in a westerly direction from north of the former disposal area along the tree line, to the western property boundary. The ditch ends in an on-site intermittent detention basin. The intermittent drainage ditch and detention basin are normally dry, except following significant rain events. Both features also receive stormwater run-off from off-site sources, including a railroad right-of-way to the west.

Soil samples collected from the intermittent ditch and detention basin in 1998, 1999, 2000, 2008, and 2009 indicated elevated concentrations of nickel and chromium. Based on the flow direction of stormwater at the Site, the metals appear to have migrated from the former waste disposal area to the drainage ditch.

4.1.2 Subsurface Features

4.1.2.1 Vadose Zone and Upper Water Bearing Zone

The upper water bearing zone consists predominantly of silty sands, sandy silts, clays and chert of the weathered limestone residuum as illustrated on Figure 11. The thickness of the unconsolidated sediments at the Site is approximately 40 to 50 feet with the thin layers of chert occurring at depths of 18 to 45 feet bgs. Beneath the chert, sediments increase in clay content with clay layers ranging from 1 to 6 feet thick. The lower boundary to this zone is the chalky limestone that occurs in the uppermost Ocala Limestone at 50 to 55 feet bgs. In the most recent gauging event (June 2014), groundwater was encountered in the upper water bearing zone between about 27 and 32 feet bgs.

According to previous reports, waste was poured or spread onto the ground surface in the former waste disposal area. The VOCs and inorganics released at the ground surface would be expected to migrate vertically under the influence of gravity, with some horizontal spreading with depth through the unsaturated zone and into the saturated zone. Figures 10 and 11 show approximately where VOCs (MW-4 area) and inorganics (MW-11 and MW-19 areas) are identified in the upper water bearing zone above the groundwater delineation and/or cleanup standards.

4.1.2.2 Semi-Confining Unit

Between the depths of approximately 50 to 55 feet bgs, a chalky limestone occurs that grades with depth to increasing cementation and induration and decreasing permeability. This layer is laterally continuous across

the Site and is interpreted to be a hydraulic boundary to the lower water bearing zone encountered at about 60 feet bgs. However, based on the hydraulic properties (i.e., vertical groundwater velocity, vertical gradient and vertical hydraulic conductivity) of the semi-confining unit and concentrations of VOCs and inorganics in the lower water bearing zone, vertical leakage occurs through the chalky limestone from the upper water bearing zone to the lower water bearing zone.

4.1.2.3 Lower Water Bearing Zone

At approximately 60 feet bgs, the chalky limestone increases in competency and becomes a porous and permeable fossiliferous limestone of the Ocala Limestone that extends to a depth of approximately 170 feet bgs. This unit, the Upper Floridan aquifer, is a principal water supply aquifer and previously served to supply irrigation and fire water to the Site. The Upper Floridan aquifer is confined above and below. The upper confining zone is the chalky limestone described above, and the lower confining zone is the calcareous clayey Lisbon formation.

In the June 2014 gauging event, potentiometric levels in the wells screened in the lower water bearing zone were between about 32 and 43 feet bgs. VOCs (MW-15 area) and inorganics (MW-24 area) are present in the lower water bearing zone; specifically, the upper portion of the permeable fossiliferous limestone as seen in well MW-15 at a depth of approximately 70 feet bgs.

4.1.3 Contaminant Fate and Transport

Moderate to low concentrations of trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (VC) continue to be detected in MW-4 located immediately downgradient of the source area within the upper water bearing zone. As described in the February 2012 VRP Application, preliminary modeling using Biochlor®, a one-dimensional axial transport model, has been conducted to evaluate potential constituent of concern (COC) migration from this area and to provide a preliminary understanding of the fate and transport of the remaining VOCs observed in groundwater. The preliminary modeling demonstrated that VOC concentrations will continue to decline over time and that the current groundwater plume will continue to contract.

Additionally, a limited interim remedial action consisting of injection of zero valent iron (ZVI) within the upper water bearing zone was conducted in 2003. The interim action created a barrier zone of accelerated attenuation downgradient of monitoring well MW-4. The barrier has most likely resulted in the decrease in VOC concentrations observed in the remaining downgradient monitoring wells.

4.2 Receptors and Exposure Pathways

The potential exposure pathways and receptors are identified on Figures 10 and 11, and are detailed further in the February 2012 Revised VRP Application and the January 30, 2013 Semiannual Progress Report.

Section 5

Status and Future Work

Work on this project has been directed at meeting the milestones established by EPD in their July 30, 2012 letter approving their application to the VRP. Specifically:

- Horizontal delineation on-site and off-site
- Vertical delineation
- Remediation, where necessary.

The current status of the Site soil and groundwater relative to the VRP delineation and cleanup criteria is discussed below. Near-term steps toward meeting project goals are presented and the updated milestone schedule for this work is presented on Figure 12.

5.1 Delineation Status

5.1.1 Soil Delineation

As discussed in the July 2013 Semiannual Progress Report, horizontal and vertical delineation of cis-1,2-DCE and VC in soil has been achieved. Historical soil results are presented in Table 6.

5.1.2 Groundwater Delineation

5.1.2.1 On-Site Horizontal Groundwater Delineation

VOCs were previously delineated on-site.

With the sampling conducted in March 2014, on-site horizontal delineation of chromium (total, hexavalent, and trivalent) in groundwater at the northern end of the property has been achieved to the north, northwest, and northeast.

It initially appeared that chromium was also delineated at the southern end of the property; however, with the recent detection of chromium in monitoring well MW-19 reported in the January 2014 Semiannual Progress Report, horizontal delineation to the south has been pursued aggressively and is still ongoing. Twenty temporary wells were installed in 2014 to delineate chromium concentrations around and to the south of MW-19. These results indicate that chromium concentrations above the delineation levels have been measured beyond the property line.

5.1.2.2 Off-Site Horizontal Groundwater Delineation

As noted above, following the identification of chromium in MW-19 at concentrations above the delineation standard in late 2013, 20 temporary wells were installed around and to the south of MW-19 this year. Temporary wells were installed along the southern property line and further south off-site in the Industry Avenue right-of-way in an effort to delineate the off-site groundwater impact. Delineation was not achieved in temporary wells TW-2, TW-16 and TW-42 located in the northern right-of-way. Sampling locations in the southern right-of-way of Industry Avenue were planned; however, they could not be installed due to the presence of overhead and underground utilities already present in the right-of way. Given that the delineation standards for all three forms of chromium were met in the sample from TW-15 and the low concentrations measured in the other most southerly sample (TW-41), options related to further delineation to the south are being weighed.

5.1.2.3 Vertical Groundwater Delineation

As discussed in previous semiannual progress reports, vertical delineation of Site COCs in groundwater has been achieved.

5.2 Status Relative to Cleanup Goals

5.2.1 Soil

The Site soil is in compliance with the soil cleanup standards developed for the Site except in the vicinity of borings B-4 and GP-1 (located in the former source area). The concentrations of cis-1,2-DCE and VC in the subsurface soil in borings B-4 and GP-1 (cis-1,2-DCE only) exceed the soil cleanup standards.

5.2.2 Groundwater

Concentrations of trivalent chromium measured at the Site are in compliance with the Site VRP cleanup level (153 mg/L). Areas where other VRP cleanup levels are not met are discussed below.

MW-4. Groundwater concentrations of TCE, cis-1,2-DCE, and VC in monitoring well MW-4 exceed the cleanup standards of 0.038 mg/L, 0.204 mg/L, and 0.0033 mg/L, respectively.

MW-11. Hexavalent chromium concentrations in monitoring well MW-11 and temporary wells TW-8, TW-22, TW-28 and TW-31 currently exceed the cleanup standard of 0.01 mg/L.

MW-19. Total chromium concentrations in monitoring well MW-19 and temporary wells TW-1, TW-4, TW-17, TW-18, and TW-20 currently exceed the cleanup standard of 0.10 mg/L. Hexavalent chromium concentrations in monitoring well MW-19 and temporary wells TW-1 through TW-5, TW-17, TW-18, TW-20, TW-25 through TW-27, TW-30, TW-36, TW-39 and TW-41 currently exceed the cleanup standard of 0.01 mg/L.

MW-24. Total chromium concentrations in temporary monitoring wells TW-11 and TW-14 currently exceed the cleanup standard of 0.10 mg/L. Hexavalent chromium concentrations in monitoring well MW-24 and temporary monitoring wells TW-11, TW-13, TW-14 and TW-24 currently exceed the cleanup standard of 0.01 mg/L.

5.3 Future Work

As total, hexavalent, and trivalent chromium concentrations in groundwater in temporary wells currently exceed delineation standards, additional delineation and/or treatment will be completed in the next reporting period.

Total and hexavalent chromium concentrations in monitoring wells MW-11 (hexavalent only), MW-19, and MW-24 and the associated temporary wells previously discussed currently exceeding the cleanup standards. Therefore, remedial strategies for chromium in groundwater in these areas will be evaluated over the next reporting period and discussed in the Final Remediation Plan.

The presence of TCE, cis-1,2-DCE, and VC in groundwater in monitoring well MW-4 at concentrations exceeding the cleanup standards will be addressed through fate and transport modeling and a uniform environmental covenant (UEC) to restrict the use of groundwater. The POD wells for the VOC impact in groundwater will be presented in the Final Remediation Plan.

During the next reporting period, BC will also continue to evaluate options to bring the soil in the vicinity of B-4 and GP-1 into compliance with the cleanup standards for cis-1,2-DCE and VC. Site-specific information and Biochlor® modeling will be used to determine if the maximum concentrations remaining in soil at the Site will result in exceedances of the applicable cleanup standards at the point of compliance or unacceptable health risks to potential receptors.

The updated milestone schedule is presented on Figure 12. As previously discussed, multiple attempts have been made to horizontally delineate groundwater south of monitoring well MW-19 in order to meet the VRP deadline of July 30, 2014, however, additional delineation and/or treatment will be required. The Final Remediation Plan and Final Cost Estimate for implementing remediation and/or continuing actions will be submitted in the January 2015 Semiannual Progress Report.

Section 6

Engineer's Services this Period

Table 7 summarizes BC's professional engineer's work on this project since the last submittal to the EPD for this project.

Section 7

Limitations

This document was prepared solely for Brunswick Corporation, Albany Sport, Co., and Albany Partners, LLC (the Group) in accordance with professional standards at the time the services were performed and in accordance with the contract between the Group and Brown and Caldwell dated September 18, 2013 and amended on February 20, 2014 and April 24, 2014. This document is governed by the specific scope of work authorized by the Group; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by the Group and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

This document sets forth the results of certain services performed by Brown and Caldwell with respect to the property or facilities described therein (the Property). The Group recognizes and acknowledges that these services were designed and performed within various limitations, including budget and time constraints. These services were not designed or intended to determine the existence and nature of all possible environmental risks (which term shall include the presence or suspected or potential presence of any hazardous waste or hazardous substance, as defined under any applicable law or regulation, or any other actual or potential environmental problems or liabilities) affecting the Property. The nature of environmental risks is such that no amount of additional inspection and testing could determine as a matter of certainty that all environmental risks affecting the Property had been identified. Accordingly, THIS DOCUMENT DOES NOT PURPORT TO DESCRIBE ALL ENVIRONMENTAL RISKS AFFECTING THE PROPERTY, NOR WILL ANY ADDITIONAL TESTING OR INSPECTION RECOMMENDED OR OTHERWISE REFERRED TO IN THIS DOCUMENT NECESSARILY IDENTIFY ALL ENVIRONMENTAL RISKS AFFECTING THE PROPERTY.

Further, Brown and Caldwell makes no warranties, express or implied, with respect to this document, except for those, if any, contained in the agreement pursuant to which the document was prepared. All data, drawings, documents, or information contained this report have been prepared exclusively for the person or entity to whom it was addressed and may not be relied upon by any other person or entity without the prior written consent of Brown and Caldwell unless otherwise provided by the Agreement pursuant to which these services were provided.

Section 8

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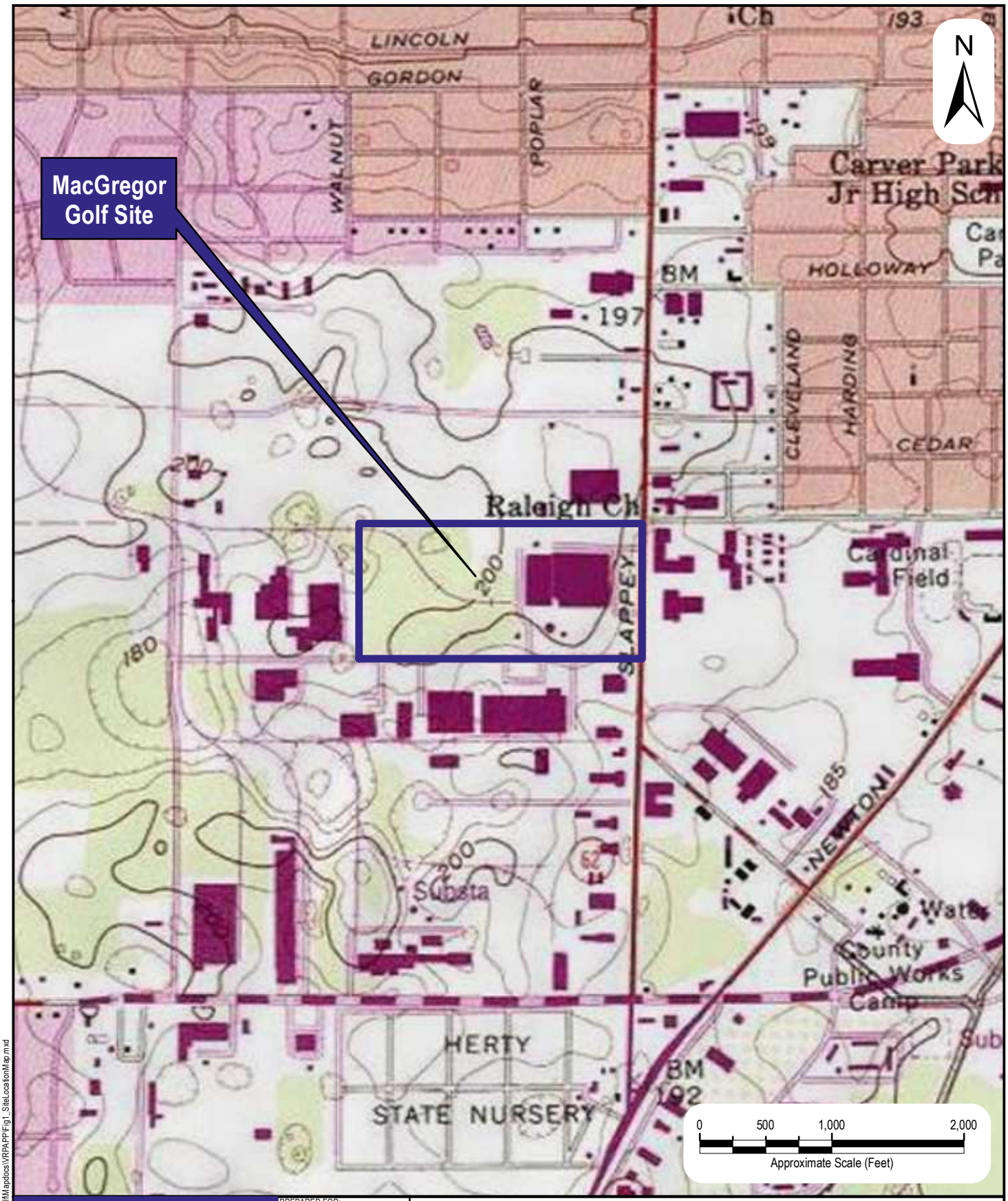

Brown AND Caldwell

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Brunswick Corp.,
Albany Sport Co., &
Albany Partners, LLC

DATE:	07/17/2014
SCALE:	AS SHOWN
DRAWN BY:	BAS
CHECKED BY:	TCB, PCR
PROJECT #:	145096

Figure 1

Site Location Map

Former MacGregor Golf Company
1601 South Slappey Blvd, Albany, Dougherty County, Georgia

FILE PATH: R:\Projects\MacGregorGolfMapdocs\VRPAPP\Fig1_SiteLocationMap.mxd

SOURCE: NATIONAL GEOGRAPHIC SEAMLESS USGS, 2010

N

Spartan MW-2

Spartan MW-1

MW-26

MW-24

MW-11

MW-6

MW-14

MW-17

Detention Basin

Drainage Ditch

MW-18

MW-5

MW-22

MW-4

MW-23

MW-25

MW-3

MW-13

South Slappey Boulevard

MW-2

MW-9

MW-12

MW-15

MW-7

MW-10

MW-19

MW-1

MW-16

Industry Avenue

LEGEND

- Approximate Property Boundaries
- Deep Monitoring Well
- Shallow Monitoring Well
- Well Not Included in the Current Monitoring Program
- Deep Monitoring Well Installed by Others

0 150 300 450

Approximate Scale in Feet

Figure 2

Site Map

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Brown AND Caldwell

Prepared For: Brunswick Corp., Albany Sport Co., & Albany Partners, LLC

DATE:	06/25/2014
SCALE:	AS SHOWN
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N

TW-10
163.90

MW-11
163.73

TW-9
163.64

MW-14
162.41

Detention Basin

Drainage Ditch

MW-22
162.39

MW-13
162.63

South Slappey Boulevard

MW-18
162.95

MW-4
160.85

MW-23
162.21

MW-25
162.04

MW-3
161.77

MW-2
161.74

MW-12
162.98

MW-19
161.83

MW-1
163.15

MW-10
161.06

Industry Avenue

TW-2
161.87

TW-15
161.85

164
163.50
163
162.50
162
161.50

0 150 300 450
Approximate Scale in Feet

LEGEND

- 148.00 Groundwater Elevation (Feet NAVD88)
- Groundwater Elevation Contour (Contour Interval is 0.50 Feet NAVD88)
- Estimated Groundwater Elevation Contour
- Apparent Groundwater Flow Direction
- Deep Monitoring Well
- Shallow Monitoring Well
- Well Not Included in the Current Monitoring Program
- Deep Monitoring Well Installed by Others
- Shallow Temporary Monitoring Well
- Approximate Property Boundaries
- MW-4 Was Not Used For Contouring Due to Anamolous Groundwater Elevation

Figure 3

Potentiometric Surface Map
Upper Water Bearing Zone
March 26, 2014

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Brown AND Caldwell

Prepared For: Brunswick Corp., Albany Sport Co., & Albany Partners, LLC

DATE:	07/14/2014
SCALE:	AS SHOWN
DRAWN BY:	BAS
CHECKED BY:	TCB
PROJECT #:	145096

N

MW-11
167.64

TW-31
167.63

TW-35
166.73

MW-14
167.56

MW-18
167.22

MW-22
167.45

MW-13
166.82

MW-4
166.62

MW-25
166.85

MW-23
167.97

MW-3
168.94

MW-2
166.54

MW-12
167.07

MW-10
165.24

MW-19
166.60

MW-1
166.77

TW-42
166.42

TW-41
166.64

167.50
167
166.50
166
165.50

Detention Basin

Drainage Ditch

Industry Avenue

South Slappey Boulevard

LEGEND

- 148.00 Groundwater Elevation (Feet NAVD88)
- Groundwater Elevation Contour (Contour Interval is 0.50 Feet NAVD88)
- Estimated Groundwater Elevation Contour
- Apparent Groundwater Flow Direction
- Deep Monitoring Well
- Shallow Monitoring Well
- Well Not Included in the Current Monitoring Program
- Deep Monitoring Well Installed by Others
- Shallow Temporary Monitoring Well
- Approximate Property Boundaries

0 150 300 450
Approximate Scale in Feet

, AEX, Get

Figure 4

Potentiometric Surface Map
Upper Water Bearing Zone
June 4, 2014

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Brown AND Caldwell

Prepared For: Brunswick Corp., Albany Sport Co., & Albany Partners, LLC

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PROJECT #:	145096

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N

TW-11
160.79

MW-26
160.94

Spartan
MW-2
160.68

Spartan
MW-1
160.38

TW-23
160.74

MW-24
160.6

TW-24
160.64

MW-6
160.25

MW-17
158.89

Detention Basin

Drainage Ditch

MW-5
160.39

South Slappey Boulevard

MW-9
159.4

MW-15
159.85

159.50

MW-7
160.7

MW-16
160.2

160.50

Industry Avenue

LEGEND

- 148.00 Groundwater Elevation (Feet NAVD88)
- Groundwater Elevation Contour (Contour Interval is 0.50 Feet NAVD88)
- Estimated Groundwater Elevation Contour
- Apparent Groundwater Flow Direction
- Deep Monitoring Well
- Shallow Monitoring Well
- Well Not Included in the Current Monitoring Program
- Deep Monitoring Well Installed by Others
- Deep Temporary Monitoring Well
- Approximate Property Boundaries

0 150 300 450

Approximate Scale in Feet

GS, AEX, Getr

Figure 5

Potentiometric Surface Map
Lower Water Bearing Zone
March 26, 2014

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Brown AND Caldwell

Prepared For: Brunswick Corp., Albany Sport Co., & Albany Partners, LLC

DATE:	07/14/2014
SCALE:	AS SHOWN
DRAWN BY:	BAS
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PROJECT #:	145096

Path: R:\Projects\MacGregorGolf\Mapdocs\July Status Report - 2014\Final Figures\Figure 5 - Deep Pot Map - March 26, 2014.mxd

Accessed By: BSTEELE at 06/25/2014 09:57

N

MW-26
164.68

MW-24
164.32

Spartan
MW-2
163.76

Spartan
MW-1
163.07

MW-6
163.82

MW-17
160.68

MW-5
163.72

MW-9
161.77

MW-15
162.97

MW-16
161.53

MW-7
160.11

164.50
164
163.50
163
162.50
162
161.50
161
160.50

Detention Basin

Drainage Ditch

South Slappey Boulevard

Industry Avenue

LEGEND

- 148.00 Groundwater Elevation (Feet NAVD88)
- Groundwater Elevation Contour (Contour Interval is 0.50 Feet NAVD88)
- Estimated Groundwater Elevation Contour
- Apparent Groundwater Flow Direction
- Deep Monitoring Well
- Shallow Monitoring Well
- Well Not Included in the Current Monitoring Program
- Deep Monitoring Well Installed by Others
- Approximate Property Boundaries

0 150 300 450
Approximate Scale in Feet

GS, AEX, Getr

Figure 6

Potentiometric Surface Map
Lower Water Bearing Zone
June 4, 2014

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Brown AND Caldwell

Prepared For: Brunswick Corp., Albany Sport Co., & Albany Partners, LLC

DATE:	06/25/2014
SCALE:	AS SHOWN
DRAWN BY:	BAS
CHECKED BY:	TCB
PROJECT #:	145096

Path: R:\Projects\MacGregorGolf\Mxd\docs\July Status Report - 2014\Final Figures\Figure 6 - Deep Pot Map - June 4, 2014.mxd

N

Spartan MW-2

Spartan MW-1

MW-26

MW-24

MW-11

MW-6

MW-11	
1/7/14	mg/L
Cr-Tot	0.032
Cr(VI)	0.035
Cr(III)	< 0.01

TW-6	
3/19/14	mg/L
Cr-Tot	0.020
Cr(VI)	< 0.01
Cr(III)	0.019

TW-7	
3/19/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

TW-8	
3/19/14	mg/L
Cr-Tot	0.020
Cr(VI)	0.013
Cr(III)	< 0.01

TW-10	
3/20/14	mg/L
Cr-Tot	0.011
Cr(VI)	< 0.01
Cr(III)	0.011

TW-22	
3/21/14	mg/L
Cr-Tot	0.019
Cr(VI)	0.017
Cr(III)	< 0.01

TW-9	
3/20/14	mg/L
Cr-Tot	0.015
Cr(VI)	< 0.01
Cr(III)	0.015

TW-31	
6/4/14	mg/L
Cr-Tot	0.024
Cr(VI)	0.013
Cr(III)	0.011

TW-28	
3/25/14	mg/L
Cr-Tot	0.039
Cr(VI)	0.024
Cr(III)	0.015

TW-35	
6/5/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

TW-32	
6/4/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

TW-34	
6/5/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

TW-33	
6/5/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

0 35 70

Approximate Scale in Feet

LEGEND

- Approximate Property Boundaries
- Deep Monitoring Well Installed by Others
- Shallow Monitoring Well
- Deep Monitoring Well
- Shallow Temporary Monitoring Well
- Concentration greater than delineation standard
- Concentration greater than delineation and cleanup standard

NOTES

mg/L - milligrams per liter

Cr-Tot - Total Chromium

Cr(VI) - Hexavalent Chromium

Cr(III) - Trivalent Chromium

Standards, mg/L

	Delineation	Cleanup
Cr-Tot	0.10	0.10
Cr(VI)	0.01	0.01
Cr(III)	0.01	153

Figure 7

Groundwater Chromium Concentration Around MW-11

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Brown AND Caldwell

Prepared For: Brunswick Corp., Albany Sport Co., & Albany Partners, LLC

DATE:	07/15/2014
SCALE:	AS SHOWN
DRAWN BY:	RPJ
CHECKED BY:	TCB
PROJECT #:	145096

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N

TW-37	
6/3/14	mg/L
Cr-Tot	0.015
Cr(VI)	< 0.01
Cr(III)	< 0.01

TW-38	
6/4/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

Supply Well

MW-15

TW-26	
3/25/14	mg/L
Cr-Tot	0.083
Cr(VI)	0.068
Cr(III)	0.015

TW-4	
3/18/14	mg/L
Cr-Tot	0.125
Cr(VI)	0.110
Cr(III)	0.015

TW-39	
6/4/14	mg/L
Cr-Tot	0.040
Cr(VI)	0.034
Cr(III)	< 0.01

TW-18	
3/23/14	mg/L
Cr-Tot	0.107
Cr(VI)	0.098
Cr(III)	< 0.01

MW-19	
1/8/14	mg/L
Cr-Tot	0.196
Cr(VI)	0.199
Cr(III)	< 0.01

TW-36	
6/3/14	mg/L
Cr-Tot	0.041
Cr(VI)	0.028
Cr(III)	0.012

TW-30	
3/25/14	mg/L
Cr-Tot	0.064
Cr(VI)	0.047
Cr(III)	0.017

TW-20	
3/23/14	mg/L
Cr-Tot	0.199
Cr(VI)	0.185
Cr(III)	0.013

TW-40	
6/3/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

TW-3	
3/18/14	mg/L
Cr-Tot	0.076
Cr(VI)	0.068
Cr(III)	< 0.01

MW-8D

MW-1

TW-25	
3/23/14	mg/L
Cr-Tot	0.086
Cr(VI)	0.075
Cr(III)	0.011

MW-19

TW-5	
3/19/14	mg/L
Cr-Tot	0.075
Cr(VI)	0.070
Cr(III)	< 0.01

TW-27	
3/25/14	mg/L
Cr-Tot	0.168
Cr(VI)	0.147
Cr(III)	0.022

TW-17	
3/22/14	mg/L
Cr-Tot	0.116
Cr(VI)	0.102
Cr(III)	0.014

TW-42	
6/2/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

TW-15	
3/22/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

TW-41	
6/3/14	mg/L
Cr-Tot	0.049
Cr(VI)	0.037
Cr(III)	0.012

TW-16	
6/2/14	mg/L
Cr-Tot	0.018
Cr(VI)	< 0.01
Cr(III)	0.018

TW-2	
3/18/14	mg/L
Cr-Tot	0.034
Cr(VI)	0.020
Cr(III)	0.014

TW-1	
3/18/14	mg/L
Cr-Tot	0.160
Cr(VI)	0.143
Cr(III)	0.017

Industry Avenue

0 35 70

Approximate Scale in Feet

Path: R:\Projects\MacGregorGolf\Maps\docs\Chromium Delineation\061814_CondMaps\Cr_Conc_Map_MW-19.mxd

LEGEND

- Approximate Property Boundaries
- Deep Monitoring Well Installed by Others
- Shallow Monitoring Well
- Deep Monitoring Well
- Shallow Temporary Monitoring Well
- Concentration greater than delineation standard
- Concentration greater than delineation and cleanup standard

NOTES

mg/L - milligrams per liter
Cr-Tot - Total Chromium
Cr(VI) - Hexavalent Chromium
Cr(III) - Trivalent Chromium

Standards, mg/L

	Delineation	Cleanup
Cr-Tot	0.10	0.10
Cr(VI)	0.01	0.01
Cr(III)	0.01	153

Figure 8

Groundwater Chromium Concentration Around MW-19

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Brown AND Caldwell

Prepared For: Brunswick Corp., Albany Sport Co., & Albany Partners, LLC

DATE:	07/15/2014
SCALE:	AS SHOWN
DRAWN BY:	RPJ
CHECKED BY:	TCB
PROJECT #:	145096

N

Spartan MW-2	
5/8/13	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

Spartan MW-2

Spartan MW-1

MW-26	
1/8/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

TW-11	
3/20/14	mg/L
Cr-Tot	1.740
Cr(VI)	1.490
Cr(III)	0.250

TW-12	
3/20/14	mg/L
Cr-Tot	0.011
Cr(VI)	< 0.01
Cr(III)	0.011

TW-23	
3/24/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

MW-26

MW-24

MW-24	
10/24/13	mg/L
Cr-Tot	0.083
Cr(VI)	0.051
Cr(III)	0.032

TW-29	
3/26/14	mg/L
Cr-Tot	< 0.01
Cr(VI)	< 0.01
Cr(III)	< 0.01

TW-13	
3/21/14	mg/L
Cr-Tot	0.060
Cr(VI)	0.056
Cr(III)	< 0.01

TW-24	
3/24/14	mg/L
Cr-Tot	0.021
Cr(VI)	0.013
Cr(III)	< 0.01

TW-14	
3/21/14	mg/L
Cr-Tot	0.587
Cr(VI)	0.580
Cr(III)	< 0.01

MW-11

MW-6

0 35 70

Approximate Scale in Feet

LEGEND

- Approximate Property Boundaries
- Deep Monitoring Well Installed by Others
- Shallow Monitoring Well
- Deep Monitoring Well
- Shallow Temporary Monitoring Well
- Concentration greater than delineation standard
- Concentration greater than delineation and cleanup standard

NOTES

mg/L - milligrams per liter
Cr-Tot - Total Chromium
Cr(VI) - Hexavalent Chromium
Cr(III) - Trivalent Chromium

	Standards, mg/L Delineation	Cleanup
Cr-Tot	0.10	0.10
Cr(VI)	0.01	0.01
Cr(III)	0.01	153

Figure 9

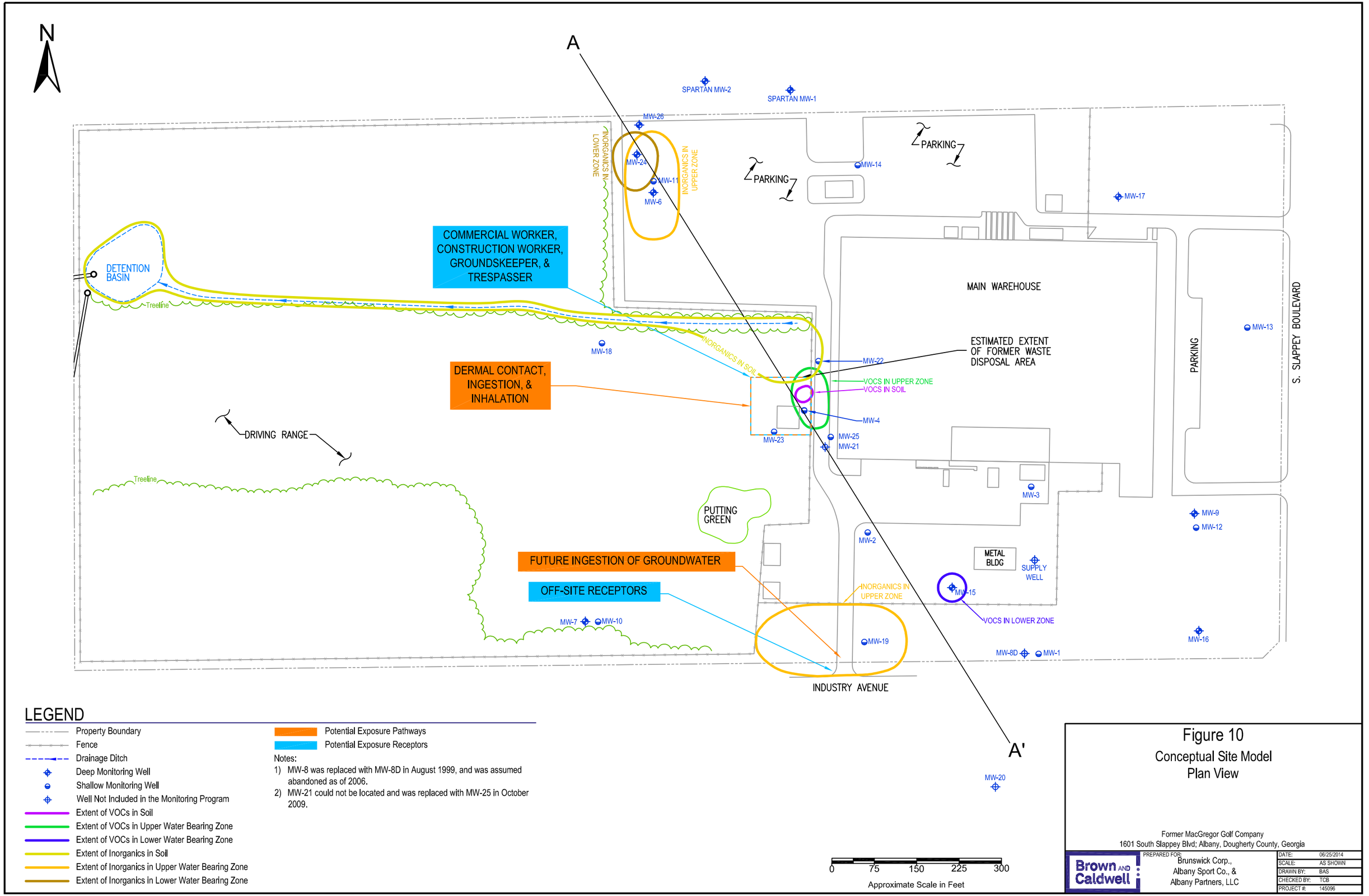
Groundwater Chromium Concentration Around MW-24

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Brown AND Caldwell

Prepared For: Brunswick Corp., Albany Sport Co., & Albany Partners, LLC

DATE:	07/15/2014
SCALE:	AS SHOWN
DRAWN BY:	RPJ
CHECKED BY:	TCB
PROJECT #:	145096



LEGEND

- Property Boundary
- Fence
- Drainage Ditch
- Deep Monitoring Well
- Shallow Monitoring Well
- Well Not Included in the Monitoring Program
- Extent of VOCs in Soil
- Extent of VOCs in Upper Water Bearing Zone
- Extent of VOCs in Lower Water Bearing Zone
- Extent of Inorganics in Soil
- Extent of Inorganics in Upper Water Bearing Zone
- Extent of Inorganics in Lower Water Bearing Zone
- Potential Exposure Pathways
- Potential Exposure Receptors

Notes:

1) MW-8 was replaced with MW-8D in August 1999, and was assumed abandoned as of 2006.
2) MW-21 could not be located and was replaced with MW-25 in October 2009.

Figure 10

Conceptual Site Model
Plan View

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Brown AND Caldwell

PREPARED FOR: Brunswick Corp., Albany Sport Co., & Albany Partners, LLC

DATE:	06/25/2014
SCALE:	AS SHOWN
DRAWN BY:	BAS
CHECKED BY:	TCB
PROJECT #:	145096

N

ESTIMATED EXTENT OF FORMER WASTE DISPOSAL AREA (SOURCE AREA)

COMMERCIAL WORKER, CONSTRUCTION WORKER, GROUNDSKEEPER, & TRESPASSER

DERMAL CONTACT, INGESTION, & INHALATION

FUTURE INGESTION OF GROUNDWATER

OFF-SITE RECEPTORS

Approximate Property Boundary

Pavement

Main Warehouse

Approximate Property Boundary

A

A'

Drainage Ditch

Unoccupied Storage Shed

Approximate Potentiometric Surface Upper Water-Bearing Unit

Approximate Potentiometric Surface Lower Water-Bearing Unit

LEGEND

- Property Boundary
- Approximate Water Table in Upper Water-Bearing Zone
- Approximate Water Table in Lower Water-Bearing Zone
- Potential Exposure Pathways
- Potential Exposure Receptors
- Soil
- Chert
- Semiconfining Unit / Chalky Limestone
- Limestone Bedrock
- Lower Confining Unit / Limestone
- VOC impacts
- Inorganics impacts

Drawing not to scale

Figure 11

Conceptual Site Model
Profile View

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Brown AND Caldwell

PREPARED FOR:
Brunswick Corp.,
Albany Sport Co., &
Albany Partners, LLC

DATE:	06/25/2014
SCALE:	NOT TO SCALE
DRAWN BY:	GS4
CHECKED BY:	TCB
PROJECT #:	145096

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Figure 12. Updated Milestone Schedule
Former MacGregor Golf Company
Albany, Georgia

ID	Task Name	Projected Completion Date	Completion Date	Year 1: July 2012 - July 2013				Year 2: July 2013 - July 2014				Year 3: July 2014 - July 2015				Year 4: July 2015 - July 2016				Year 5: July 2016 - July 2017			
				2012		2013				2014				2015				2016				2017			
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	Enrollment in VRP	--	July 30, 2012																				
2	Preliminary Cost Estimate for Implementation of Remediation & Continuing Actions, and Financial Assurance Demonstration	Within 60 days of Enrollment[a]	March 13, 2013	☒	☒	☒																	
3	Monthly Groundwater Level Measurements	Within 3 Months of Enrollment	November 6, 2012	☒	☒																		
4	Horizontal Delineation of Site COCs (on accessible property)	Within 6 Months of Enrollment	November 29, 2012	☒	☒																		
5	Semiannual Progress Report with Updated CSM	Within 6 Months of Enrollment	January 30, 2013		☒																		
6	Semiannual Progress Report with Updated CSM	Within 12 Months of Enrollment	July 30, 2013				☒																
7	Vertical Delineation of Site COCs	Within 12 Months of Enrollment	May 31, 2013			☒	☒																
8	Semiannual Progress Report with Updated CSM	Within 18 Months of Enrollment	January 30, 2014						☒														
9	Horizontal Delineation of Site COCs (on property previously inaccessible)	Within 24 Months of Enrollment				☒	☒			☒	☒	■											
10	Semiannual Progress Report with Updated CSM	Within 24 Months of Enrollment	July 30, 2014								☒												
11	Semiannual Progress Report with Final Remediation Plan, Updated CSM, and Final Cost Estimate for Remediation and/or Continuing Actions	Within 30 Months of Enrollment										■	■										
12	Active remediation, if necessary	Within 36 Months of Enrollment												■	■								
13	Semiannual Progress Report with Updated CSM	Within 36 Months of Enrollment													■								
14	Semiannual Progress Report with Updated CSM	Within 42 Months of Enrollment															■						
15	Semiannual Progress Report with Updated CSM	Within 48 Months of Enrollment																	■				
16	Semiannual Progress Report with Updated CSM	Within 52 Months of Enrollment																			■		
17	Compliance Status Report under the VRP with Certifications	Within 60 Months of Enrollment																					■

Indicates due date indicated on VRP Application Form.

[a] - Due date for this task was extended per EPD's approval.

☒ Indicates task accomplished.

On-site Horizontal Delineation

Off-site Horizontal Delineation

Vertical Delineation, Final Remediation Plan, and Final Cost Estimate

CSR Submittal to VRP with Certifications

Table 1. Well Construction Data and Recent Groundwater Elevations
Former MacGregor Golf Company
Albany, Georgia

Well ID	Well Completion Date	Water Bearing Unit	Northing (Feet - Georgia West State Plane NAD83)	Easting (Feet - Georgia West State Plane NAD83)	Total Depth[a] (feet)	Screened Interval[a] (feet)	Open Hole Interval[a] (feet)	Top of Casing Elevation[b] (feet)	March 26, 2014		June 4, 2014	
									Static Depth to Water[a] (feet)	Groundwater Elevation[b] (feet)	Static Depth to Water[a] (feet)	Groundwater Elevation[b] (feet)
Upper Water Bearing Zone												
MW-1	6/28/1995	Upper	566051.98	2293023.36	45.88	33.5-48.5	NA	196.54	33.39	163.15	29.77	166.77
MW-2	6/28/1995	Upper	566220.01	2292765.44	40.19	25-40	NA	196.61	34.87	161.74	30.07	166.54
MW-3	6/29/1995	Upper	566348.21	2293042.11	46.33	32.50-47.50	NA	198.41	36.64	161.77	29.47	168.94
MW-4	6/29/1995	Upper	566470.82	2292611.54	46.96	28-41.50	NA	198.43	37.58	160.85	31.81	166.62
MW-10	7/15/1998	Upper	566080.73	2292221.58	48.37	33.30-48.30	NA	193.75	32.69	161.06	28.51	165.24
MW-11	7/15/1998	Upper	566921.91	2292317.31	48.30	33-48	NA	200.25	36.52	163.73	32.61	167.64
MW-12	7/16/1998	Upper	566218.48	2293315.55	45.28	35-50	NA	194.70	31.72	162.98	27.63	167.07
MW-13	10/22/1998	Upper	566566.74	2293392.86	50.38	35-50	NA	196.48	33.85	162.63	29.66	166.82
MW-14	10/20/1998	Upper	566899.03	2292756.18	49.71	34.80-49.80	NA	196.99	34.58	162.41	29.43	167.56
MW-18	6/17/1999	Upper	566533.98	2292176.82	43.70	28.8-43.8	NA	196.49	33.54	162.95	29.27	167.22
MW-19	6/17/1999	Upper	566035.83	2292750.34	44.12	29-44	NA	193.40	31.57	161.83	26.80	166.60
MW-21[c, d]	3/11/2003	Upper	NM	NM	38.61	28.61-38.61	NA	196.80	NM	NM	NM	NM
MW-22	3/11/2003	Upper	566540.86	2292649.02	45.69	35.4-45.4	NA	196.89	34.50	162.39	29.44	167.45
MW-23	3/11/2003	Upper	566423.91	2292556.49	48.10	37.95-47.95	NA	199.73	37.52	162.21	31.76	167.97
MW-25[d]	10/21/2009	Upper	566402.83	2292666.80	39.16	29-39	NA	195.82	33.78	162.04	28.97	166.85
TW-2[e]	3/17/2014	Upper	566015.94	2292736.14	35.51	25.51-35.51	NA	193.36	31.49	161.87	NM	NM
TW-9[e]	3/19/2014	Upper	566898.95	2292305.58	44.79	34.79-44.79	NA	200.18	36.54	163.64	NM	NM
TW-10[e]	3/19/2014	Upper	566921.71	2292291.27	44.78	34.78-44.78	NA	200.19	36.29	163.90	NM	NM
TW-15[e]	3/21/2014	Upper	565998.92	2292779.18	42.95	32.94-42.95	NA	193.99	32.14	161.85	NM	NM
TW-31[e]	6/4/2014	Upper	566879.07	2292400.98	45.25	35.25-45.25	NA	201.28	NM	NM	33.65	167.63
TW-35[e]	6/4/2014	Upper	566848.17	2292320.97	45.07	35.07-45.07	NA	200.02	NM	NM	33.29	166.73
TW-41[e]	6/4/2014	Upper	566002.49	2292870.78	45.11	35.11-45.11	NA	196.35	NM	NM	29.71	166.64
TW-42[e]	6/4/2014	Upper	566010.23	2292603.03	45.00	35.00-45.00	NA	193.33	NM	NM	26.91	166.42
Lower Water Bearing Zone												
MW-5	7/23/1998	Lower	566495.97	2292539.09	60.50	NA	60-73	199.89	39.50	160.39	36.17	163.72
MW-6	7/25/1998	Lower	566911.71	2292317.29	60.13	NA	60-73	200.14	39.89	160.25	36.32	163.82
MW-7	7/22/1998	Lower	566080.91	2292207.62	69.35	60-70	NA	194.22	33.52	160.70	34.11	160.11
MW-8/8D[c]	8/17/1999	Lower	NM	NM	207.50	197.3-207.3	NA	198.00	NM	NM	NM	NM
MW-9	7/20/1998	Lower	566227.03	2293312.05	69.28	NA	58.5-73.5	194.68	35.28	159.40	32.91	161.77
MW-15	10/23/1998	Lower	566153.85	2292894.90	75.38	65.70-75.70	NA	199.23	39.38	159.85	36.26	162.97
MW-16	10/21/1998	Lower	566065.57	2293320.44	75.47	64.70-74.70	NA	193.61	33.41	160.20	32.08	161.53
MW-17	6/17/1999	Lower	566871.51	2293186.97	73.81	66-76	NA	198.73	39.84	158.89	38.05	160.68
MW-20[c]	8/14/1999	Lower	NM	NM	70.00	60-70	NA	193.31	NM	NM	NM	NM
MW-24	2/8/2008	Lower	566975.84	2292293.48	58.75	50-60	NA	200.39	39.79	160.60	36.07	164.32
MW-26	11/26/2012	Lower	567002.52	2292301.47	62.20	52.20-62.20	NA	200.90	39.96	160.94	36.22	164.68
Spartan MW-1	11/10/2008	Lower	567032.71	2292578.90	68.5	52-67	NA	206.37	45.99	160.38	43.30	163.07
Spartan MW-2	11/10/2008	Lower	567048.65	2292428.10	65.0	49.5-64.5	NA	205.78	45.10	160.68	42.02	163.76
Supply Well	1958	Lower	NM	NM	168.0	NA	NA	NM	NM	NM	NM	NM
TW-11[e]	3/20/2014	Lower	566992.21	2292277.10	59.74	49.74-59.74	NA	200.54	39.75	160.79	NM	NM
TW-23[e]	3/24/2014	Lower	567002.88	2292252.96	59.78	49.78-59.78	NA	200.26	39.52	160.74	NM	NM
TW-24[e]	3/24/2014	Lower	566940.64	2292250.83	59.68	49.68-59.68	NA	200.15	39.51	160.64	NM	NM

[a] Depth below top of casing.

[b] Elevation is feet above mean sea level.

[c] Wells not gauged or sampled as part of the monitoring program.

[d] Well MW-25 replaced MW-21 in 2009.

[e] Temporary wells were abandoned following survey and water level measurements.

NA - Not Applicable

NM - Not Measured

NAD83 - North American Datum of 1983

Table 2. Temporary Well Construction Details Former MacGregor Golf Company Albany, Georgia					
Well	Date Installed	Date Abandoned	Installation Method (DPT/HSA/SSA)[a]	Screen Interval (ft bgs)[b]	Total Depth (ft bgs)
TW-1	3/17/2014	3/25/2014	DPT	24.95-34.95	34.95
TW-2	3/17/2014	3/25/2014	DPT	25.51-35.51	35.51
TW-3	3/18/2014	3/25/2014	DPT	26.34-36.34	36.34
TW-4	3/18/2014	3/25/2014	DPT	26.93-36.93	36.93
TW-5	3/18/2014	3/25/2014	DPT/SSA	27.42-37.42	37.42
TW-6	3/18/2014	3/24/2014	DPT/SSA	34.76-44.76	44.76
TW-7	3/19/2014	3/24/2014	SSA	34.79-44.79	44.79
TW-8	3/19/2014	3/24/2014	SSA	34.76-44.76	44.76
TW-9	3/19/2014	3/24/2014	SSA	34.79-44.79	44.79
TW-10	3/19/2014	3/24/2014	SSA	34.78-44.78	44.78
TW-11	3/20/2014	3/24/2014	DPT/SSA	49.74-59.74	59.74
TW-12	3/19/2014	3/24/2014	SSA	49.75-59.75	59.75
TW-13	3/21/2014	3/24/2014	SSA	49.77-59.77	59.77
TW-14	3/20/2014	3/24/2014	SSA	49.71-59.71	59.71
TW-15	3/21/2014	3/24/2014	SSA	32.95-42.95	42.95
TW-16	6/2/2014	6/5/2014	HSA	35.15-45.15	45.15
TW-17	3/21/2014	3/25/2014	SSA	32.93-42.93	42.93
TW-18	3/22/2014	3/25/2014	SSA	32.30-42.30	42.30
TW-20	3/22/2014	3/25/2014	SSA	32.89-42.89	42.89
TW-22	3/21/2014	3/24/2014	SSA	34.78-44.78	44.78
TW-23	3/24/2014	3/25/2014	SSA	49.78-59.78	59.78
TW-24	3/24/2014	3/25/2014	SSA	49.68-59.68	59.68
TW-25	3/22/2014	3/25/2014	SSA	33.13-43.13	43.13
TW-26	3/24/2014	3/24/2014	SSA	34.78-44.78	44.78
TW-27	3/25/2014	3/25/2014	SSA	34.73-44.73	44.73
TW-28	3/25/2014	3/25/2014	SSA	34.82-44.82	44.82
TW-29	3/25/2014	3/25/2014	SSA	49.78-59.78	59.78
TW-30	3/25/2014	3/25/2014	SSA	33.19-43.19	43.19
TW-31	6/3/2014	6/5/2014	SSA	35.25-45.25	45.25
TW-32	6/3/2014	6/5/2014	SSA	35.27-45.27	45.27
TW-33	6/4/2014	6/5/2014	SSA	35.03-45.03	45.03
TW-34	6/4/2014	6/5/2014	SSA	35.10-45.10	45.10
TW-35	6/4/2014	6/5/2014	SSA	35.07-45.07	45.07
TW-36	6/2/2014	6/5/2014	SSA	35.15-45.15	45.15
TW-37	6/2/2014	6/5/2014	SSA	35.10-45.10	45.10
TW-38	6/3/2014	6/5/2014	SSA	35.02-45.02	45.02
TW-39	6/3/2014	6/5/2014	SSA	35.16-45.16	45.16
TW-40	6/3/2014	6/5/2014	SSA	35.15-45.15	45.15
TW-41	6/2/2014	6/5/2014	HSA	35.11-45.11	45.11
TW-42	6/2/2014	6/5/2014	HSA	35.00-45.00	45.00

[a]DPT - direct push technology, HSA - hollow stem auger, and SSA - solid stem auger.

[b]ft bgs - feet below ground surface

Table 3. Recent Field-Measured Groundwater Sampling Parameters Former MacGregor Golf Company Albany, Georgia								
Well	Sample Date	Total Gallons Removed	pH	Temperature (°C)	Conductivity (mS/cm)[a]	ORP (mV)[b]	Dissolved Oxygen (mg/L)[c]	Turbidity (NTU)[d]
TW-1	3/18/2014	0.75	7.41	14.30	0.234	150.3	6.23	3.39
TW-2	3/18/2014	0.75	7.41	18.59	0.372	94.6	5.18	3.47
TW-3	3/18/2014	0.80	7.59	20.46	0.245	1.6	5.33	2.39
TW-4	3/18/2014	0.75	7.46	19.72	0.224	-13.3	5.36	3.34
TW-5	3/19/2014	0.80	7.32	17.75	0.314	59.1	5.36	1.41
TW-6	3/19/2014	1.40	6.83	19.41	0.586	43.4	5.02	2.60
TW-7	3/19/2014	0.85	6.88	21.98	0.605	-16.5	2.57	29.1
TW-8	3/19/2014	1.00	6.77	23.16	0.582	151.7	5.12	1.98
TW-9	3/20/2014	1.80	6.77	19.95	0.644	182.0	4.68	1.51
TW-10	3/20/2014	0.75	6.70	21.07	0.508	259.4	5.72	5.31
TW-11	3/20/2014	2.50	6.84	21.47	0.633	104.2	5.30	4.73
TW-12	3/20/2014	1.55	6.88	23.24	0.586	13.7	8.79	4.85
TW-13	3/21/2014	2.75	6.57	24.76	0.574	63.6	5.77	7.70
TW-14	3/21/2014	2.80	6.63	20.44	0.529	89.3	5.55	9.11
TW-15	3/22/2014	1.25	7.04	22.53	0.436	18.7	5.15	3.28
TW-16	6/2/2014	1.20	7.20	24.14	0.415	122.9	5.35	4.67
TW-17	3/22/2014	1.50	7.27	20.96	0.327	94.8	0.33	3.40
TW-18	3/23/2014	1.25	7.46	20.45	0.230	43.2	5.86	7.37
TW-20	3/23/2014	1.00	7.45	20.86	0.268	104.6	6.28	5.28
TW-22	3/21/2014	1.00	6.44	26.24	0.541	76.1	4.93	1.30
TW-23	3/24/2014	3.75	6.86	21.13	0.561	76.4	4.30	8.89
TW-24	3/24/2014	2.75	6.72	20.09	0.626	129.6	5.34	7.03
TW-25	3/23/2014	1.00	7.26	21.22	0.337	250.1	5.65	9.19
TW-26	3/25/2014	1.00	7.52	19.12	0.299	82.1	5.51	4.01
TW-27	3/25/2014	1.50	7.30	18.34	0.374	73.1	5.95	7.94
TW-28	3/25/2014	1.00	6.82	24.79	0.545	88.5	4.68	2.09
TW-29	3/26/2014	2.00	6.81	18.35	0.569	103.5	7.35	9.23
TW-30	3/25/2014	4.00	7.40	22.24	0.337	66.0	5.67	8.79
TW-31	6/4/2014	1.00	6.79	28.61	0.542	86.0	4.27	6.60
TW-32	6/4/2014	1.40	6.80	28.07	0.552	97.3	4.10	8.02
TW-33	6/5/2014	1.25	6.93	26.54	0.534	-105.9	3.91	8.68
TW-34	6/5/2014	0.90	6.84	25.95	0.600	-154.2	2.76	6.96
TW-35	6/5/2014	2.80	6.93	26.83	0.669	-126.1	3.91	33.10
TW-36	6/3/2014	2.20	7.05	22.28	0.391	105.9	5.23	8.86
TW-37	6/3/2014	2.20	7.27	23.86	0.397	110.4	4.47	9.27
TW-38	6/4/2014	1.20	6.61	25.77	0.435	24.4	0.44	7.53
TW-39	6/4/2014	1.80	7.34	22.76	0.248	92.2	6.02	8.61
TW-40	6/3/2014	0.80	7.07	23.22	0.447	130.7	5.22	5.85
TW-41	6/3/2014	1.25	7.18	23.87	0.441	103.2	4.36	9.03
TW-42	6/2/2014	1.50	7.14	25.77	0.428	115.4	4.43	6.31

[a] mS/cm = Millisiemens per centimeter.

[b] ORP = Oxidation Reduction Potential in millivolts (mV).

[c] mg/L = Milligrams per liter.

[d] NTU = Nephelometric Turbidity Unit.

Table 4. Recent Groundwater Detections of Site COCs Former MacGregor Golf Company Albany, Georgia				
Well ID	Sampling Date	Concentration (mg/L)[a]		
		Total Chromium	Hexavalent Chromium	Trivalent Chromium
GW Delineation Standard		0.10	0.01	0.01
GW Cleanup Standard		0.10	0.01	153
TW-1	3/18/2014	0.160	0.143	0.017
TW-2	3/18/2014	0.034	0.020 J[b]	0.014
	3/18/2014 Dup	0.034	0.026 J	< 0.01
TW-3	3/18/2014	0.076	0.068	< 0.01
TW-4	3/18/2014	0.125	0.110	0.015
TW-5	3/19/2014	0.075	0.070 J	< 0.01 UJ[c]
TW-6	3/19/2014	0.020	< 0.01	0.019
TW-7	3/19/2014	< 0.01	< 0.01	< 0.01
TW-8	3/19/2014	0.020	0.013	< 0.01
TW-9	3/20/2014	0.015 J	< 0.01 UJ	0.015 J
TW-10	3/20/2014	0.011	< 0.01	0.011
TW-11	3/20/2014	1.740	1.490	0.250
	3/20/2014 Dup	1.730	1.460	0.274
TW-12	3/20/2014	0.011	< 0.01	0.011
TW-13	3/21/2014	0.060	0.056	< 0.01
TW-14	3/21/2014	0.587	0.580	< 0.01
TW-15	3/22/2014	< 0.01	< 0.01	< 0.01
TW-16	6/2/2014	0.018	< 0.01	0.018
TW-17	3/22/2014	0.116	0.102	0.014
TW-18	3/23/2014	0.107	0.098	< 0.01
TW-20	3/23/2014	0.199	0.185	0.013
TW-22	3/21/2014	0.019	0.017	< 0.01
TW-23	3/24/2014	< 0.01	< 0.01	< 0.01
TW-24	3/24/2014	0.021	0.013	< 0.01
TW-25	3/23/2014	0.086	0.075	0.011
TW-26	3/25/2014	0.083	0.068 J	0.015 J
TW-27	3/25/2014	0.168	0.147 J	0.022 J
TW-28	3/25/2014	0.039	0.024	0.015
TW-29	3/26/2014	< 0.01	< 0.01	< 0.01
TW-30	3/25/2014	0.064	0.047	0.017
TW-31	6/4/2013	0.024	0.013	0.011
TW-32	6/4/2013	< 0.01	< 0.01	< 0.01
TW-33	6/5/2014	< 0.01	< 0.01 UJ	< 0.01 UJ
	6/5/2014 Dup	< 0.01	< 0.01 UJ	< 0.01 UJ
TW-34	6/5/2014	< 0.01	< 0.01	< 0.01
TW-35	6/5/2014	< 0.01	< 0.01	< 0.01
TW-36	6/3/2014	0.041	0.028 J	0.012 J
TW-37	6/3/2014	0.015	< 0.01	< 0.01
TW-38	6/4/2014	< 0.01	< 0.01	< 0.01

Table 4. Recent Groundwater Detections of Site COCs Former MacGregor Golf Company Albany, Georgia				
Well ID	Sampling Date	Concentration (mg/L)[a]		
		Total Chromium	Hexavalent Chromium	Trivalent Chromium
GW Delineation Standard		0.10	0.01	0.01
GW Cleanup Standard		0.10	0.01	153
TW-39	6/4/2014	0.040	0.034 J	< 0.01 UJ
TW-40	6/3/2014	< 0.01	< 0.01	< 0.01
TW-41	6/3/2014	0.049	0.037	0.012
	6/3/2014 Dup	0.050	0.038	0.012
TW-42	6/2/2014	< 0.01	< 0.01	< 0.01

[a]mg/L - Milligrams per liter; Concentrations have been rounded to three decimal places.

[b]J - Result qualified as estimated by the laboratory or as the result of data verification.

[c]UJ - Result qualified as undetected at an estimated limit of detection as the result of data verification.

Purple Highlight - Indicates concentration is greater than delineation standard.

Orange Highlight - Indicates concentration is greater than delineation and cleanup standard.

Table 5. Historical Groundwater Detections of Site COCs
Former MacGregor Golf Company
Albany, Georgia

Well ID	Sampling Date	Inorganics: Concentration (mg/L)					Organics: Concentration (mg/L)						
		Total Chromium	Hexavalent Chromium	Trivalent Chromium	Cyanide	Nickel	1,1-Dichloroethene	cis-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Benzene	Ethylbenzene	Xylenes (Total)
GW Delineation Standard		0.10	0.01	0.01	0.20	0.10	0.007	0.07	0.005	0.002	0.005	0.7	10
GW Cleanup Standard		0.10	0.01	153	2.04	2.04	0.58	0.204	0.038	0.0033	0.0088	0.70	10
MW-1	6/30/95	0.05	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.005
	6/10/98	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.005
	7/31/98	< 0.010	NA	NA	< 0.02	< 0.02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/30/99	NA	NA	NA	NA	NA	0.0017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
	8/6/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	NA	NA	NA	NA
	3/12/03	NA	NA	NA	NA	NA	<0.0002	<0.0004	<0.0002	<0.0001	<0.0002	<0.0003	<0.0015
MW-2	6/30/95	0.04	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.005
	6/10/98	NA	NA	NA	NA	NA	<0.005	0.0059	<0.005	<0.002	<0.002	<0.002	<0.005
	7/31/98	< 0.010	NA	NA	< 0.02	< 0.02	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.005
MW-3	6/30/95	0.05	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.005
	6/10/98	NA	NA	NA	NA	NA	0.0094	<0.005	0.005	<0.002	<0.002	<0.002	<0.005
	7/31/98	< 0.010	NA	NA	< 0.02	0.03	0.007	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/30/99	NA	NA	NA	NA	NA	0.0058	0.0019	<0.001	<0.001	<0.001	<0.001	<0.002
	2/26/03	NA	NA	NA	NA	NA	<0.0002	<0.0004	<0.0002	<0.0001	<0.0002	<0.0003	<0.0015
MW-4	6/30/95	< 0.010	NA	NA	NA	NA	<0.005	1.560	0.376	0.065	<0.002	<0.002	<0.005
	6/10/98	NA	NA	NA	NA	NA	<0.005	2.900	0.310	<0.002	<0.002	<0.002	<0.005
	7/29/98	0.33	NA	NA	< 0.02	0.39	<0.002	2.800	0.350	0.013	<0.002	<0.002	<0.005
	6/30/99	NA	NA	NA	NA	NA	<0.025	3.700	0.460	<0.001	<0.025	<0.025	<0.050
	2/26/03	NA	NA	NA	NA	NA	<0.0002	2.200	0.290	0.017	<0.0002	<0.0003	<0.0015
	5/21/03	NA	NA	NA	NA	NA	<0.0002	1.300	0.200	0.0034	<0.0002	<0.0003	<0.0015
	6/13/03	NA	NA	NA	NA	NA	<0.0002	2.200	0.190	0.0022	<0.0002	<0.0003	<0.0015
	7/18/03	NA	NA	NA	NA	NA	<0.007	1.500	0.200	0.0068	<0.009	<2.300	<10.000
	8/14/03	NA	NA	NA	NA	NA	<0.00022	1.600	0.200	0.0020	<0.00019	<0.00032	<0.0015
	2/19/04	NA	NA	NA	NA	NA	<0.007	1.800	0.370	0.013	<0.009	<2.300	<10.000
	3/29/04	NA	NA	NA	NA	NA	<0.005	1.700	0.130	0.021	<0.005	<0.005	<0.015
	5/19/04	NA	NA	NA	NA	NA	<0.005	0.890	0.110	0.0087	<0.005	<0.005	<0.015
	8/23/04	NA	NA	NA	NA	NA	<0.005	1.400	0.180	0.0074	<0.005	<0.005	<0.015
	5/30/06	< 0.010	NA	NA	NA	2.83	<0.005	1.100	0.170	0.0088	<0.005	<0.005	<0.015
	10/22/09	NA	NA	NA	NA	NA	0.00025 J	0.400	0.079	0.015	<0.00028	<0.00025	<0.00068
	7/28/10	NA	NA	NA	NA	NA	<0.005	0.690	0.200	0.025	<0.005	<0.005	<0.015
	3/31/11	NA	NA	NA	NA	NA	<0.005	0.410	0.110	0.0048	<0.005	<0.005	<0.015
	1/11/12	NA	NA	NA	NA	0.0725	NA	NA	NA	NA	NA	NA	NA
	11/28/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/22/13	< 0.010	< 0.010	< 0.010	NA	0.203	< 0.005	0.380	0.120	0.015	< 0.005	< 0.005	< 0.005
	1/7/14	NA	NA	NA	NA	NA	< 0.005	0.290	0.097	0.011	< 0.005	< 0.005	< 0.005
MW-5	7/30/98	0.01	NA	NA	< 0.02	< 0.02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/28/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
	8/9/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	NA	NA	NA	NA
	9/3/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	NA	NA	NA	NA
	3/13/03	NA	NA	NA	NA	NA	<0.0002	0.030	<0.0002	<0.0001	<0.0002	<0.0003	<0.0015
	5/30/06	NA	NA	NA	NA	< 0.02	<0.005	<0.005	<0.005	<0.002	<0.005	<0.005	<0.015
MW-6	7/30/98	0.01	NA	NA	< 0.02	< 0.02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/28/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
	2/25/03	NA	NA	NA	NA	NA	<0.0002	<0.0004	<0.0002	<0.0001	<0.0002	<0.0003	<0.0015
MW-7	7/30/98	< 0.010	NA	NA	< 0.02	< 0.02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/29/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
	3/13/03	NA	NA	NA	NA	NA	<0.0002	<0.0004	<0.0002	<0.0001	<0.0002	<0.0003	<0.0015
MW-8	7/15/98	NA	NA	NA	NA	NA	0.007	<0.002	0.003	<0.002	<0.002	<0.002	<0.005
	7/31/98	< 0.010	NA	NA	0.03	< 0.02	0.008	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/8/99	NA	NA	NA	NA	NA	0.014	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/28/99	NA	NA	NA	NA	NA	0.016	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.002
MW-8D	6/17/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	NA	NA	NA	NA

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Albany, Georgia

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		Total Chromium	Hexavalent Chromium	Trivalent Chromium	Cyanide	Nickel	1,1-Dichloroethene	cis-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Benzene	Ethylbenzene	Xylenes (Total)
GW Delineation Standard		0.10	0.01	0.01	0.20	0.10	0.007	0.07	0.005	0.002	0.005	0.7	10
GW Cleanup Standard		0.10	0.01	153	2.04	2.04	0.58	0.204	0.038	0.0033	0.0088	0.70	10
MW-9	7/29/98	< 0.010	NA	NA	< 0.02	< 0.02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/28/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
	8/6/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	NA	NA	NA	NA
	2/25/03	NA	NA	NA	NA	NA	<0.0002	<0.0004	<0.0002	<0.0001	<0.0002	<0.0003	<0.0015
	2/21/08	NA	NA	NA	NA	NA	<0.007	NA	NA	NA	NA	NA	NA
MW-10	7/29/98	0.01	NA	NA	< 0.02	< 0.02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/29/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
	3/13/03	NA	NA	NA	NA	NA	<0.0002	<0.0004	<0.0002	<0.0001	<0.0002	<0.0003	<0.0015
MW-11	7/30/98	0.04	NA	NA	< 0.02	<0 .04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/28/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
	9/13/99	0.37[a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/25/03	NA	NA	NA	NA	NA	<0.0002	<0.0004	<0.0002	<0.0001	<0.0002	<0.0003	<0.0015
	2/21/08	0.0404	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/21/09	0.0250	0.0300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/29/10	0.1930	0.0322	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/29/11	0.0285	0.0243	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/23/13	0.0459	0.0402	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/7/14	0.0319	0.0351	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-12	7/30/98	< 0.010	NA	NA	< 0.02	< 0.02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/28/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
	2/25/03	NA	NA	NA	NA	NA	<0.0002	<0.0004	<0.0002	<0.0001	<0.0002	<0.0003	<0.0015
	7/28/10	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.002	<0.005	<0.005	<0.015
	3/28/11	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.002	<0.005	<0.005	<0.015
MW-13	10/26/98	NA	NA	NA	NA	NA	<0.002	<0.002	<0.002	<0.002	0.014	0.770	4.5
	6/28/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
	2/25/03	NA	NA	NA	NA	NA	<0.0002	<0.0004	<0.0002	<0.0001	<0.0002	<0.0003	<0.0015
	3/20/10	< 0.010	< 0.010	NA	NA	NA	<0.005	<0.005	<0.005	<0.002	<0.005	<0.005	<0.015
	7/28/10	< 0.010	< 0.010	NA	NA	NA	<0.005	<0.005	<0.005	<0.002	<0.005	<0.005	<0.015
	3/29/11	< 0.010	< 0.010	NA	NA	NA	<0.005	<0.005	<0.005	<0.002	<0.005	<0.005	<0.015
MW-14	10/27/98	NA	NA	NA	NA	NA	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
	6/28/99	NA	NA	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
	2/25/03	NA	NA	NA	NA	NA	<0.0002	<0.0004	<0.0002	<0.0001	<0.0002	<0.0003	<0.0015
MW-15	10/26/98	NA	NA	NA	NA	NA	0.057	<0.002	0.004	<0.002	<0.002	<0.002	<0.005
	6/30/99	NA	NA	NA	NA	NA	0.340	<0.002	0.032	<0.002	<0.002	<0.002	<0.004
	2/26/03	NA	NA	NA	NA	NA	0.066	< 0.0004	0.008	< 0.0001	< 0.0002	< 0.0003	< 0.0015
MW-16	10/26/98	NA	NA	NA	NA	NA	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.005
	6/29/99	NA	NA	NA	NA	NA	< 0.001	< 0.001	0.0017	< 0.001	< 0.001	< 0.001	< 0.0002
	8/6/99	NA	NA	NA	NA	NA	< 0.001	0.0018	0.004	NA	NA	NA	NA
	9/3/99	NA	NA	NA	NA	NA	< 0.001	0.0012	< 0.001	NA	NA	NA	NA
	9/13/00	NA	NA	NA	< 0.01	NA	< 0.001	0.0015	0.0029	< 0.001	< 0.001	< 0.001	< 0.002
	2/25/03	NA	NA	NA	NA	NA	< 0.0002	< 0.0004	< 0.0002	<0.0001	< 0.0002	< 0.0003	< 0.0015
MW-17	6/28/99	NA	NA	NA	NA	NA	< 0.001	<0.001	<0.001	< 0.001	< 0.001	< 0.001	< 0.002
	8/9/99	NA	NA	NA	NA	NA	< 0.001	< 0.001	< 0.001	NA	NA	NA	NA
	2/25/03	NA	NA	NA	NA	NA	< 0.0002	<0.0004	< 0.0002	<0.0001	< 0.0002	< 0.0003	< 0.0015
MW-18	6/26/99	NA	NA	NA	NA	NA	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002
	8/9/99	NA	NA	NA	NA	NA	< 0.001	<0.001	<0.001	NA	NA	NA	NA
	9/13/99	< 0.010	NA	NA	NA	< 0.04	NA	NA	NA	NA	NA	NA	NA
MW-19	6/28/99	NA	NA	NA	NA	NA	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002
	8/9/99	NA	NA	NA	NA	NA	< 0.001	<0.001	<0.001	NA	NA	NA	NA
	2/26/03	NA	NA	NA	NA	NA	< 0.0002	< 0.0004	< 0.0002	< 0.0001	<0.0002	<0.0003	< 0.0015
	7/28/10	0.0117	0.0139	NA	NA	NA	< 0.005	< 0.005	< 0.005	< 0.002	< 0.005	< 0.005	< 0.015
	3/29/11	< 0.010	< 0.010	NA	NA	NA	< 0.005	< 0.005	< 0.005	< 0.002	< 0.005	< 0.005	< 0.015
	10/23/13	0.296	0.284 J	0.0113 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/8/14	0.196	0.199	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/8/14 Dup	0.204	0.198	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA

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		Total Chromium	Hexavalent Chromium	Trivalent Chromium	Cyanide	Nickel	1,1-Dichloroethene	cis-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Benzene	Ethylbenzene	Xylenes (Total)
GW Delineation Standard		0.10	0.01	0.01	0.20	0.10	0.007	0.07	0.005	0.002	0.005	0.7	10
GW Cleanup Standard		0.10	0.01	153	2.04	2.04	0.58	0.204	0.038	0.0033	0.0088	0.70	10
MW-20	8/17/99	NA	NA	NA	NA	NA	0.0047	< 0.001	0.0016	NA	NA	NA	NA
	9/3/99	NA	NA	NA	NA	NA	0.0073	< 0.001	< 0.001	NA	NA	NA	NA
	9/13/00	NA	NA	NA	< 0.01	NA	0.0085	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002
	2/25/03	NA	NA	NA	NA	NA	< 0.0002	<0.0004	< 0.0002	< 0.0001	< 0.0002	< 0.0003	< 0.0015
MW-21	3/13/03	NA	NA	NA	NA	NA	< 0.0002	0.030	< 0.0002	< 0.0001	< 0.0002	< 0.0003	< 0.0015
MW-22	3/13/03	NA	NA	NA	NA	NA	< 0.0002	< 0.0004	0.007	< 0.0001	< 0.0002	< 0.0003	< 0.0015
	5/30/06	NA	NA	NA	NA	< 0.02	< 0.005	0.0084	0.0090	< 0.002	< 0.005	< 0.005	< 0.015
	10/22/09	NA	NA	NA	NA	NA	< 0.00024	0.0062	0.0053	< 0.00029	< 0.00028	< 0.00025	< 0.00068
	7/28/10	NA	NA	NA	NA	NA	< 0.005	0.0095	0.0089	<0.002	< 0.005	< 0.005	< 0.015
	3/31/11	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	<0.002	< 0.005	< 0.005	< 0.015
	11/28/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-23	3/13/03	NA	NA	NA	NA	NA	< 0.0002	0.030	< 0.0002	< 0.0001	< 0.0002	< 0.0003	< 0.0015
	5/30/06	NA	NA	NA	NA	< 0.02	< 0.005	< 0.005	< 0.002	< 0.002	< 0.005	< 0.005	< 0.015
	2/8/08	0.33	NA	NA	NA	< 0.02	NA	NA	NA	NA	NA	NA	NA
	10/22/09	NA	NA	NA	NA	NA	<0.00024	0.0012	0.00059J	< 0.00029	< 0.00028	< 0.00025	< 0.00068
	7/28/10	NA	NA	NA	NA	NA	< 0.005	0.0089	< 0.005	<0.002	< 0.005	< 0.005	< 0.015
	3/29/11	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	<0.002	< 0.005	< 0.005	< 0.005
	10/2/12	< 0.010	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/22/13	< 0.010	< 0.010	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-24	4/9/08	0.386	NA	NA	NA	< 0.02	NA	NA	NA	NA	NA	NA	NA
	10/21/09	0.11	0.11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/29/10	0.108	0.107	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/29/10 Dup	0.109	0.110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/30/11	0.120	0.0945	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/11/12	0.153[b]	0.125[b]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/2/12	0.138[c]	0.105	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/2/12 Dup	0.139	0.116	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/23/13	0.0829	0.0513	0.0316	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-25	10/22/09	NA	NA	NA	NA	NA	< 0.00024	0.004	0.0018	< 0.00029	< 0.00028	<0.00025	< 0.00068
	7/28/10	NA	NA	NA	NA	NA	< 0.005	0.011	0.0055	< 0.002	< 0.005	< 0.005	< 0.015
	3/29/11	NA	NA	NA	NA	NA	< 0.005	0.0083	< 0.005	< 0.002	< 0.005	< 0.005	< 0.015
MW-26	11/29/12	0.175	0.184	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/29/12 Dup	0.175	0.180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/20/2013	0.0959	< 0.010	0.0959	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/20/2013 Dup	0.0979	< 0.010	0.0979	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/9/2013	0.0337	0.031	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/24/2013	< 0.010	< 0.010	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/24/2013 Dup	< 0.010	< 0.010	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/8/2014	< 0.010	< 0.010	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spartan MW-2	2/21/2013	0.0101	< 0.050	0.0101	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/8/2013	< 0.010	< 0.010	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/8/2013 Dup	< 0.010	< 0.010	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA
Supply Well	9/22/98	NA	NA	NA	NA	NA	0.003	< 0.002	0.003	< 0.002	< 0.002	< 0.002	< 0.005
	6/15/99	NA	NA	NA	NA	NA	0.0011	< 0.001	0.0026	< 0.001	< 0.001	< 0.001	< 0.002
	3/12/03	NA	NA	NA	NA	NA	0.006	< 0.0004	< 0.0002	< 0.0001	< 0.0002	< 0.0003	< 0.0015
DB-SW-1 (Surface Water)	10/20/09	0.0027J	NA	NA	NA	< 0.0022	NA	NA	NA	NA	NA	NA	NA
TW-1	3/18/2014	0.160	0.143	0.017	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-2	3/18/2014	0.034	0.020 J	0.014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/18/2014 Dup	0.034	0.026 J	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-3	3/18/2014	0.076	0.068	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-4	3/18/2014	0.125	0.110	0.015	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-5	3/19/2014	0.075	0.070 J	< 0.01 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-6	3/19/2014	0.020	< 0.01	0.019	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-7	3/19/2014	< 0.01	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-8	3/19/2014	0.020	0.013	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-9	3/20/2014	0.015 J	< 0.01 UJ	0.015 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-10	3/20/2014	0.011	< 0.01	0.011	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Albany, Georgia

Well ID	Sampling Date	Inorganics: Concentration (mg/L)					Organics: Concentration (mg/L)						
		Total Chromium	Hexavalent Chromium	Trivalent Chromium	Cyanide	Nickel	1,1-Dichloroethene	cis-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Benzene	Ethylbenzene	Xylenes (Total)
GW Delineation Standard		0.10	0.01	0.01	0.20	0.10	0.007	0.07	0.005	0.002	0.005	0.7	10
GW Cleanup Standard		0.10	0.01	153	2.04	2.04	0.58	0.204	0.038	0.0033	0.0088	0.70	10
TW-11	3/20/2014	1.740	1.490	0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2014 Dup	1.730	1.460	0.274	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-12	3/20/2014	0.011	< 0.01	0.011	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-13	3/21/2014	0.060	0.056	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-14	3/21/2014	0.587	0.580	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-15	3/22/2014	< 0.01	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-16	6/2/2014	0.018	< 0.01	0.018	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-17	3/22/2014	0.116	0.102	0.014	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-18	3/23/2014	0.107	0.098	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-20	3/23/2014	0.199	0.185	0.013	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-22	3/21/2014	0.019	0.017	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-23	3/24/2014	< 0.01	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-24	3/24/2014	0.021	0.013	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-25	3/23/2014	0.086	0.075	0.011	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-26	3/25/2014	0.083	0.068 J	0.015 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-27	3/25/2014	0.168	0.147 J	0.022 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-28	3/25/2014	0.039	0.024	0.015	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-29	3/26/2014	< 0.01	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-30	3/25/2014	0.064	0.047	0.017	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-31	6/4/2013	0.024	0.013	0.011	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-32	6/4/2013	< 0.01	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-33	6/5/2014	< 0.01	< 0.01 UJ	< 0.01 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/5/2014 Dup	< 0.01	< 0.01 UJ	< 0.01 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-34	6/5/2014	< 0.01	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-35	6/5/2014	< 0.01	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-36	6/3/2014	0.041	0.028 J	0.012 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-37	6/3/2014	0.015	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-38	6/4/2014	< 0.01	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-39	6/4/2014	0.040	0.034 J	< 0.01 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-40	6/3/2014	< 0.01	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-41	6/3/2014	0.049	0.037	0.012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/3/2014 Dup	0.050	0.038	0.012	NA	NA	NA	NA	NA	NA	NA	NA	NA
TW-42	6/2/2014	< 0.01	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA -Sample not analyzed for this parameter.

J - Result qualified as estimated by the laboratory or as the result of data verification.

Dup - Duplicate sample

mg/L - milligrams per liter

[a] MW-11 sample from 9/13/99 was highly turbid at time of sample collection; data not representative of groundwater conditions.

[b] MW-24 samples from 1/11/12 were highly turbid at time of sample collection. Concentrations of dissolved total chromium and dissolved hexavalent chromium were 0.122 mg/L and 0.115 mg/L, respectively.

[c] MW-24 samples from 10/2/12 were highly turbid at time of sample collection. Concentration of total dissolved chromium in the parent and duplicate samples was 0.134 mg/L. The samples were not analyzed for dissolved hexavalent chromium.

Purple Highlight - Indicates concentration is greater than delineation standard.

Orange Highlight - Indicates concentration is greater than delineation and cleanup standard.

Table 6. Historical Soil Detections of Site COCs
Former MacGregor Golf Company
Albany, Georgia

Location	Sample Depth (feet)	Sampling Date	Inorganics: Concentration (mg/kg)					Organics: Concentration (mg/kg)						
			Total Chromium	Hexavalent Chromium	Trivalent Chromium	Cyanide	Nickel	1,1-Dichloroethene	cis-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Benzene	Ethylbenzene	Xylenes (Total)
Soil Delineation Standard			100	2.0	2.5	20	50	0.7	7.0	0.5	0.2	0.5	70	1,000
Soil Cleanup Standard			1,200	3.84	3,066,000	412.9	2,665	4.18	7.0	0.5	0.2	0.5	70	1,000
SB-1	0-2	7/27/98	12	NA	NA	< 0.2	2.9	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
	0-2 D	7/27/98	5.3	NA	NA	< 0.2	2.6	< 0.005	0.015	< 0.005	NA	NA	NA	< 0.005
	28-30	7/27/98	6.7	NA	NA	< 0.2	13	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
SB-2	0-2[a]	7/25/98	7.6	NA	NA	0.2	4	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.007
	0-2[b]	7/25/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
	29-31[a]	7/25/98	2.7	NA	NA	< 0.2	2.7	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.005
	29-31[b]	7/25/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
	34-36	7/25/98	9.4	NA	NA	0.4	14	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
SB-3	2-4[a]	7/24/98	4.2	NA	NA	3.7	300	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.019
	2-4[b]	7/24/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
	8-10[a]	7/24/98	3.8	NA	NA	< 0.2	620	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.017
	8-10[b]	7/24/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
	34-36[a]	7/24/98	12	NA	NA	0.5	23	< 0.005	1 E	0.45 E	NA	NA	NA	0.019
	34-36[b]	7/25/98	NA	NA	NA	NA	NA	< 0.005	0.1	0.04	NA	NA	NA	< 0.005
SB-4	0-2[a]	7/25/98	530	NA	NA	0.2	52	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.008
	0-2[b]	7/25/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.0024 E
	29-31[a]	7/25/98	1.8	NA	NA	< 0.2	< 2	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.01
	29-31[b]	7/25/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
	34-36[a]	7/24/98	8.6	NA	NA	0.3	5.2	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.008
	34-36[b]	7/24/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
MW-5	3-5[a]	7/18/98	4	NA	NA	< 0.2	< 2	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.02
	3-5[b]	7/18/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
	8-10[a]	7/18/98	6.1	NA	NA	< 0.2	< 2	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.018
	8-10[b]	7/18/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
	32-34[a]	7/18/98	< 1	NA	NA	< 0.2	< 2	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.012
	32-34[b]	7/18/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
MW-6	13-15[a]	7/21/98	13	NA	NA	< 0.2	< 1	< 0.005	< 0.005	< 0.005	NA	NA	NA	0.023
	13-15[b]	7/21/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
SB-5	0-2	10/23/98	6.8	NA	NA	NA	< 2	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
	8-10	10/23/98	5.5	NA	NA	NA	< 2	NA	NA	NA	NA	NA	NA	NA
	34-36	10/23/98	45	NA	NA	NA	28	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
SB-6	0-2	10/23/98	650	NA	NA	NA	61	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
	8-10	10/23/98	7.2	NA	NA	NA	< 2	NA	NA	NA	NA	NA	NA	NA
	20-22	10/23/98	NA	NA	NA	NA	NA	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
	34-36	10/23/98	30	NA	NA	NA	24	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005
SB-7	0-2	6/24/99	9.9	NA	NA	< 1.1	< 4.3	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.01
	8-10	6/24/99	7.1	NA	NA	< 1.1	< 4.3	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.009
	18-20	6/24/99	2.6	NA	NA	< 1.1	< 4.4	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0096
SB-8	0-2	6/24/99	10	NA	NA	< 1.1	< 4.3	< 0.004	< 0.004	< 0.004	NA	NA	NA	< 0.0084
	8-10	6/24/99	6.3	NA	NA	< 1.1	< 4.3	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0092
	18-20	6/24/99	4.7	NA	NA	< 1.1	< 4.3	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0094
SB-9	0-2	6/24/99	14	NA	NA	< 1.1	< 4.4	< 0.004	< 0.004	< 0.004	NA	NA	NA	< 0.0087
	8-10	6/24/99	10	NA	NA	< 1.1	< 4.3	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0094
	18-20	6/24/99	2.6	NA	NA	< 1.1	< 4.3	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.009
SB-10	0-2	6/24/99	8.3	NA	NA	< 1.1	< 4.5	< 0.004	< 0.004	< 0.004	NA	NA	NA	< 0.0086
	8-10	6/24/99	7.8	NA	NA	< 1.1	< 4.4	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.009
	18-20	6/24/99	3.9	NA	NA	< 1.1	< 4.5	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0094
SB-11	0-2	6/24/99	8.1	NA	NA	< 1.1	4.9	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0093
	8-10	6/24/99	12	NA	NA	< 1.1	< 4.5	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0094
	18-20	6/24/99	8.4	NA	NA	< 1.1	< 4.5	< 0.004	< 0.004	< 0.004	NA	NA	NA	< 0.0089
SB-12	0-2	6/24/99	7.9	NA	NA	< 1.1	< 4.3	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.01
	8-10	6/24/99	6.9	NA	NA	< 1.1	< 4.6	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0094
	18-20	6/24/99	23	NA	NA	< 1.1	< 4.4	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0091
SB-13	0-2	6/24/99	17	NA	NA	< 1.1	6.3	< 0.004	< 0.004	< 0.004	NA	NA	NA	< 0.0089
	8-10	6/24/99	22	NA	NA	< 1.1	< 4.4	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.01
	18-20	6/24/99	5.2	NA	NA	< 1.1	< 4.4	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0096

Table 6. Historical Soil Detections of Site COCs
Former MacGregor Golf Company
Albany, Georgia

Location	Sample Depth (feet)	Sampling Date	Inorganics: Concentration (mg/kg)					Organics: Concentration (mg/kg)						
			Total Chromium	Hexavalent Chromium	Trivalent Chromium	Cyanide	Nickel	1,1-Dichloroethene	cis-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Benzene	Ethylbenzene	Xylenes (Total)
Soil Delineation Standard			100	2.0	2.5	20	50	0.7	7.0	0.5	0.2	0.5	70	1,000
Soil Cleanup Standard			1,200	3.84	3,066,000	412.9	2,665	4.18	7.0	0.5	0.2	0.5	70	1,000
SB-14	0-2	6/24/99	7.8	NA	NA	< 1.1	< 8.7	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.01
	8-10	6/24/99	9.9	NA	NA	< 1.1	< 4.3	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0093
	18-20	6/24/99	9	NA	NA	< 1.1	< 4.4	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0092
SB-15	0-2	6/25/99	60	NA	NA	< 1.1	< 4.5	< 0.004	< 0.004	< 0.004	NA	NA	NA	< 0.0089
	8-10	6/25/99	280	NA	NA	< 1.3	39	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.01
	18-20	6/25/99	2	NA	NA	< 1.1	< 4.2	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0094
SB-16	0-2	6/25/99	390	NA	NA	< 1.2	68	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.011
	8-10	6/25/99	15	NA	NA	< 1.1	< 4.4	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.0092
	18-20	6/25/99	2.8	NA	NA	< 1.1	< 4.3	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.009
SB-17	0-2	8/5/99	74	NA	NA	NA	6.4	NA	NA	NA	NA	NA	NA	NA
	8-10	8/5/99	88	NA	NA	NA	82	NA	NA	NA	NA	NA	NA	NA
	18-20	8/5/99	8.9	NA	NA	NA	22	NA	NA	NA	NA	NA	NA	NA
SB-17A	18-20	9/3/99	8.7	NA	NA	NA	7.7	NA	NA	NA	NA	NA	NA	NA
	23-25	9/3/99	31	NA	NA	NA	61	NA	NA	NA	NA	NA	NA	NA
	28-30	11/26/12	NA	NA	NA	NA	48.3	NA	NA	NA	NA	NA	NA	NA
SB-18	0-2	8/5/99	730	NA	NA	NA	39	NA	NA	NA	NA	NA	NA	NA
	8-10	8/5/99	29	NA	NA	NA	6.7	NA	NA	NA	NA	NA	NA	NA
	18-20	8/5/99	4.9	NA	NA	NA	< 4.2	NA	NA	NA	NA	NA	NA	NA
SB-19	0-2	8/5/99	32	NA	NA	NA	8.6	NA	NA	NA	NA	NA	NA	NA
	8-10	8/5/99	9.3	NA	NA	NA	< 4.5	NA	NA	NA	NA	NA	NA	NA
	18-20	8/5/99	3.8	NA	NA	NA	< 4	NA	NA	NA	NA	NA	NA	NA
SB-20	0-2	8/5/99	7.2	NA	NA	NA	< 8.5	NA	NA	NA	NA	NA	NA	NA
	8-10	8/5/99	11	NA	NA	NA	< 4.5	NA	NA	NA	NA	NA	NA	NA
	18-20	8/5/99	9.8	NA	NA	NA	< 4.7	NA	NA	NA	NA	NA	NA	NA
SB-21	0-2	8/5/99	5.3	NA	NA	NA	< 3.9	NA	NA	NA	NA	NA	NA	NA
	8-10	8/5/99	22	NA	NA	NA	< 4.4	NA	NA	NA	NA	NA	NA	NA
	18-20	8/5/99	12	NA	NA	NA	< 4.7	NA	NA	NA	NA	NA	NA	NA
SB-22	0-2	8/5/99	13	NA	NA	NA	< 3.9	NA	NA	NA	NA	NA	NA	NA
	8-10	8/5/99	15	NA	NA	NA	< 4.1	NA	NA	NA	NA	NA	NA	NA
	18-20	8/5/99	6.6	NA	NA	NA	< 4.1	NA	NA	NA	NA	NA	NA	NA
SB-23	0-2	8/5/99	7.5	NA	NA	NA	< 4.3	NA	NA	NA	NA	NA	NA	NA
	8-10	8/5/99	7.8	NA	NA	NA	< 4.3	NA	NA	NA	NA	NA	NA	NA
	18-20	8/5/99	9.2	NA	NA	NA	< 4.5	NA	NA	NA	NA	NA	NA	NA
SB-24	0-2	9/13/00	28	NA	NA	NA	< 4.2	NA	NA	NA	NA	NA	NA	NA
SB-25	0-2	9/13/00	190	NA	NA	NA	22	NA	NA	NA	NA	NA	NA	NA
SB-26	0-2	9/13/00	170	NA	NA	NA	18	NA	NA	NA	NA	NA	NA	NA
MW-17	0-2	6/16/99	6.6	NA	NA	< 1.1	< 4.2	NA	NA	NA	NA	NA	NA	NA
	8-10	6/17/99	21	NA	NA	< 1.1	< 4.3	NA	NA	NA	NA	NA	NA	NA
	18-20	6/17/99	5.8	NA	NA	< 1.1	< 4.4	NA	NA	NA	NA	NA	NA	NA
MW-18	0-2	6/16/99	16	NA	NA	< 1.1	6.2	NA	NA	NA	NA	NA	NA	NA
	8-10	6/16/99	19	NA	NA	< 1.2	< 4.7	NA	NA	NA	NA	NA	NA	NA
	18-20	6/16/99	7.1	NA	NA	< 1.1	< 4.4	NA	NA	NA	NA	NA	NA	NA
MW-20	0-2	8/5/99	18	NA	NA	NA	5.4	NA	NA	NA	NA	NA	NA	NA
	8-10	8/5/99	16	NA	NA	NA	< 5.1	NA	NA	NA	NA	NA	NA	NA
	18-20	8/5/99	2.1	NA	NA	NA	< 4.2	NA	NA	NA	NA	NA	NA	NA
B-1	10-15	5/24/05	NA	NA	NA	NA	NA	< 0.0032	0.0062	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
	20-25	5/24/05	NA	NA	NA	NA	NA	< 0.0032	< 0.0036	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
	35-40	5/24/05	NA	NA	NA	NA	NA	< 0.0032	0.12	0.01	< 0.0071	0.0042	< 0.0036	< 0.0036
B-2	5-10	5/24/05	NA	NA	NA	NA	NA	< 0.0032	< 0.0036	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
	25-30	5/24/05	NA	NA	NA	NA	NA	< 0.0032	0.11	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
B-3	5-10	5/24/05	NA	NA	NA	NA	NA	< 0.0034	< 0.0034	< 0.0034	< 0.0069	< 0.0034	32	130
	15-20	5/24/05	NA	NA	NA	NA	NA	< 0.0032	0.018	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036

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Albany, Georgia

Location	Sample Depth (feet)	Sampling Date	Inorganics: Concentration (mg/kg)					Organics: Concentration (mg/kg)						
			Total Chromium	Hexavalent Chromium	Trivalent Chromium	Cyanide	Nickel	1,1-Dichloroethene	cis-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Benzene	Ethylbenzene	Xylenes (Total)
Soil Delineation Standard			100	2.0	2.5	20	50	0.7	7.0	0.5	0.2	0.5	70	1,000
Soil Cleanup Standard			1,200	3.84	3,066,000	412.9	2,665	4.18	7.0	0.5	0.2	0.5	70	1,000
B-4	5-10	5/24/05	NA	NA	NA	NA	NA	0.013	11	< 0.0036	1.5	0.0098	4.00	16.6
	9-10	11/26/12	NA	NA	NA	NA	NA	NA	25	NA	1.5	NA	NA	NA
	9-10	11/26/12 Dup	NA	NA	NA	NA	NA	NA	37	NA	1.4	NA	NA	NA
	15-20	5/24/05	NA	NA	NA	NA	NA	0.025	0.32	0.0056	< 0.0071	< 0.0036	0.0061	0.028
	25-30	5/24/05	NA	NA	NA	NA	NA	0.025	2.1	0.014	< 0.0071	< 0.0036	0.67	3.21
	9-10	11/26/12	NA	NA	NA	NA	NA	NA	25	NA	1.5	NA	NA	NA
	9-10	11/26/12 Dup	NA	NA	NA	NA	NA	NA	37	NA	1.4	NA	NA	NA
B-4a	3-4	2/22/13	NA	NA	NA	NA	NA	NA	1.500	NA	< 0.0087	NA	NA	NA
	7-8	2/22/13	NA	NA	NA	NA	NA	NA	0.110	NA	< 0.011	NA	NA	NA
	10-11	2/22/13	NA	NA	NA	NA	NA	NA	0.140	NA	< 0.013	NA	NA	NA
	15-19	2/22/13	NA	NA	NA	NA	NA	NA	0.130	NA	< 0.015	NA	NA	NA
B-5	15-20	5/25/05	NA	NA	NA	NA	NA	< 0.0032	< 0.0036	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
	25-30	5/25/05	NA	NA	NA	NA	NA	< 0.0032	< 0.0036	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
B-6	5-10	5/25/05	NA	NA	NA	NA	NA	< 0.0032	< 0.0036	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
	25-30	5/25/05	NA	NA	NA	NA	NA	< 0.0032	< 0.0036	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
B-7	5-10	5/25/05	NA	NA	NA	NA	NA	< 0.0032	< 0.0036	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
	15-20	5/25/05	NA	NA	NA	NA	NA	< 0.0032	< 0.0036	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
B-8	0-5	5/25/05	NA	NA	NA	NA	NA	< 0.0032	< 0.0036	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
	15-20	5/25/05	NA	NA	NA	NA	NA	< 0.0032	< 0.0036	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
B-10	5-10	5/25/05	NA	NA	NA	NA	NA	< 0.0032	< 0.0036	< 0.0036	< 0.0071	< 0.0036	< 0.0036	< 0.0036
SB-27	0-2	2/20/08	58.60	NA	NA	NA	13.10	NA	NA	NA	NA	NA	NA	NA
	2-4	2/20/08	52.90	NA	NA	NA	11.50	NA	NA	NA	NA	NA	NA	NA
SB-28	0-2	2/20/08	89.60	NA	NA	NA	15.70	NA	NA	NA	NA	NA	NA	NA
	2-4	2/20/08	49.60	NA	NA	NA	18.20	NA	NA	NA	NA	NA	NA	NA
SB-29	0-2	2/20/08	133	NA	NA	NA	11.10	NA	NA	NA	NA	NA	NA	NA
	2-4	2/20/08	16.70	NA	NA	NA	< 4.34	NA	NA	NA	NA	NA	NA	NA
SB-30	0-2	2/20/08	5.47	NA	NA	NA	< 5.80	NA	NA	NA	NA	NA	NA	NA
SB-31	0-2	2/20/08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8-10	2/20/08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-31	23-25	2/20/08	< 2.20	NA	NA	NA	< 4.41	NA	NA	NA	NA	NA	NA	NA
	30-32	2/20/08	5.72	NA	NA	NA	< 5.30	< 0.0095	< 0.0095	< 0.0095	< 0.0095	< 0.019	< 0.0095	< 0.0095
SB-32	0-2	2/20/08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8-10	2/20/08	13.00	NA	NA	NA	< 5.32	NA	NA	NA	NA	NA	NA	NA
	23-25	2/20/08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-33	0-2	2/20/08	NA	NA	NA	< 1.08	NA	NA	NA	NA	NA	NA	NA	NA
	34-36	2/20/08	6.53	NA	NA	NA	< 4.5	NA	NA	NA	NA	NA	NA	NA
	40-42	2/20/08	8.70	NA	NA	NA	< 5.73	NA	NA	NA	NA	NA	NA	NA
SB-34	34-36	2/20/08	22.50	NA	NA	NA	7.31	NA	NA	NA	NA	NA	NA	NA
SB-35	0-2	2/20/08	9.21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-36	0-2	4/8/08	8.56	NA	NA	NA	< 5.14	NA	NA	NA	NA	NA	NA	NA
SB-37	0--2	4/8/08	9.46	NA	NA	NA	< 4.41	NA	NA	NA	NA	NA	NA	NA
SB-38	0-2	4/8/08	6.39	NA	NA	NA	< 5.06	NA	NA	NA	NA	NA	NA	NA
	0-2	4/8/08 Dup	3.4	NA	NA	NA	< 5.06	NA	NA	NA	NA	NA	NA	NA
SB-39	34-36	4/8/08	12	NA	NA	NA	< 4.60	NA	NA	NA	NA	NA	NA	NA
DB-S1	0-1	10/20/09	5.9	< 0.37	5.9	NA	1.3	NA	NA	NA	NA	NA	NA	NA
DB-S2	0-1	10/20/09	45.0	< 0.75	45.0	NA	8.0	NA	NA	NA	NA	NA	NA	NA
	0-1 D	10/20/09	40.0	< 0.60	40.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
SED-1	0-3"	2000	3,300[c]	NA	NA	NA	210	NA	NA	NA	NA	NA	NA	NA
SED-2	0-3"	2000	500[c]	NA	NA	NA	240	NA	NA	NA	NA	NA	NA	NA
	0-3"	2000 Dup	490[c]	NA	NA	NA	270	NA	NA	NA	NA	NA	NA	NA
SED-3	0-1	10/20/09	1,400[d]	< 0.36	1,400	NA	NA	NA	NA	NA	NA	NA	NA	NA
SED-4	0-1	10/20/09	2,900[d]	< 0.42	2,900	NA	NA	NA	NA	NA	NA	NA	NA	NA
SED-5	0-1	10/20/09	2,400[d]	< 0.36	2,400	NA	NA	NA	NA	NA	NA	NA	NA	NA
SED-6	0-1	10/20/09	880	< 0.35	880	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 6. Historical Soil Detections of Site COCs
Former MacGregor Golf Company
Albany, Georgia

Location	Sample Depth (feet)	Sampling Date	Inorganics: Concentration (mg/kg)					Organics: Concentration (mg/kg)						
			Total Chromium	Hexavalent Chromium	Trivalent Chromium	Cyanide	Nickel	1,1-Dichloroethene	cis-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Benzene	Ethylbenzene	Xylenes (Total)
Soil Delineation Standard			100	2.0	2.5	20	50	0.7	7.0	0.5	0.2	0.5	70	1,000
Soil Cleanup Standard			1,200	3.84	3,066,000	412.9	2,665	4.18	7.0	0.5	0.2	0.5	70	1,000
GP-1	4-5	2/22/13	NA	NA	NA	NA	NA	NA	13	NA	< 0.0089	NA	NA	NA
	5-6	2/22/13	NA	NA	NA	NA	NA	NA	120	NA	0.023	NA	NA	NA
	14-15	2/22/13	NA	NA	NA	NA	NA	NA	0.110	NA	< 0.014	NA	NA	NA
	19-20	2/22/13	NA	NA	NA	NA	NA	NA	0.580	NA	< 0.008	NA	NA	NA
GP-2	4-5	2/22/13	NA	NA	NA	NA	NA	NA	0.066	NA	< 0.0093	NA	NA	NA
	7-8	2/22/13	NA	NA	NA	NA	NA	NA	< 0.006	NA	< 0.012	NA	NA	NA
	14-15	2/22/13	NA	NA	NA	NA	NA	NA	1.000	NA	< 0.014	NA	NA	NA
	18-19	2/22/13	NA	NA	NA	NA	NA	NA	0.540	NA	< 0.0067	NA	NA	NA
GP-3	4-5	2/22/13	NA	NA	NA	NA	NA	NA	< 0.0045	NA	< 0.009	NA	NA	NA
	7-8	2/22/13	NA	NA	NA	NA	NA	NA	0.100	NA	< 0.008	NA	NA	NA
	14-15	2/22/13	NA	NA	NA	NA	NA	NA	0.380	NA	< 0.008	NA	NA	NA
	17-18	2/22/13	NA	NA	NA	NA	NA	NA	0.082	NA	< 0.011	NA	NA	NA
GP-4	3-4	2/22/13	NA	NA	NA	NA	NA	NA	1.700	NA	0.033	NA	NA	NA
	9-10	2/22/13	NA	NA	NA	NA	NA	NA	< 0.0059	NA	< 0.012	NA	NA	NA
	14-15	2/22/13	NA	NA	NA	NA	NA	NA	< 0.0051	NA	< 0.010	NA	NA	NA
	17-18	2/22/13	NA	NA	NA	NA	NA	NA	0.075	NA	< 0.011	NA	NA	NA
GP-6	2-3	2/22/13	NA	NA	NA	NA	NA	NA	< 0.0047	NA	< 0.0095	NA	NA	NA
	8-9	2/22/13	NA	NA	NA	NA	NA	NA	0.076	NA	< 0.008	NA	NA	NA

NA - Sample not analyzed for this parameter.

Dup - Duplicate sample

mg/kg - milligrams per kilogram

E - Estimated (value above quantitation range)

J - Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an estimated value.

[a] Soil from lab-contaminated Encore samplers run for 8260 VOCs.

[b] Soil from soil jars run for 8260 VOCs.

[c] The area immediately surrounding SED-1 and SED-2 was resampled in 2009. Based on the speciation of samples SED-3 through SED-6, the chromium in SED-1 and SED-2 was assumed to be in trivalent form.

[d] Based on the speciation of samples SED-3 through SED-6, the chromium is in trivalent form.

Purple Highlight - Indicates concentration is greater than delineation standard.

Orange Highlight - Indicates concentration is greater than delineation and cleanup standard.

Table 7. Summary of Hours Invoiced by Professional Engineer This Period Former MacGregor Golf Company Albany, Georgia			
Certified PE	Month	Hours Invoiced	Description of Services
Trish Reifenberger, P.E. Georgia PE No. 20676	February 2014	17.50	*Reviewed monthly status updates and participated in monthly project status calls *Remedial evaluation oversight.
	March 2014	7.75	*Oversight during on-site monitoring activities. *Reviewed monthly status updates and participated in monthly project status calls
	April 2014	7.25	*Reviewed monthly status updates and participated in monthly project status calls
	May 2014	1.00	*Reviewed monthly status updates and participated in monthly project status calls
	June 2014	6.75	*Oversight during on-site monitoring activities. *Reviewed monthly status updates and participated in monthly project status calls
	July 2014 (as of 7/17/14)	7.00	*Reviewed monthly status updates and participated in monthly project status calls *Review of July 2014 Semiannual Progress Report.
Total Hours Invoiced this Period		47.25	

Appendix A: Temporary Well Boring Logs and Well Construction Diagrams

Brown AND Caldwell	**Project Name:** MacGregor Golf **Project Number:** 145096 **Project Location:** Albany, GA	**Permit Number:** NA	**Well No.** TW-1 **Page** 1 **of** 2

Geologist/Office	**Checked By:**	**Borehole Diameter:**	**Screen Diameter and Type:**	**Slot Size:**	**Total Boring Depth (ft)**
Brian Steele / Atlanta	Brian Steele	2"	Ultra Fine Pre Pack	0.010	35.5 ft.

Start/Finish Date	**Drilling Contractor:**	**Sampling:**	**Backfill:**
3/17/14 - 3/17/14	Atlas Geo	Continuous Core	Bentonite / Grout

Driller:	**Drilling Method:**	**Drilling Equipment:**	**Ground Surface Elev:** NA	**Easting:** 2292762.9 ft
David Hoilett	Direct Push	Geoprobe	**TOC Elev:** NA	**Northing:** 566015.3 ft

Depth (feet)	USC Soil Type	Description	Graphic Log: Sample Int / Lithology / Backfill	Readings (ppm)	Remarks
	TOP	Top soil, sand, trace organics, trace silt. Brown			Drilled to refusal with direct push, temporary monitoring well installed with direct push.
	ML/CL	Orange-brown SILT, trace CLAY. trace m Sand.			
	CL/ML	Reddish orange Silty CLAY, trace m Sand.			
5				0.0	
	SP/SC	Reddish CLAY and m Sand. Sand is gray to orange with banded coloration, dense CLAY.			
10				0.0	
	SP/SC	M SAND, weathered chert little (+) Clay. Quartz fragments, chert is light gray.			
15				0.0	
	CHERT	Chert, smooth blocky texture, hard. Saturated.			
	SC/SM	Clayey SILT, mf light brown Sand.			

Figure A1

WELL LOG

Brown AND Caldwell	**Project Name:** MacGregor Golf **Project Number:** 145096 **Project Location:** Albany, GA	**Permit Number:** NA	**Well No.** TW-1 **Page** 2 **of** 2

Depth (feet)	USC Soil Type	Description	Graphic Log: Sample Int	Graphic Log: Lithology	Graphic Log: Backfill	Readings (ppm)	Remarks
						0.0	
	CHERT	Weathered Chert lense with m SAND.					
	CL/GC	Brown CLAY, some (-) black Gravel, some Sand.					
	CHERT	Chert, weathered chert.					
	CHERT	Chert, dark red to gray					
25						0.0	
	CL/GC	Brown to red CLAY, little Gravel. Trace (-) Sand.					
	CL/ML	CLAY and SILT, some (+) m Sand.					
30						0.0	
	LS	SAND and weathered white weathered limestone. Saturated at 31.5, marly limestone.					
	LS	SAND and weathered marly limestone, very fine grained, white color. Refusal at 35.5 ft.					
35						0.0	

Brown AND Caldwell	**Project Name:** MacGregor Golf **Project Number:** 145096 **Project Location:** Albany, GA	**Permit Number:** NA	**Well No.** TW-11 **Page** 1 **of** 3

Geologist/Office	**Checked By:**	**Borehole Diameter:**	**Screen Diameter and Type:**	**Slot Size:**	**Total Boring Depth (ft)**
George Skala / Atlanta	Brian Steele	2"	Ultra Fine Pre Pack	0.010	60.0 ft.

Start/Finish Date	**Drilling Contractor:**	**Sampling:**	**Backfill:**
3/20/14 - 3/20/14	Atlas Geo	Continuous Core	Bentonite / Grout

Driller:	**Drilling Method:**	**Drilling Equipment:**	**Ground Surface Elev:** 200.27 ft	**Easting:** 2292277.1 ft
David Hoilett	DPT/ Solid Stem Auger	Geoprobe	**TOC Elev:** 200.54 ft	**Northing:** 566992.2 ft

Depth (feet)	USC Soil Type	Description	Graphic Log: Sample Int / Lithology / Backfill	Readings (ppm)	Remarks
	TOP	Top soil, sand, trace organics.			Drilled to refusal at 39 ft bgs with direct push.
	SP/SM	Orange to dark brown m SAND with some Silt (-).			
	CL/ML	Orange Silty CLAY, trace (-) m Sand.			
5				0.0	
10					
	SC	Yellow to orange m SAND, little Clay. Small quartz grains in sand, some weathered mica schist composition.			
15					

Figure A2

WELL LOG

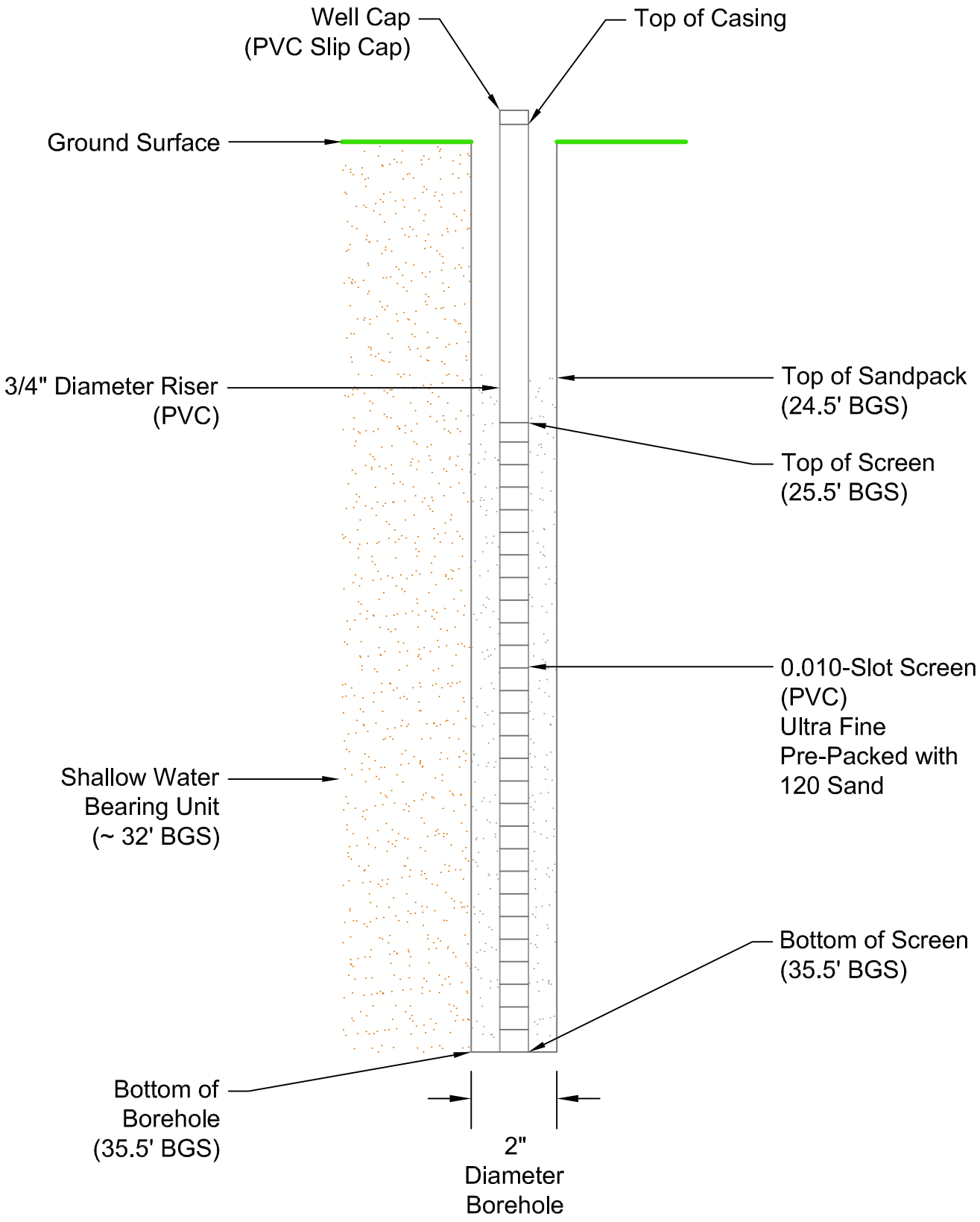
Brown AND Caldwell	**Project Name:** MacGregor Golf **Project Number:** 145096 **Project Location:** Albany, GA	**Permit Number:** NA	**Well No.** TW-11 **Page** 2 **of** 3

Depth (feet)	USC Soil Type	Description	Graphic Log: Sample Int	Graphic Log: Lithology	Graphic Log: Backfill	Readings (ppm)	Remarks
						0.0	
25							
	SP	Yellow to gray mc SAND, contains abundant weathered mica schist.					
	GP/SP	White m SAND, weathered Chert. Trave (+) Gravel.					
30	SC/GC	White to light orange m SAND, some Clay trace Gravel. Contains some weathered chert, gravel contains large quartz grains. Saturated at 33 ft.					
	CL/ML	Dark brown Slity CLAY with trace (+) Gravel. Saturated					
35	SC/CL	F SAND, some Clay, and white marly Limestone. Refusal at 39 ft with Geoprobe rig. Switched to Solid Stem Auger.					
	SC/CL	Light brown to light gray f SAND and some (+) Clay. Small quartz grains and mica present. Boring terminated at 60 ft.				0.0	Drilled to 60 ft with solid stem auger, temporary well installed with solid stem auger.
40							
45							

WELL LOG

Brown AND Caldwell	**Project Name:** MacGregor Golf **Project Number:** 145096 **Project Location:** Albany, GA	**Permit Number:** NA	**Well No.** TW-11 **Page** 3 **of** 3

Depth (feet)	USC Soil Type	Description	Graphic Log: Sample Int	Graphic Log: Lithology	Graphic Log: Backfill	Readings (ppm)	Remarks
50							
55							
60						0.0	



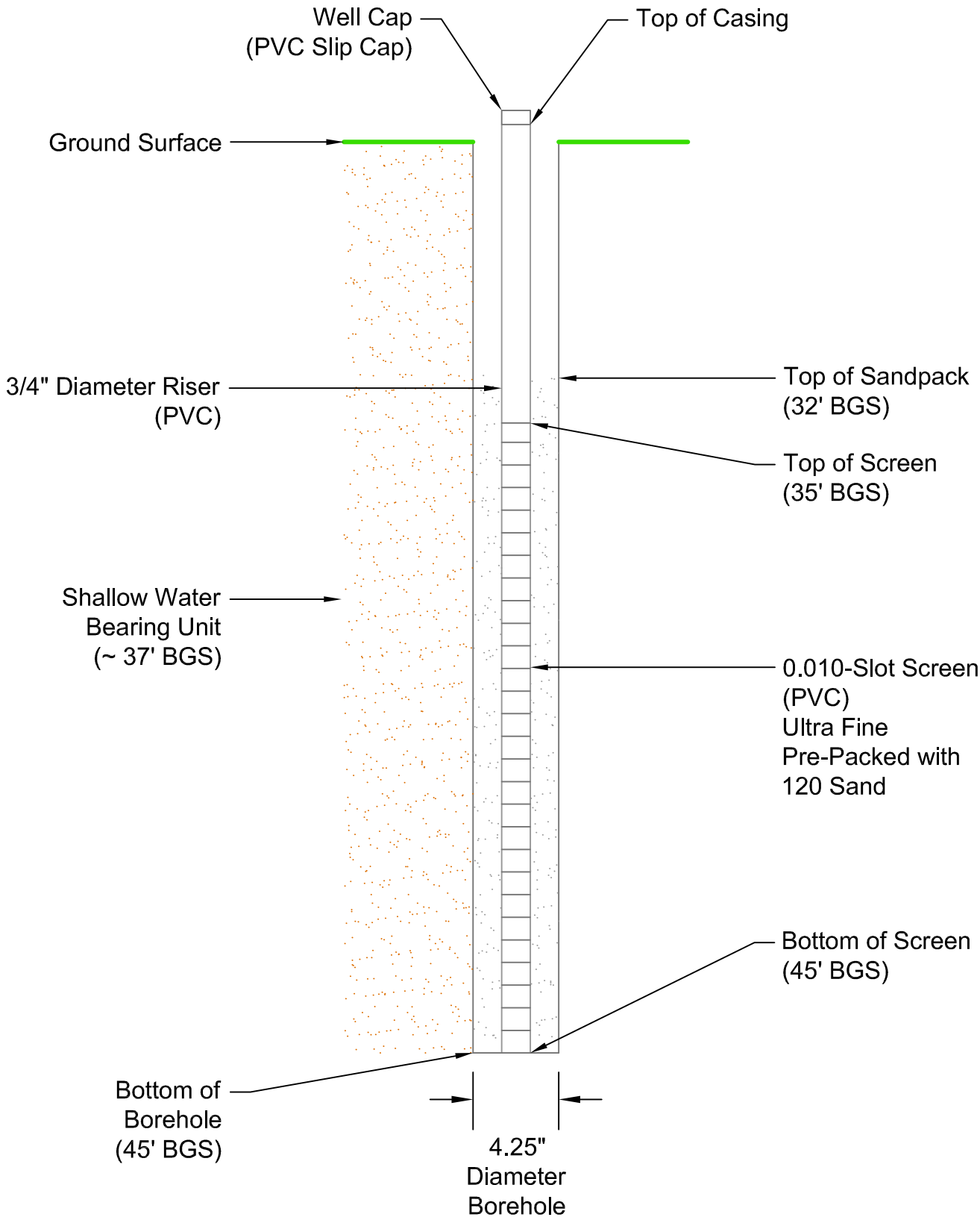
Brown AND Caldwell

PREPARED FOR:	Brunswick Corp., Albany Sport Co., & Albany Partners, LLC
DATE:	07/15/2014
SCALE:	NA
DRAWN BY:	BAS
CHECKED BY:	SEJ
PROJECT #:	145096

Figure A3

Well Construction Diagram
TB-1 through TB-5

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia



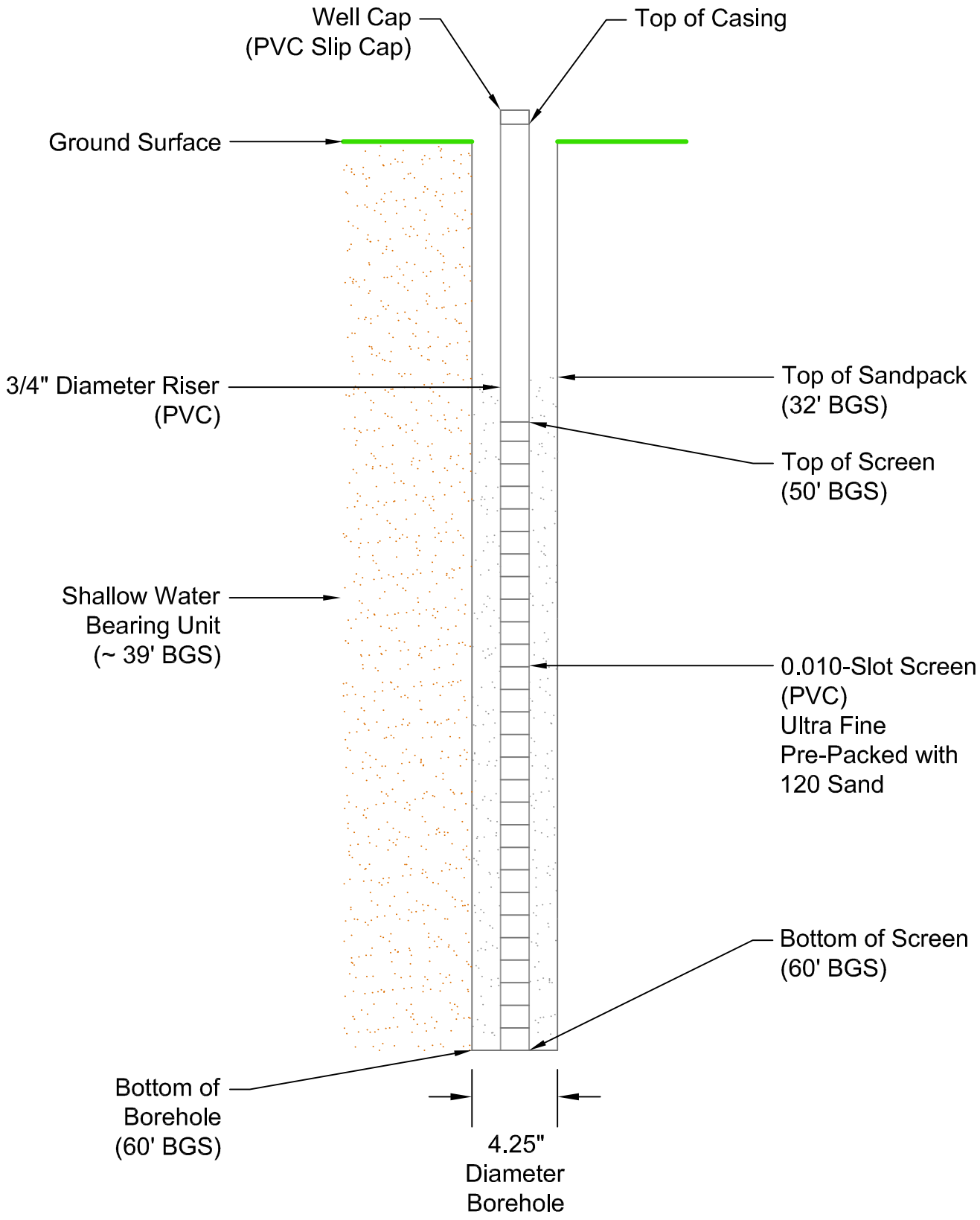
Brown AND Caldwell

PREPARED FOR:	Brunswick Corp., Albany Sport Co., & Albany Partners, LLC
DATE:	07/15/2014
SCALE:	NA
DRAWN BY:	BAS
CHECKED BY:	SEJ
PROJECT #:	145096

Figure A4

Well Construction Diagram
TB-6 through TB-10, TW-22,TW-28 and TW-31 through TW-35

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia



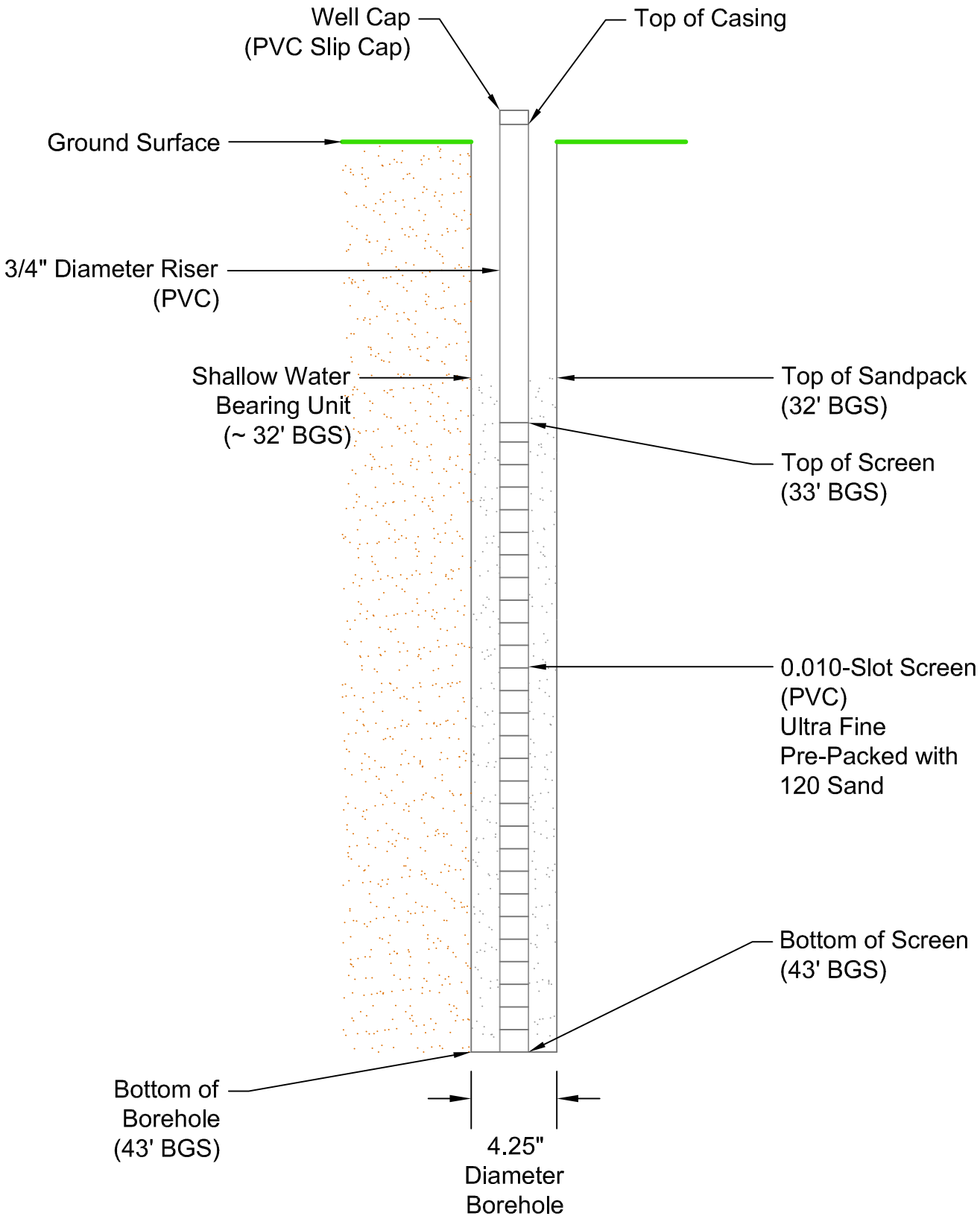
Brown AND Caldwell

PREPARED FOR:	Brunswick Corp., Albany Sport Co., & Albany Partners, LLC
DATE:	07/15/2014
SCALE:	NA
DRAWN BY:	BAS
CHECKED BY:	SEJ
PROJECT #:	145096

Figure A5

Well Construction Diagram
TB-11 through TB-14, TW-23, TW-24 and TW-29

Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia



Brown AND Caldwell

PREPARED FOR:	Brunswick Corp., Albany Sport Co., & Albany Partners, LLC
DATE:	07/15/2014
SCALE:	NA
DRAWN BY:	BAS
CHECKED BY:	SEJ
PROJECT #:	145096

Figure A6
Well Construction Diagram
TB-15 through TB-21, TW-25 through TW-27,TW-30 and TW-36 through TW-42
Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Appendix B: Field Data Sheets

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-1

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern:

Client: Macgregor Personnel: BS

Project Location: Albany GA Weather: Cloudy, 40°F

2. WELL DATA

Date Measured: 3-18-14 Time: 0800 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3¼ inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Screen Diameter: 3¼ inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Total Depth of Well: 34.95 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Static Water: 32.32 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Product: — feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Length of Water Column: 2.63 feet — Well Volume: 0.10 gal — Screened Interval (from GS):

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-18-14 Time: 1020

Purge Method: ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Equipment Model(s): 1. QED Bladder Pump 2. YSI-556 3. DRT-15CE 4.

Materials: (Pump)/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/(Tubing) ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 0.32 gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: gal/min Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1020	<0.10	6.65	13.52	0.340	277.1	6.53	576	32.32'	
1030	0.10	7.32	14.65	0.301	250.1	6.34	36.1	32.32'	
1040	0.20	6.22	14.54	0.297	236.8	6.25	21.3	32.32'	
1050	0.25	7.44	14.76	0.238	212.6	6.22	2.67	32.32'	
1100	0.35	7.41	14.85	0.237	160.9	6.26	2.05	32.32'	

Purge data continued on next sheet? ☑

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☑ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: BS Field Filtered? ☐ Yes ☑ No

Sample ID: 14077-TW-1 Sample Date: 11/26 3.18.14 Sample Time: 1120 # of Containers:

Duplicate Sample Collected? ☐ Yes ☐ No ID: # of Containers:

Equipment Blank Collected? ☐ Yes ☐ No ID: # of Containers:

Geochemical Analyses

Ferrous Iron: mg/L

DO: mg/L

Nitrate: mg/L

Sulfate: mg/L

Alkalinity: mg/L

5. COMMENTS

Sample turbid at the start.

Cr test kit results = < 0.1, slight pink

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-1

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1110	0.75	7.41	14.30	~~0.295~~	150.3	6.23	3.39	32.32	
1120				0.234					
1120	Collected sample, purged 5 well volumes								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-2

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: Albany GA Weather: cloudy, ~40°F

2. WELL DATA

Date Measured: 3-18-14 Time: 1220 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches — Type: ☐ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches — Type: ☐ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 35.51 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 31.96 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 3.55 feet — Well Volume: 0.14 gal — Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-18-14 Time: 1226

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials Pump/Bailer: ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing: ☐ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 0.43 gallons x5 = 0.72

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. YSI-556
4. DRT-ISCE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1226	0.01	7.73	17.05	0.374	205.1	6.54	ADL	32.13'	
1236	0.10	7.44	18.40	0.377	74.9	5.34	88.4	32.13'	
1246	0.35	7.42	18.64	0.375	73.3	5.27	22.3	32.13'	
1256	0.50	7.39	18.22	0.373	86.1	5.21	4.39	32.13'	
1306	0.75	7.41	18.59	0.372	94.6	5.18	3.47	32.13'	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials Pump/Bailer: ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope: ☐ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14077-TW-2 Sample Date: 3.18.14 Sample Time: 1310 # of Containers: 2

Duplicate Sample Collected? ☑ Yes ☐ No ID: 14077-Dup @1330 # of Containers: 2

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Chromium field results, < 0.1 but slightly pink.

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-3

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: Albany GA Weather: clear, ~56°F

2. WELL DATA

Date Measured: 3.18.14 Time: _____ Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 36.64 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 32.12' feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 4.52 feet — Well Volume: 0.18 gal — Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-18-14 Time: 1407

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: (Pump/Bailer) ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/(Tubing) ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 5 well volumes or 0.92 gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. YSI-556
4. ORT-15CF

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1407	0.05	7.59	19.02	0.277	26.5	5.13	293	32.16'	
1417	0.20	7.57	19.41	0.251	7.3	5.25	30.3	32.16'	
1427	0.50	7.58	19.59	0.245	4.9	5.37	15.3	32.16'	
1437	0.60	7.57	19.94	0.244	3.5	5.26	6.70	32.16'	
1447	0.80	7.59	20.46	0.245	1.6	5.33	2.39	32.16'	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: (Pump/Bailer) ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: (Tubing)/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 1407-TW-3 Sample Date: 3.18.14 Sample Time: 1450 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Chromium field kit = <0.0, BS <0.1, color slight pink

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-4

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: Kingsland GA Weather: sunny ~60°F

2. WELL DATA

Date Measured 3-18-14 Time: _____ Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 36.93 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 33.18' feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 3.75 feet Well Volume: 0.15 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-18-14 Time: 1526

Equipment Model(s)

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

1. QED Bladder

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

2. MP-50

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

3. YSI-556

4. DRT-15CE

Volume to Purge (minimum): 5 well volumes or 0.76 gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1526	0.0	7.84	19.36	0.259	102.8	6.63	328	33.40'	
1536	0.20	7.47	19.57	0.232	-37.2	4.93	61.7	33.40'	
1546	0.45	7.51	20.87	0.225	-31.6	5.29	18.5	33.40'	
1556	0.55	7.44	19.88	0.224	-19.5	5.37	6.02	33.40'	
1606	0.75	7.46	19.72	0.224	-13.3	5.36	3.34	33.40'	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☐ No

Sample ID: 14077-TW-4 Sample Date: 3-18-14 Sample Time: 1610 # of Containers: _____

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach field results = 0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-5

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern:

Client: Macgregor Personnel: BS

Project Location: Albany, GA Weather: cloudy ~ 45°F

2. WELL DATA

Date Measured: 3-19-14 Time: 0820 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Screen Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Total Depth of Well: 3137.42 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Static Water: 33.15 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Length of Water Column: 4.27 feet Well Volume: 0.17 gal Screened Interval (from GS):

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-19-14 Time: 0830

Purge Method: ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 5 well volumes or 0.87 gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: gal/min

Equipment Model(s)
1. QED Bladder Pump
2. MP-50
3. YSI-556
4. DRT-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0830	0.00	6.28	16.65	0.400	242.8	6.52	584	33.90'	
0840	0.10	7.27	17.92	0.336	123.6	5.38	277	33.90'	
0850	0.20	7.31	18.00	0.326	66.2	5.13	40.9	33.90'	
0900	0.50	7.31	17.82	0.320	55.8	5.26	14.6	33.90'	
0910	0.70	7.32	17.68	0.317	56.2	5.30	3.30	33.90'	

Purge data continued on next sheet? ☑

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☐ No

Sample ID: 14078-TW-5 Sample Date: 3-19-14 Sample Time: 0925 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: # of Containers:

Equipment Blank Collected? ☑ Yes ☐ No ID: 14078-EB @ 1005 # of Containers: 2

Geochemical Analyses

Ferrous Iron: mg/L

DO: mg/L

Nitrate: mg/L

Sulfate: mg/L

Alkalinity: mg/L

5. COMMENTS

Hach Kit = < 0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-5

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0920	0.80	7.32	17.75	0.314	59.1	5.36	1.41	33.90	
0925	collect sample								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-6

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: _____ Weather: cloudy ~ 60°F

2. WELL DATA

Date Measured: 3-19-14 Time: 1020 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 44.76 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 38.31 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 6.45 feet Well Volume: 0.25 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-19-14 Time: 1026

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 0.79 gallons 5x = 1.32

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. YSI-556
4. DRT-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1026	0	6.59	18.10	0.519	205.7	6.75	409	38.51'	
1036	0.25	6.90	19.00	0.540	50.0	5.55	38.4	38.92'	
1046	0.50	6.87	19.12	0.548	48.3	5.39	5.15	39.36'	
1056	0.65	6.86	19.29	0.564	48.4	5.24	3.85	39.85'	
1106	0.90	6.84	19.45	0.580	47.5	5.17	2.60	40.20'	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☐ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☐ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☐ No

Sample ID: 14096-TW-6 Sample Date: 3-19-14 Sample Time: 1130 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = <0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-6

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1116	1.20	6.84	19.40	0.574	44.6	5.15	3.09	40.62'	
1126	1.40	6.83	19.41	0.586	43.4	5.02	1.81	41.05'	
	purged 5 well volumes								
1130	collect sample								

Purge data continued on next sheet? ☐

FORM GW-2 (Rev 051812 - sej)

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-7

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: Albany GA Weather: cloudy ~ 60°F

2. WELL DATA

Date Measured: 3-19-14 Time: 1225 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 41.79 feet From: ☑Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 40.81 feet From: ☑Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: _____ feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 3.98 feet Well Volume: 0.16 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-19-14 Time: 1231

Equipment Model(s)

Purge Method: ☐ Bailer, Size: _____ ☑Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

1. QED-Bladder

Materials: Pump/Bailer ☐ Polyethylene ☑Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑Field-Cleaned ☐ Disposable

2. MP-50

Materials: Rope/Tubing ☑Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑Disposable

3. YSI-556

Volume to Purge (minimum): 3 well volumes or 0.48 gallons 5 v = 0.81

4. DLT-15CG

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Calibrated? ☑Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1231	0.0	6.92	20.09	0.605	54.8	3.56	874	40.98'	
1241	0.10	6.92	21.37	0.599	20.7	3.82	826	41.40'	
1251	0.20	6.90	21.46	0.608	11.0	2.68	530	41.80'	
1301	0.50	6.88	21.63	0.609	4.9	2.53	494	42.15'	
1311	0.60	6.86	21.12	0.611	2.5	2.37	473	42.09	slowed purge.

Purge data continued on next sheet? ☑

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14078-TW-7 Sample Date: 3-19-14 Sample Time: 1355 # of Containers: 4

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach Kit = < 0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-7

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1321	0.65	6.88	20.85	0.610	-0.9	2.53	246	42.05'	
1331	0.75	6.87	21.85	0.608	-10.1	255	56.1	41.95'	
1341	0.80	6.89	21.31	0.607	-13.1	249	32.5	41.93'	
1351	0.85	6.88	21.98	0.605	-16.5	2.57	29.1	41.95'	
		purged 5 well volumes, sampled for							
		total & dissolved Cr, Hex/Tri Cr							
1355	sample								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-8

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: _____ Weather: SUNNY ~ 70°F

2. WELL DATA

Date Measured: 3-19-14 Time: 1500 Temporary Well: ☐Yes ☐No

Casing Diameter: 3¼ inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3¼ inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 44.76 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 37.57' feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: _____ feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 7.19 feet — Well Volume: 0.29 gal — Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-19-14 Time: 1522

Equipment Model(s): 1. QED Bladder 2. MP-50 3. YSI-556 4. DRT-15CE

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 0.88 gallons 5% = 1.47

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1522	0.0	6.94	23.72	0.592	180.6	6.23	849	37.80'	
1532	0.10	6.70	23.47	0.574	189.6	5.31	383	38.10	
1542	0.40	6.74	23.48	0.577	175.8	5.10	77.9	38.25'	
1552	0.50	6.74	23.30	0.578	168.1	5.16	5.59	38.45'	
1602	0.60	6.79	23.39	0.580	159.1	5.11	3.70	38.65'	

Purge data continued on next sheet? ☑

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14078-TW-8 Sample Date: 3-19-14 Sample Time: 1625 # of Containers: _____

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach res-Hr =

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-8

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1611	0.80	6.81	23.74	0.581	152.5	5.08	3.02	38.74'	
1621	1.00	6.77	23.16	0.582	151.7	5.12	1.98	37.85'	
1625	collect sample								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-9

1. PROJECT INFORMATION

Project Number: 145094 Task Number: 600 Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany, GA Weather: sunny ~50°F

2. WELL DATA

Date Measured: 3-20-14 Time: 0830 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches Type: ☑PVC ☐Stainless ☐Galv. Steel ☐Teflon® ☐Other: _____

Screen Diameter: 3/4 inches Type: ☑PVC ☐Stainless ☐Galv. Steel ☐Teflon® ☐Other: _____

Total Depth of Well: 44.79 feet From: ☑Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other: _____

Depth to Static Water: 36.68 feet From: ☑Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other: _____

Depth to Product: — feet From: ☐Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other: _____

Length of Water Column: 8.11 feet Well Volume: 0.33 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-20-14 Time: 0852

Purge Method: ☐ Bailer, Size: _____ ☑Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑Disposable

Volume to Purge (minimum): 3 well volumes or 0.99 gallons 5x = 1.66

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. YSI-556
4. DRT-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0852	0.0	6.22	18.03	0.673	228.0	5.99	192	37.15'	
0902	0.10	6.84	19.13	0.601	168.7	5.51	37.9	37.65	
0912	0.50	6.86	19.55	0.609	167.0	5.27	6.67	38.05'	
0922	0.75	6.85	19.57	0.616	168.2	5.13	2.79	38.56	
0932	0.95	6.82	19.47	0.620	166.0	4.99	1.74	39.02'	

Purge data continued on next sheet? ☑

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 4079-TW-9 Sample Date: 3-20-14 Sample Time: 1005 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results < 0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-9

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0942	1.10	6.80	19.60	0.627	175.8	4.78	1.49	39.5	
0952	1.25	6.78	19.72	0.635	178.1	4.77	1.61	39.95'	
1002	1.80	6.77	19.95	0.644	182.0	4.68	1.51	40.25'	
1005	collect sample, purge 5 well volumes.								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-10

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany, GA Weather: Partly Cloudy, ~ 60°F

2. WELL DATA

Date Measured: 3.20.14 Time: 1015 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 44.78 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 36.32 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 8.46 feet Well Volume: 0.34 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-20-14 Time: 1044

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 1.02 gallons 5 x = 1.7

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)

1. QED Bladder Pump
2. MP-50
3. YSI-556
4. HRT-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1044	0.0	6.92	19.60	0.546	80.5	6.52	803	36.40'	
1054	0.10	6.60	19.64	0.516	229.5	5.52	257	36.40'	
1104	0.25	6.71	20.20	0.513	249.2	5.60	65.7	36.40	
1114	0.45	6.70	20.62	0.512	264.3	5.43	24.8	36.40	
1124	0.60	6.68	20.66	0.510	267.2	5.60	9.22	36.40	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14079-TW-10 Sample Date: 3.20.14 Sample Time: 1135 # of Containers: _____

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = <0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-10

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1134	0.75	6.70	21.07	0.508	259.4	5.72	5.31	36.40	
1135	collect	sample							

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-11

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: Magnolia Personnel: BS

Project Location: Albany, GA Weather: Sunny ~ 77°F

2. WELL DATA

Date Measured: 3.20.14 Time: 1530 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 59.74 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 40.87 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 18.87 feet — Well Volume: 0.77 gal — Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3.20.14 Time: 1537

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: (Pump)/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/(Tubing) ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 2.32 gallons 5x = 3.85

Was well purged dry? ☐ Yes ☑ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. YSI-556
4. DRT-15LE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1537	0.0	6.86	22.18	0.644	18.1	6.63	496	41.25'	
1547	0.50	6.73	21.41	0.639	46.5	5.77	974	41.25'	
1557	0.70	6.69	21.06	0.635	60.8	5.57	>1000	41.25	
1607 1407	1.00	6.74	20.91	0.635	74.6	5.45	336	41.25	
1617 1417	1.20	6.79	21.24	0.635	82.8	5.31	90.2	41.25	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14079-TW-11 Sample Date: 3.20.14 Sample Time: 1720 # of Containers: _____

Duplicate Sample Collected? ☑ Yes ☐ No ID: 14079-DUP @ 1725 # of Containers: 2

Equipment Blank Collected? ☑ Yes ☐ No ID: ~~14079-EB~~ @ 1745 # of Containers: 2

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

14079-EB-2G

Hach field test results = 0.6 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-11

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1627 1427	1.40	6.85	21.89	0.636	83.5	5.25	45.9	41.25'	
1637 1437	1.60	6.84	21.04	0.635	89.0	5.32	23.4	41.25	
1647 1447	1.80	6.74	20.90	0.632	101.0	5.41	16.2	41.25'	
1657	2.10	6.87	21.78	0.633	98.1	5.21	13.7	41.25'	
1707	2.25	6.84	21.64	0.632	99.5	5.23	6.33	41.25'	
~~1710~~	~~collect sample~~			BS	3.20.14,		pH	not stable	
1717	2.5	6.84	21.47	0.633	104.2	5.30	4.73	41.25'	
1720	collect sample.								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-12

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: Albany GA Weather: Sunny ~ 70's F

2. WELL DATA

Date Measured: 3-20-14 Time: 1300 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 59.75 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 40.2 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 19.55 feet Well Volume: 0.80 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3.20.14 Time: 1318

Purge Method: ☐ Bailer, Size: _____ ☑Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☐ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 2.4 gallons 5 x = 4.00

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. YSI-556
4. ORP-ISE

Calibrated? ☑Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1318	0.0	6.95	24.95	0.595	-19.2	8.09	917	41.70'	
1328	0.10	6.62	23.47	0.586	15.4	8.59	338	43.76'	
1339	0.55	6.71	23.44	0.583	16.4	9.26	81.3	44.55'	
1349	0.75	6.83	23.77	0.582	17.7	8.93	51.6	44.87'	
1359	1.00	6.76	22.57	0.586	23.9	8.22	27.4	44.87	

Purge data continued on next sheet? ☐ ✓

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14079-TW-12 Sample Date: 3.20.14 Sample Time: 1430 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = < 0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-12

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1409	1.10	6.88	23.15	0.587	13.2	8.80	9.64	44.70'	
1419	1.40	6.89	23.44	0.585	20.7	8.60	6.43	44.70'	
1429	1.55	6.88	23.24	0.586	13.7	8.79	4.85	44.70'	
1430	collect sample								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-13

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: Albany, GA Weather: sunny ~ 77°F

2. WELL DATA

Date Measured: 3-21-14 Time: 1350 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 59.77 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 40.54 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 19.23 feet Well Volume: 0.78 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-21-14 Time: 1401

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 2.34 gallons 5 L = 3.94

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP-600
3. YSI-556
4. DR T-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1401	0	6.82	25.65	0.582	-27.2	7.06	>1000	40.72	
1411	0.25	6.47	25.57	0.580	-3.0	6.03	594	40.80	
1421	0.50	6.52	24.97	0.579	11.0	5.73	249	40.81	
1431	0.75	6.56	24.80	0.578	20.0	5.85	132	40.81	
1441	1.10	6.61	25.11	0.577	26.3	5.63	63.1	40.83	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 140880-TW-13 Sample Date: 3-21-14 Sample Time: 1535 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-13

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1451	1.75	6.54	24.81	0.575	40.4	5.66	31.5	40.83	
1501	2.00	6.60	24.89	0.576	44.8	5.70	29.5	40.83	
1511	2.25	6.54	24.51	0.574	57.6	5.74	18.1	40.83	
1521	2.5	6.60	24.82	0.574	60.2	5.73	14.7	40.83	
1531	2.75	6.57	24.76	0.574	63.6	5.77	7.70	40.83	
1535	Collect sample								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-14

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern:

Client: MacGregor Personnel: BS

Project Location: Albany GA Weather: Sunny ~ 60°F

2. WELL DATA

Date Measured: 3.21.14 Time: 1030 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Screen Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Total Depth of Well: 59.71 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Static Water: 39.92' feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Length of Water Column: 19.79 feet Well Volume: 0.81 gal Screened Interval (from GS):

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3.21.14 Time: 1040

Purge Method: ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 2.43 gallons 5x = 4.05

Was well purged dry? ☐ Yes ☑ No Pumping Rate: gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. YSI-556
4. DRT-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1040	0.0	6.60	19.62	0.538	128.8	6.47	>1000	42.50'	
1050	0.50	6.61	19.96	0.532	78.7	5.81	826	42.50'	
1100	0.60	6.63	19.96	0.532	71.8	5.72	912	42.50'	
1110 ~~1100~~	1.00	6.63	20.05	0.531	69.7	5.59	623	42.50'	
1120	1.20	6.63	20.09	0.530	71.8	5.57	292	42.50'	

Purge data continued on next sheet?

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: ☐ Bladder Pump ☑ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: 14080-TW-14 Sample Date: 3.21.14 Sample Time: 1225 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: # of Containers:

Equipment Blank Collected? ☐ Yes ☑ No ID: # of Containers:

Geochemical Analyses

Ferrous Iron: mg/L

DO: mg/L

Nitrate: mg/L

Sulfate: mg/L

Alkalinity: mg/L

5. COMMENTS

Hach results = 0.2 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-14

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1130	1.50	6.63	20.17	0.530	74.3	5.55	98.7	42.50'	
1140	1.75	6.62	20.14	0.530	78.0	5.56	53.9	42.50'	
1150	2.00	6.62	20.15	0.530	81.6	5.57	34.8	42.50'	
1200	2.25	6.62	20.15	0.530	83.4	5.58	21.4	42.50'	
1210	2.50	6.62	20.33	0.530	86.4	5.56	16.4	42.50'	
1220	2.80	6.63	20.44	0.529	89.3	5.55	9.11	42.50'	
1225	collect sample								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-15

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 6600 Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: Albany GA Weather: sunny, ~ 29 °F

2. WELL DATA

Date Measured: 3-22-14 Time: 1200 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches Type: ☑PVC ☐Stainless ☐Galv. Steel ☐Teflon® ☐Other: _____

Screen Diameter: 3/4 inches Type: ☑PVC ☐Stainless ☐Galv. Steel ☐Teflon® ☐Other: _____

Total Depth of Well: 42.95 feet From: ☑Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other: _____

Depth to Static Water: 32.24 feet From: ☑Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other: _____

Depth to Product: _____ feet From: ☐Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other: _____

Length of Water Column: 10.68 feet Well Volume: 0.43 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-22-14 Time: 1205

Equipment Model(s)

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

1. QED Bladder

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

2. MP-50

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

3. 1/4 - SS

4. DLT-15LE

Volume to Purge (minimum): _____ well volumes or _____ gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1205	0.0	7.10	22.85	0.454	21.4	5.34	444	32.89	
1215	0.50	6.98	22.56	0.466	19.6	5.13	41.2	32.89	
1225	0.75	7.02	22.85	0.462	18.8	5.06	14.6	32.89	
1235	1.00	7.02	22.81	0.444	19.2	5.06	4.74	32.89	
1245	1.25	7.04	22.53	0.436	18.7	5.15	3.28	32.89	

1250 collect sample

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☐ No

Sample ID: 1408-TW-15 Sample Date: 3-22-14 Sample Time: 1250 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = <0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-17

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern:

Client: Macgregor Personnel: BS

Project Location: Albany GA Weather: Partly Cloudy ~ 65°F

2. WELL DATA

Date Measured: 3-22-14 Time: 0958 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Screen Diameter: 3/4 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Total Depth of Well: 42.93 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Static Water: 32.53 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Product: — feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Length of Water Column: 10.4 feet — Well Volume: 0.42 gal — Screened Interval (from GS):

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-22-14 Time: 1004

Purge Method: ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): _____ well volumes or _____ gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s): 1. QED Bladder 2. MP-50 3. VSI-556 4. DRT-1SLE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1004	0.0	6.91	20.41	0.378	159.8	5.93	507	32.53'	
1014	0.25	7.23	20.80	0.343	107.7	5.85	482	32.53'	
1024	0.50	7.26	20.93	0.334	102.2	5.80	81.0	32.53'	
1034	0.80	7.26	20.90	0.330	99.8	5.80	28.3	32.53'	
1044	1.20	7.28	21.08	0.329	96.3	5.79	14.8	32.53'	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14081-TW-17 Sample Date: 3-22-14 Sample Time: 1100 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = 0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-17

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 μS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1054	1.50	7.27	20.96	0.327	94.8	0.327	3.40	32.53'	
1100	collect sample								

Purge data continued on next sheet? ☐

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-18

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 400 Area of Concern:

Client: Macgregor Personnel: BS

Project Location: Albany, GA Weather: Sunny, 80°F

2. WELL DATA

Date Measured: 3-28-14 Time: 0900 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Screen Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Total Depth of Well: 42.30 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Static Water: 32.40 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Length of Water Column: 9.9 feet Well Volume: 0.40 gal Screened Interval (from GS):

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-23-14 Time: 0902

Equipment Model(s)

Purge Method: ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

1. QED Bladder

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

2. MP-50

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

3. YSI-556

Volume to Purge (minimum): 3 well volumes or 1.7 gallons

4. DRT-15CE

Was well purged dry? ☐ Yes ☐ No Pumping Rate: gal/min

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0902	0.0	6.75	19.68	0.306	66.6	5.28	809	32.40'	
0912	0.25	7.39	19.93	0.244	28.4	5.79	163	32.40'	
0922	0.50	7.45	19.98	0.232	36.5	5.89	37.3	32.40'	
0932	0.75	7.45	20.03	0.230	40.8	5.91	19.9	32.40'	
0942	1.00	7.47	20.35	0.229	42.5	5.85	14.6	32.40'	

Purge data continued on next sheet? ☑

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: 140621-TW-18 Sample Date: 3-23-14 Sample Time: 0955 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: # of Containers:

Equipment Blank Collected? ☐ Yes ☑ No ID: # of Containers:

Geochemical Analyses

Ferrous Iron: mg/L

DO: mg/L

Nitrate: mg/L

Sulfate: mg/L

Alkalinity: mg/L

5. COMMENTS

Hach results = <0.1 mg/L, pink color.

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-2 (Rev 051812 - sej)

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-18

3. PURGE DATA (continued from page ( ))

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0952	1.25	7.46	20.45	0.230	43.2	5.86	7.37	32.40	
0955	collect	sample							

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-20

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern:

Client: MacGregor Personnel: BS

Project Location: Albany, GA Weather: cloudy ~ 60°F

2. WELL DATA

Date Measured: 3.23.14 Time: 1020 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Screen Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Total Depth of Well: 42.89 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Static Water: 33.78 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Product: ~ feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Length of Water Column: 9.11 feet Well Volume: 0.37 gal Screened Interval (from GS):

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3.23.14 Time: 1024

Purge Method: ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☑ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 1.12 gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: gal/min

Equipment Model(s)
1. DED Bladder
2. MP-50
3. YSI-556
4. DRT-15LE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1024	0.0	7.56	19.82	0.291	86.7	6.93	875	33.80'	
1034	0.25	7.42	20.29	0.272	60.1	6.47	93.1	33.80	
1044	0.50	7.43	20.34	0.268	75.0	6.37	24.0	33.80	
1054	0.75	7.44	20.62	0.268	95.5	6.28	8.60	33.80	
1104	1.00	7.45	20.86	0.268	104.6	6.28	5.28	33.80'	
1105	collect sample								

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: 14082-TW-20 Sample Date: 3.23.14 Sample Time: 1105 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: # of Containers:

Equipment Blank Collected? ☐ Yes ☑ No ID: # of Containers:

Geochemical Analyses

Ferrous Iron: mg/L

DO: mg/L

Nitrate: mg/L

Sulfate: mg/L

Alkalinity: mg/L

5. COMMENTS

Hach result = 0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-22

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern:

Client: Macgregor Personnel: BS

Project Location: Albany GA Weather: Partly Cloudy ~ 79°F

2. WELL DATA

Date Measured: 3-21-14 Time: 1600 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Screen Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Total Depth of Well: 41.78 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Static Water: 37.63 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Product: feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Length of Water Column: feet Well Volume: gal Screened Interval (from GS):

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-21-14 Time: 1606

Purge Method: ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): well volumes or gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. YSI-556
4. DRT-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1606	0	6.50	26.53	0.561	22.1	5.46	333	37.74'	
1616	0.25	6.38	26.62	0.550	39.1	5.00	31.6	37.74'	
1626	0.50	6.42	26.32	0.547	59.2	5.02	5.61	37.74'	
1636	0.75	6.40	26.03	0.543	74.2	4.96	1.76	37.74'	
1646	1.00	6.44	26.24	0.541	76.1	4.93	1.30	37.74'	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: 14080-TW-22 Sample Date: 3-21-14 Sample Time: 1650 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: # of Containers:

Equipment Blank Collected? ☐ Yes ☑ No ID: # of Containers:

Geochemical Analyses

Ferrous Iron: mg/L

DO: mg/L

Nitrate: mg/L

Sulfate: mg/L

Alkalinity: mg/L

5. COMMENTS

Hach results = < 0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-23

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: Albany, GA Weather: sunny ~ 70°F

2. WELL DATA

Date Measured: 3-24-14 Time: 1230 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 59.78 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water 39.73 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 20.05 feet Well Volume: 0.82 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3.24.14 Time: 1234

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☐ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 2.46 gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP.50
3. YSI-556
4. DRT-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1234	0	7.69	21.89	0.582	69.5	6.14	>1000	39.83'	
1244	0.25	6.85	21.54	0.577	83.3	83.2	>1000	39.83'	
1254	0.50	6.88	21.46	0.574	78.0	5.16	>1000	39.83'	
1304	0.75	6.86	21.35	0.571	80.1	4.87	405	39.83'	
1314	1.00	6.86	21.33	0.568	86.0	4.49	92.1	39.83'	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☐ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☐ No

Sample ID: 14083-TW-23 Sample Date: 3.24.14 Sample Time: 1455 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-2 (Rev 051812 - sej)

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-23

3. PURGE DATA (continued from page ( ))

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1324	1.25	6.88	21.41	0.566	88.1	4.41	50.2	39.83'	
1334	1.75	6.87	21.30	0.566	91.4	4.42	44.3	39.83'	
1344	2.00	6.87	21.34	0.565	88.5	4.36	35.2	39.83'	
1354	2.25	6.86	21.20	0.564	86.4	4.37	29.6	39.83'	
1404	2.50	6.85	21.15	0.563	86.7	4.34	24.8	39.83'	
1414	2.75	6.86	21.13	0.563	82.4	4.32	19.9	39.83'	
1424	3.00	6.86	21.13	0.561	83.3	4.29	18.5	39.83'	
1434	3.25	6.86	21.19	0.561	81.2	4.28	16.5	39.83'	
1444	3.50	6.86	21.28	0.561	79.8	4.26	14.7	39.83'	
1454	3.75	6.86	21.13	0.561	76.4	4.30	8.89	39.83'	
1455	collect sample								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-24

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: Albany, GA Weather: sunny, ~ 70°F

2. WELL DATA

Date Measured: 3.24.14 Time: 1530 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 59.68 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 39.45 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: _____ feet Well Volume: _____ gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3.24.14 Time: 1536

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☐ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): _____ well volumes or _____ gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)

1. QED Bladder
2. MP-50
3. YSI-556
4. ORT-15CE

Calibrated? ☑Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1536	0	6.81	20.86	0.637	54.2	6.11	>1000	39.70	
1546	0.25	6.63	20.48	0.633	86.7	5.94	484	39.70	
1556	0.50	6.66	20.43	0.631	98.0	5.74	490	39.70	
1606	0.75	6.67	20.38	0.628	117.5	5.67	884	39.70	
1616	1.00	6.69	20.26	0.627	124.1	5.46	300	39.70	

Purge data continued on next sheet? ☑

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: ☑ 14083-TW-24 Sample Date: 3.24.14 Sample Time: 1700 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = <0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-2 (Rev 051812 - sej)

Signature _____

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-24

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1626	1.50	6.71	20.16	0.627	127.5	5.39	65.8	39.70	
1636	1.75	6.70	20.27	0.626	130.0	5.33	26.5	39.70'	
1646	2.25	6.74	20.44	0.626	128.7	5.26	14.3	39.70'	
1656	2.75	6.72	20.09	0.626	129.6	5.34	7.03	39.70'	
1700	Collect sample								

Purge data continued on next sheet? ☐

FORM GW-2 (Rev 051812 - sej)

Signature

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-25

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: McCarregher Personnel: BS

Project Location: Albany, GA Weather: Partly cloudy ~70°F

2. WELL DATA

Date Measured: 3-23-14 Time: 1130 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches Type: ☐PVC ☐Stainless ☐Galv. Steel ☐Teflon® ☐Other: _____

Screen Diameter: 3/4 inches Type: ☑PVC ☐Stainless ☐Galv. Steel ☐Teflon® ☐Other: _____

Total Depth of Well: 43.13 feet From: ☑Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other: _____

Depth to Static Water: 30.60 feet From: ☑Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other: _____

Depth to Product: _____ feet From: ☐Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other: _____

Length of Water Column: _____ feet Well Volume: _____ gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-23-14 Time: 1139

Equipment Model(s)

1. QED Bladder
2. MP-50
3. YSI-556
4. ORT-15CE

Purge Method: ☐Bailer, Size: _____ ☑Bladder Pump ☐2" Sub. Pump ☐4" Sub. Pump ☐Centrifugal Pump ☐Peristaltic Pump ☐Inertial Lift Pump ☐Other: _____

Materials: Pump/Bailer ☐Polyethylene ☑Stainless ☐PVC ☐Teflon® ☐Other: _____ ☐Dedicated ☑Prepared Off-Site ☑Field-Cleaned ☐Disposable

Materials: Rope/Tubing ☐Polyethylene ☐Polypropylene ☐Teflon® ☐Nylon ☐Other: _____ ☐Dedicated ☐Prepared Off-Site ☐Field-Cleaned ☑Disposable

Volume to Purge (minimum): _____ well volumes or _____ gallons

Was well purged dry? ☐Yes ☐No Pumping Rate: _____ gal/min Calibrated? ☑Yes ☐No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1139	0.0	7.45	21.42	0.352	154.8	6.12	826	31.30	
1149	0.25	7.19	21.26	0.353	218.1	5.59	172	31.30	
1159	0.50	7.27	21.49	0.347	235.2	5.50	513	31.30	
1209	0.75	7.25	21.25	0.341	247.3	5.59	24.3	31.30	
1219	1.00	7.26	21.22	0.337	250.1	5.65	9.19	31.30	

1220 collect sample

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐Bailer, Size: _____ ☑Bladder Pump ☐2" Sub. Pump ☐4" Sub. Pump ☐Centrifugal Pump ☐Peristaltic Pump ☐Inertial Lift Pump ☐Other: _____

Materials: Pump/Bailer ☐Polyethylene ☑Stainless ☐PVC ☐Teflon® ☐Other: _____ ☐Dedicated ☐Prepared Off-Site ☑Field-Cleaned ☐Disposable

Materials: Tubing/Rope ☑Polyethylene ☐Polypropylene ☐Teflon® ☐Nylon ☐Other: _____ ☐Dedicated ☐Prepared Off-Site ☐Field-Cleaned ☑Disposable

(14082-TW-25)

Depth to Water at Time of Sampling: _____ Field Filtered? ☐Yes ☑No

Sample ID: 14082-TW-25 Sample Date: 3-23-14 Sample Time: 1220 # of Containers: 2

Duplicate Sample Collected? ☐Yes ☑No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐Yes ☑No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = <0.1 mg/L, slight pink color

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-26

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 6000 Area of Concern:

Client: Macgregor Personnel: BS

Project Location: Albany, GA Weather: clear ~ 55°F

2. WELL DATA

Date Measured: 3.25.14 Time: 0830 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches — Type: ☑PVC ☐Stainless ☐Galv. Steel ☐Teflon® ☐Other:

Screen Diameter: 3/4 inches — Type: ☑PVC ☐Stainless ☐Galv. Steel ☐Teflon® ☐Other:

Total Depth of Well: 44.78 feet — From: ☑Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other:

Depth to Static Water: 35.34' feet — From: ☑Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other:

Depth to Product: — feet — From: ☐Top of Well Casing (TOC) ☐Top of Protective Casing ☐Other:

Length of Water Column: feet — Well Volume: gal — Screened Interval (from GS):

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3.25.14 Time: 0844

Equipment Model(s)

Purge Method: ☐ Bailer, Size: ☑Bladder Pump ☐2" Sub. Pump ☐4" Sub. Pump ☐Centrifugal Pump ☐Peristaltic Pump ☐Inertial Lift Pump ☐Other:

1. QED Bladder

Materials: (Pump)/Bailer ☐Polyethylene ☑Stainless ☐PVC ☐Teflon® ☐Other: ☐Dedicated ☐Prepared Off-Site ☑Field-Cleaned ☐Disposable

2. MP-50

Materials: Rope/(Tubing) ☑Polyethylene ☐Polypropylene ☐Teflon® ☐Nylon ☐Other: ☐Dedicated ☐Prepared Off-Site ☐Field-Cleaned ☑Disposable

3. YSI-556

Volume to Purge (minimum): well volumes or gallons

4. DRT-15CE

Was well purged dry? ☐Yes ☐No Pumping Rate: gal/min Calibrated? ☑Yes ☐No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0844	0	6.73	17.70	0.346	172.1	5.86	644	35.45'	
0854	0.25	7.48	18.82	0.326	94.2	5.62	247	35.47'	
0904	0.50	7.53	19.21	0.306	86.0	5.68	52.1	35.47'	
0914	0.75	7.50	19.03	0.301	86.2	5.48	7.59	35.47'	
0924	1.00	7.52	19.12	0.299	82.1	5.51	4.01	35.47	

0925 collect sample

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: ☑Bladder Pump ☐2" Sub. Pump ☐4" Sub. Pump ☐Centrifugal Pump ☐Peristaltic Pump ☐Inertial Lift Pump ☐Other:

Materials: (Pump)/Bailer ☐Polyethylene ☑Stainless ☐PVC ☐Teflon® ☐Other: ☐Dedicated ☐Prepared Off-Site ☑Field-Cleaned ☐Disposable

Materials: (Tubing)/Rope ☑Polyethylene ☐Polypropylene ☐Teflon® ☐Nylon ☐Other: ☐Dedicated ☐Prepared Off-Site ☐Field-Cleaned ☑Disposable

Depth to Water at Time of Sampling: Field Filtered? ☐Yes ☑No

Sample ID: 141084-TW-26 Sample Date: 3.25.14 Sample Time: 0925 # of Containers: 2

Duplicate Sample Collected? ☐Yes ☑No ID: # of Containers:

Equipment Blank Collected? ☐Yes ☑No ID: # of Containers:

Geochemical Analyses

Ferrous Iron: mg/L

DO: mg/L

Nitrate: mg/L

Sulfate: mg/L

Alkalinity: mg/L

5. COMMENTS

Hach results = 0.1 mg/L, pink color

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-27

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern:

Client: Macgregor Personnel: BS

Project Location: Albany, GA Weather: sunny ~ 70° F

2. WELL DATA

Date Measured: 3-25-14 Time: 0930 Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☐ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Screen Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Total Depth of Well: 44.73 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Static Water: 35.43 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Length of Water Column: 9.3 feet Well Volume: 0.38 gal Screened Interval (from GS):

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-25-14 Time: 1008

Equipment Model(s)

Purge Method: ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

1. QED Bladder

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

2. MP-50

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

3. YSI-556

Volume to Purge (minimum): 3 well volumes or 1.14 gallons

4. DR 4-ISCE

Was well purged dry? ☐ Yes ☐ No Pumping Rate: gal/min

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1008	0	7.55	18.37	0.409	270.5	7.41	>1000	36.61'	
1018	0.25	7.36	19.41	0.394	58.4	6.27	405	36.61'	
1028	0.50	7.33	18.95	0.382	60.6	5.89	65.0	36.61	
1038	0.75	7.25	18.31	0.378	69.0	5.93	26.5	36.61	
1048	1.00	7.29	18.13	0.377	70.2	5.98	21.3	36.61	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☐ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: 14084-TW-27 Sample Date: 3-25-14 Sample Time: 1110 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: # of Containers:

Equipment Blank Collected? ☐ Yes ☑ No ID: # of Containers:

Geochemical Analyses

Ferrous Iron: mg/L

DO: mg/L

Nitrate: mg/L

Sulfate: mg/L

Alkalinity: mg/L

5. COMMENTS

Hach results = 0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-27

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1058	1.25	7.34	18.55	0.375	70.0	5.93	14.1	36.61	
1108	1.50	7.30	18.34	0.374	73.1	5.95	7.94	36.61	
1110	collect sample								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-28

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: Macgregor Personnel: BS

Project Location: Albany GA Weather: Sunny ~ 75°F

2. WELL DATA

Date Measured: 3-25-14 Time: 1605 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 44.82 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 37.72 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 7.1 feet Well Volume: 0.29 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-25-14 Time: 1611

Equipment Model(s)

Purge Method: ☐ Bailer, Size: _____ ☑Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

1. QED Bladder

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

2. MP-50

Materials: Rope/Tubing ☑Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

3. YSI-556

Volume to Purge (minimum): 3 well volumes or 0.87 gallons

4. DRT-15CE

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1611	0	6.99	25.53	0.575	17.3	5.10	432	37.75'	
1621	0.25	6.91	25.44	0.560	40.4	4.81	56.1	37.75'	
1631	0.50	6.87	25.24	0.553	55.1	4.73	8.29	37.75'	
1641	0.75	6.85	24.83	0.548	83.1	4.67	5.60	37.75'	
1651	1.00	6.82	24.79	0.545	88.5	4.68	2.09	37.75'	

1655 collect sample

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14084-TW-28 Sample Date: 3-25-14 Sample Time: 1655 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = <0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

GROUNDWATER SAMPLING FIELD DATA SHEET

Brown AND Caldwell

WELL ID: TW-29

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany GA Weather: Sunny ~ 60°F

2. WELL DATA

Date Measured: 3.26.14 Time: 0926 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches — Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches — Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 59.78 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 39.30 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: _____ feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 20.48 feet — Well Volume: 0.89 gal — Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-26.14 Time: 0926

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 2.51 gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. YSI-556
4. ORT-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0926	0.0	6.84	18.86	0.575	194.3	7.94	948	—	George Skalg
0936	0.25	6.92	19.20	0.564	187.2	7.48	146	—	has water level meter
0946	0.50	6.92	19.45	0.563	177.6	7.41	40.7	—	for gauging
0956	0.75	6.92	19.52	0.564	169.7	7.58	31.6	—	
1006	1.00	6.89	19.54	0.565	164.1	7.50	35.1	—	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☐ No

Sample ID: 14085-TW-29 Sample Date: 3.26.14 Sample Time: 1100 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = <0.1 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-29

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1016	1.25	6.81	18.04	0.565	171.5	7.49	30.8	—	
1026	1.55	6.86	18.36	0.566	165.3	7.45	23.4	—	
1036	1.75	6.81	18.27	0.568	156.9	7.41	16.6	—	
1046	1.90	6.80	18.09	0.568	124.4	7.40	15.4	—	
1056	2.00	6.81	18.35	0.569	103.5	7.35	9.23	—	
1100	collect	sample							

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-30

1. PROJECT INFORMATION

Project Number: 145096 Task Number: 600 Area of Concern:

Client: Macgregor Personnel: BS

Project Location: Albany, GA Weather: Sunny, Wind ~ 65°F

2. WELL DATA

Date Measured: 3-25-14 Time: 1220 Temporary Well: ☐Yes ☐No

Casing Diameter: 3/4 inches — Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Screen Diameter: 3/4 inches — Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other:

Total Depth of Well: 43.19 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Static Water: 31.09 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Depth to Product: feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other:

Length of Water Column: 12.1 feet — Well Volume: 0.49 gal Screened Interval (from GS):

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 3-25-14 Time: 1223

Purge Method: ☐ Bailer, Size: ☑Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 1.48 gallons 5x = 2.45

Was well purged dry? ☐ Yes ☑ No Pumping Rate: gal/min

Equipment Model(s)
1. MP-60
2. QED Bladder
3. YSI-556
4. DRT-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1223	0	7.47	22.84	0.398	3.9	6.30	709	31.22'	
1233	0.25	7.27	22.98	0.380	22.4	5.94	209	31.23'	
1243	0.50	7.30	22.86	0.369	28.0	5.82	98.5	31.23'	
1253	0.75	7.31	22.72	0.359	37.4	5.79	64.1	31.23'	
1303	1.00	7.34	22.61	0.354	41.6	5.76	60.3	31.23	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: ☑Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: 14084-TW-30 Sample Date: 3-25-14 Sample Time: 1435 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: # of Containers:

Equipment Blank Collected? ☐ Yes ☑ No ID: # of Containers:

Geochemical Analyses

Ferrous Iron: mg/L

DO: mg/L

Nitrate: mg/L

Sulfate: mg/L

Alkalinity: mg/L

5. COMMENTS

Hach results = <0.1 mg/L, slight pink color

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-30

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1313	1.50	7.37	22.56	0.350	45.3	5.77	51.2	31.23'	
1323	1.75	7.36	22.47	0.346	52.5	5.76	47.8	31.23'	
1333	2.25	7.31	22.29	0.346	59.9	5.67	30.2	31.23'	
1343	2.75	7.38	22.37	0.346	57.7	5.61	133	31.23'	purged
1353	3.00	7.36	22.30	0.342	60.5	5.68	60.3	31.23	5 well
1403	3.25	7.39	22.17	0.340	60.4	5.70	32.1	31.23'	volumes
1413	3.50	7.38	22.48	0.339	63.5	5.65	24.4	31.23'	
1423	3.75	7.39	22.16	0.338	64.5	5.62	19.9	31.23	
1433	4.00	7.40	22.24	0.337	66.0	5.67	8.79	31.23	
1435	collected sample								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: Tw-16

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany GA Weather: Cloudy ~ 85°F

2. WELL DATA

Date Measured: 6.2.14 Time: PM Temporary Well: ☐ Yes ☒ No

Casing Diameter: 3/4 inches Type: ☒ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches Type: ☒ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.15 feet From: ☒ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 28.76 feet From: ☒ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☒ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: _____ feet Well Volume: _____ gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.167 gal/ft 4-in well = 0.667 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6.2.14 Time: 1630

Purge Method: ☐ Bailer, Size: _____ ☒ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☒ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☒ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☒ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☒ Disposable

Volume to Purge (minimum): _____ well volumes or _____ gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. YSI-556
4. DFT-15CE

Calibrated? ☒ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1640	0.20	7.11	23.80	0.411	132.9	6.25	205	35.70'	
1650	0.40	7.16	23.60	0.409	130.3	5.96	114	35.73	
1700	0.60	7.21	23.99	0.408	125.9	5.53	73.1	35.73'	
1710	0.80	7.26	24.51	0.409	122.2	5.41	49.7	36.50'	
1720	1.00	7.21	24.34	0.413	123.1	5.34	15.2	36.80	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☒ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☒ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☒ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☒ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☒ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☒ No

Sample ID: 14153-TW-16 Sample Date: 6.2.14 Sample Time: 1735 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☒ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☒ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-16

3. PURGE DATA (continued from page ____)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1730	1.20	7.20	24.14	0.415	122.9	5.35	4.67	36.80'	
1735	collect sample								

Purge data continued on next sheet? ☐

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-31

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: Macdonald Albany GA Personnel: BS

Project Location: Albany GA Weather: sunny ~ 95°F

2. WELL DATA

Date Measured: 6.4.14 Time: PM Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 1 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.25 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 33.71 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 11.54 feet Well Volume: 0.47 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6.4.14 Time: 1259

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 1.41 gallons

Was well purged dry? ☐ Yes ☑ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. YSI-556
3. DRT-15CE
4. Solinst H_2O

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1309	0.20	6.71	29.46	0.597	69.5	4.09	885	33.80	
1319	0.40	6.78	28.79	0.590	70.5	4.20	202	33.80	
1329	0.60	6.79	29.01	0.555	74.5	4.23	63.1	33.80	
1339	0.80	6.81	28.85	0.546	81.1	4.23	15.2	33.80	
1349	1.00	6.79	28.61	0.542	86.0	4.27	6.60	33.80	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14155-TW-31 Sample Date: 6-4-14 Sample Time: 1350 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results < 0.1 mg/L w/ slight color change.

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-32

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany GA Weather: Sunny ~ 92°F

2. WELL DATA

Date Measured: 6.4.14 Time: PM Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 1 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.27 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 33.38' feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 11.89 feet Well Volume: 0.48 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6.4.14 Time: 1435

Equipment Model(s)

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

1. QED Bladder Pump

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

2. YSI-556

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

3. DRT-15CE

Volume to Purge (minimum): 3 well volumes or 1.46 gallons

4. Solinst H_2O

Was well purged dry? ☐ Yes ☑ No Pumping Rate: _____ gal/min

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1445	0.26	6.83	28.93	0.516	46.2	3.75	361	33.39'	
1455	0.40	6.81	28.38	0.537	62.5	3.87	127	33.39	
1505	0.60	6.84	28.30	0.547	71.1	3.77	64.0	33.39'	
1515	0.80	6.83	27.98	0.549	79.0	3.87	30.3	33.39'	
1525	1.00	6.81	27.89	0.551	86.7	3.98	17.1	33.39'	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14155-TW-32 Sample Date: 6.4.14 Sample Time: 1551 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = <0.1 & no color change

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-32

3. PURGE DATA (continued from page __/__)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1535	1.20	6.83	28.25	0.553	91.1	3.81	14.6	33.39'	
1545	1.40	6.80	28.07	0.552	97.3	4.10	8.02	33.39'	
1550	collect	sample							

Purge data continued on next sheet? ☐

FORM GW-2 (Rev 051812 - sej)

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-33

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: MW-11 area

Client: MacGregor Personnel: Skala

Project Location: Albany Ga Weather: ~80° Sunny

2. WELL DATA

Date Measured: 6-5-14 Time: AM Temporary Well: ☑ Yes ☐ No

Casing Diameter: 1 inches Type: ☐ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 1 inches Type: ☐ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.03 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 33.65 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: _____ feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 11.38 feet Well Volume: .466 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6-5-14 Time: 0800

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☐ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☑ Prepared Off-Site ☐ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☐ Disposable

Volume to Purge (minimum): — well volumes or Stability gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. YSI
2. QRT
3. Mp-50
4. _____

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0805	.01	6.41	25.69	.557	-94.5	1.50	1165	33.71	
0815	.03	6.50	25.68	.542	-124.3	2.42	1164	33.71	600, switched to QRT
0825	.05	6.60	25.77	.537	-123.3	3.02	273	33.90	
0835	.25	6.75	25.81	.536	-102.5	3.26	91.8	33.83	
0845	.35	6.79	25.90	.534	-104.1	3.28	65.5	33.87	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☐ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☑ Prepared Off-Site ☐ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☐ No

Sample ID: 14156-TW-33 Sample Date: 6-5-14 Sample Time: 0935 # of Containers: 2

Duplicate Sample Collected? ☑ Yes ☐ No ID: 14156-Dup # of Containers: 2

Equipment Blank Collected? ☐ Yes ☐ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

0.0 on Hach Kit

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

MJ Skala TE

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-33

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0855	.65	6.83	25.78	.534	-104.2	3.47	73.5	33.83	
0905	.85	6.86	26.95	.534	-105.1	3.52	58.9	33.85	
0915	1.05	6.92	26.62	.534	-105.7	3.62	17.4	33.85	
0925	1.25	6.93	26.54	.534	-105.9	3.91	8.68	33.85	
				0925	sample				

Purge data continued on next sheet? ☐

FORM GW-2 (Rev 051812 - sej)

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-34

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: MacGregor Personnel: Sigala

Project Location: Albany, Ga Weather: 85° Sunny

2. WELL DATA

Date Measured: 6-5-14 Time: ~~6:54~~ AM Temporary Well: ☑ Yes ☐ No

Casing Diameter: 1 inches Type: ☐ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 1 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.10 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 33.27 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: _____ feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 11.83 feet Well Volume: 1.49 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6-5-14 Time: 1015

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☐ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): _____ well volumes or Stability gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. YSI
2. DRT
3. MP-50
4. _____

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
~~1015~~ 1020	.01	6.86	26.69	.604	-101.4	3.48	47.7	33.57	
1030	.15	6.34	26.03	.605	-96.0	2.85	37.9	33.61	
1040	.30	6.65	26.09	.603	-142.4	2.59	55.1	33.78	
1050	.50	6.74	25.85	.602	-150.6	2.71	25.2	33.83	
1100	.70	6.83	25.86	.600	-154.2	2.74	16.8	33.85	

Purge data continued on next sheet? ☑

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☐ No

Sample ID: 14156-TW-34 Sample Date: 6-5-14 Sample Time: 1110 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: — # of Containers: —

Equipment Blank Collected? ☐ Yes ☑ No ID: — # of Containers: —

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

No hit on Hach Kit

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature: Sigala

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-34

3. PURGE DATA (continued from page __1__)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1110	.90	6.84	25.95	.600	-154.2	2.76	6.96	33.87	
				1110					

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-35

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: MacGregor Personnel: Stala

Project Location: Albany, Ga Weather: 95° Sunny

2. WELL DATA

Date Measured: 6-5-14 Time: AM Temporary Well: ☑ Yes ☐ No

Casing Diameter: 1 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 1 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.07 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 33.29 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: _____ feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 11.78 feet — Well Volume: .48 gal — Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6-5-14 Time: 1200

Purge Method: ☐ Bailer, Size: _____ ☐ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☐ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): ~ well volumes or Stability gallons 2.91 = 5 well vol

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s): 1. YSI 2. DRT 3. MP-50 4. _____ Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1205	.1	6.10	27.16	.672	-89.3	1.47	665	33.33	
1215	.3	6.47	26.09	.654	-113.8	1.67	190	33.48	
1225	.5	6.63	26.26	.665	-99.2	1.55	151	33.56	
1235	.7	6.71	26.09	.670	-95.8	1.04	219	33.61	
1245	1.0	6.91	26.49	.674	-144.6	1.73	184	33.62	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☐ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☐ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☐ No

Sample ID: 14156-TW-35 Sample Date: 6-5-14 Sample Time: 1515 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: ~ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: ~ # of Containers: ~

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

No hot on Hach kit

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature: Stala

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-35

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1255	1.2	6.72	25.61	.670	-155.6	2.00	144	33.62	
1305	1.4	6.93	26.74	.669	-122.3	2.75	111	33.62	
1315	1.6	6.97	27.00	.669	-122.9	1.71	108	33.62	
1325	1.8	7.03	27.04	.669	-123.8	3.55	62	33.62	
1335	1.9	7.01	27.02	.669	-122.3	1.75	71	33.62	
1345	2.0	6.99	27.25	.669	-122.4	1.82	70	33.62	
1355	2.1	7.02	27.28	.669	-124.1	1.88	39	33.63	
1405	2.2	7.01	27.51	.669	-123.8	1.90	70	33.63	BS pulls pump up 5ft
1425	2.3	6.86	26.27	.669	-123.0	2.21	222	33.63	
1435	2.4	6.92	26.49	.669	-123.3	2.22	51	33.63	
1445	2.5	6.93	26.17	.669	-124.3	2.24	26.1	33.63	
1455	2.6	6.94	26.52	.669	-123.9	2.91	13.4	33.63	
1505	2.7	6.94	26.71	.669	-125.3	3.84	19.1	33.63	
1515	2.8	6.93	26.83	.669	-126.1	3.91	23.1	33.63	
				1515 sample					

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-36

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany GA Weather: Partly Cloudy ~ 80F

2. WELL DATA

Date Measured: 6-2-14 Time: AM Temporary Well: ☐Yes ☐No

Casing Diameter: 3in. inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3in inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.15 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Gasing ☐ Other: _____

Depth to Static Water: 28.86 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 16.29 feet Well Volume: 0.66 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.167 gal/ft 4-in well = 0.667 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6-3-14 Time: 0823

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 2.00 gallons

Was well purged dry? ☐ Yes ☑ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. YSI-556
3. DRT-15CE
4. Solinst H2O

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0833	0.20	6.70	21.15	0.528	154.6	5.41	192	30.25	
0843	0.50	6.79	21.21	0.502	136.1	5.06	531	30.25	
0853	0.75	6.85	21.34	0.470	126.0	5.13	183	30.26	
0903	1.00	6.90	21.44	0.445	119.9	5.25	36.9	30.27	
0913	1.25	6.93	21.50	0.428	115.7	5.28	19.4	30.27	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☐ No

Sample ID: 14154-MTW-36 Sample Date: 6-3-14 Sample Time: 1005 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = <0.01 b-t

some color change.

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-36

3. PURGE DATA (continued from page 6)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0923	1.5	6.97	21.57	0.415	112.1	5.29	29.1	30.27	
0933	1.75	6.96	21.52	0.405	111.5	5.38	12.1	30.29	
0943	2.00	7.02	21.65	0.396	109.4	5.39	59.3	30.29	
0953	2.10	7.06	22.36	0.394	105.2	5.19	15.3	30.30	
1003	2.20	7.05	22.28	0.391	105.9	5.23	8.86	30.30	
1005	collect sample								

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 11.March.10 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-37

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany Weather: Partly cloudy ~85°F

2. WELL DATA

Date Measured: 6-3-14 Time: 8AM Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 1 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.10 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 29.85 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 15.25 feet Well Volume: .62 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.167 gal/ft 4-in well = 0.667 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6-3-14 Time: 1055

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 1.87 gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. VSI-556
4. DFT-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1105	0.20	7.03	23.23	0.508	122.3	4.04	343	29.95'	
1115	0.40	7.06	23.02	0.476	124.4	4.03	130	29.95	
1125	0.60	7.14	23.04	0.439	122.1	4.26	71.4	29.95	
1135	0.80	7.17	23.12	0.423	121.5	4.33	60.9	29.96'	
1145	1.10	7.20	23.43	0.415	119.5	4.40	43.3	29.96	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☐ No

Sample ID: 14154-TW-37 Sample Date: 6.3.14 Sample Time: 1240 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach Msult < 0.1 mg/L. No sign of color.

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: ~~RW-1~~ TW-37

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1155	1.30	7.19	23.16	0.409	119.4	4.46	44.2	29.96	
1205	1.50	7.26	23.53	0.405	114.6	4.47	20.3	29.96	
1215	1.80	7.24	23.47	0.402	116.4	4.49	15.1	29.96	
1225	2.00	7.23	23.46	0.400	113.5	4.60	12.9	29.96	
1235	2.20	7.27	23.86	0.397	110.4	4.47	9.27	29.96	
1240	collect sample								

Purge data continued on next sheet? ☐

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-38

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany GA Weather: sunny ~ 90°F

2. WELL DATA

Date Measured: 6.4.14 Time: AM Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: / inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.02 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 31.90 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: / feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 13.12 feet — Well Volume: 0.53 gal — Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6.4.14 Time: 1028

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 1.59 gallons

Was well purged dry? ☐ Yes ☑ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder Pump
2. YSI-556
3. DR2-15CE
4. Solinst H_2O

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1038	0.20	6.65	24.72	0.427	43.4	3.62	54.8	32.45'	
1048	0.40	6.67	25.14	0.433	25.3	3.73	37.8	32.45	
1058	0.60	6.64	25.25	0.441	21.5	3.71	29.5	32.45'	
1108	0.80	6.63	25.43	0.443	20.4	3.75	30.5	32.45'	
1118	1.00	6.68	26.19	0.441	18.6	3.77	20.6	32.45'	

Purge data continued on next sheet? ☑

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14155-TW-38 Sample Date: 6.4.14 Sample Time: 1130 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach result =<0.1 mg/L. No color change

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-38

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1128	1.20	6.61	25.77	0.435	24.4	0.435	7.53	32.45	
1130	collect	sample							

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-39

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany GA Weather: sunny ~ 86°F

2. WELL DATA

Date Measured: 6.4.14 Time: AM Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 1 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.16 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 34.27 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 10.89 feet Well Volume: 0.44 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6.4.14 Time: 0818

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 1.33 gallons

Was well purged dry? ☐ Yes ☑ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder Pump
2. YSI-556
3. DRT-15CE
4. Solinst 102

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0828	0.20	7.13	21.74	0.322	92.9	4.57	539	34.27	
0838	0.40	7.25	22.06	0.298	80.8	4.98	165	34.27	
0848	0.60	7.27	22.16	0.277	82.4	5.22	51.4	34.27	
0858	0.80	7.28	22.38	0.267	85.9	5.45	30.8	34.27	
0908	1.00	7.38	22.75	0.261	85.3	5.60	128	34.27	

Purge data continued on next sheet? ☑

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☑ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14155-TW-39 Sample Date: 6.4.14 Sample Time: 0940 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results < 0.1 mg/L but some slight color

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-39

3. PURGE DATA (continued from page ____)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
0918	1.20	7.35	22.65	0.255	90.1	5.83	39.7	34.27	
0928	1.50	7.37	22.87	0.249	90.1	5.94	17.4	34.27	
0938	1.80	7.34	22.76	0.248	92.2	6.02	8.61	34.27	
0940	collect	sample							

Purge data continued on next sheet? ☐

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-40

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany GA Weather: SUNNY ~ 90°F

2. WELL DATA

Date Measured: 6.3.14 Time: PM Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 1 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.15 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 33.51 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 11.64 feet — Well Volume: 0.47 gal — Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6.3.14 Time: 1540

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 1.43 gallons

Was well purged dry? ☐ Yes ☑ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder Pump
2. YSI-556
3. DRT-15CE
4. Solinst H2O

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1550	0.20	6.98	23.26	0.495	113.6	5.06	31.4	35.33'	
1600	0.40	7.01	23.39	0.481	120.7	5.07	18.5	35.33'	
1610	0.60	7.04	23.03	0.446	126.8	5.19	17.2	35.35'	
1620	0.80	7.07	23.22	0.447	130.7	5.22	5.85	35.36'	
1625	collect sample								

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14154-TW-40 Sample Date: 6.3.14 Sample Time: 1625 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results < 0.1 mg/L no color change

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-4I

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany GA Weather: sunny ~ 90°F

2. WELL DATA

Date Measured: 6.3.14 Time: 1324 PM Temporary Well: ☑ Yes ☐ No

Casing Diameter: 3/4 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 3/4 inches — Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45.11 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 29.75 feet — From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: _____ feet — From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: _____ feet — Well Volume: _____ gal — Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.163 gal/ft 4-in well = 0.653 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6.3.14 Time: 1324

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: (Pump)/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/(Tubing) ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): _____ well volumes or _____ gallons

Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. DEH Bladder Pump
2. YSI-556
3. DRT-15CE
4. Solinst H2O

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1334	0.20	6.97	23.61	0.485	96.0	3.89	422	30.25'	
1344	0.40	7.08	23.54	0.470	97.7	3.82	112	30.25	
1354	0.60	7.09	23.51	0.461	103.0	3.92	39.9	30.25'	
1404	0.80	7.12	23.42	0.453	104.2	4.16	34.2	30.25	
1414	1.00	7.17	23.72	0.447	103.3	4.25	8.30	30.25	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: (Pump)/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: (Tubing)/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14154-TW-4I Sample Date: 6.3.14 Sample Time: 1425 # of Containers: 2

Duplicate Sample Collected? ☑ Yes ☐ No ID: 14154-Dup @ 1400 # of Containers: 2

Equipment Blank Collected? ☑ Yes ☐ No ID: 14154-EB @ 1300 # of Containers: 2

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Hach results = < 0.1 mg/L but slight color change

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-41

BbrewerGallprojects.com

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1424	1.25	7.18	23.87	0.441	103.2	4.36	9.03	30.26	
1425	collected sample								

Purge data continued on next sheet? ☐

FORM GW-2 (Rev 051812 - sej)

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-42

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Area of Concern: _____

Client: MacGregor Personnel: BS

Project Location: Albany GA Weather: Cloudy ~85°F

2. WELL DATA

Date Measured: 6.2.14 Time: PM Temporary Well: ☐ Yes ☐ No

Casing Diameter: 0.75 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: ~~0.25~~ 1 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 45 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 37.05 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Product: — feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Length of Water Column: 7.95 feet Well Volume: 0.32 gal Screened Interval (from GS): _____

Note: 1-in well = 0.041 gal/ft 2-in well = 0.167 gal/ft 4-in well = 0.667 gal/ft 6-in well = 1.469 gal/ft

3. PURGE DATA

Date Purged: 6.2.14 Time: 1421

Purge Method: ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Rope/Tubing ☐ Polyethylene ☐ Polypropylene ☑ Teflon® ☐ Nylon ☐ Other: _____ ☐ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Volume to Purge (minimum): 3 well volumes or 0.97 gallons x5 = 1.6

Was well purged dry? ☐ Yes ☑ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. QED Bladder
2. MP-50
3. YSI-556
4. DRT-15CE

Calibrated? ☑ Yes ☐ No

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity ≤ 10 NTU	Water Level	Comments
1426	0.10	6.81	27.41	0.398	172.9	6.11	392	37.51	
1436	0.50	6.91	26.71	0.417	128.1	5.00	366	37.53	
1446	0.75	7.00	26.10	0.408	120.0	5.00	138	37.54	
1456	0.80	7.02	25.74	0.413	117.1	4.93	157	37.54	
1506	1.00	7.20	27.07	0.414	109.1	4.61	150	37.50	

Purge data continued on next sheet? ☐

4. SAMPLING DATA

Method(s): ☐ Bailer, Size: _____ ☑ Bladder Pump ☐ 2" Sub. Pump ☐ 4" Sub. Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

Materials: Pump/Bailer ☐ Polyethylene ☑ Stainless ☐ PVC ☐ Teflon® ☐ Other: _____ ☐ Dedicated ☑ Prepared Off-Site ☑ Field-Cleaned ☐ Disposable

Materials: Tubing/Rope ☑ Polyethylene ☐ Polypropylene ☐ Teflon® ☐ Nylon ☐ Other: _____ ☑ Dedicated ☐ Prepared Off-Site ☐ Field-Cleaned ☑ Disposable

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: 14153-TW-42 Sample Date: 6.2.14 Sample Time: 1550 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Equipment Blank Collected? ☐ Yes ☑ No ID: _____ # of Containers: _____

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

Well developed prior to sampling.
Hach results = 0.0 mg/L

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: TW-42

3. PURGE DATA (continued from page 1)

Time	Cum. Gallons Removed (gal)	pH ±0.1 su	Temp ±2°C	Spec. Cond. > of ±3% or ±10 µS/cm	ORP > of ±10% or ±20 mV	DO > of ±10% or ±0.2 mg/L	Turbidity < 10 NTU	Water Level	Comments
1516	1.15	7.22	27.25	0.408	111.4	4.73	~~7.22~~ 39.5	37.50	
1526	1.30	7.12	25.93	0.421	118.0	4.93	17.9	37.50	"
1536	1.35	7.10	25.47	0.424	119.1	4.79	8.94	37.50	"
1546	1.50	7.14	25.77	0.428	115.4	4.43	6.31	35.50	-
1550	collect	sample							

Purge data continued on next sheet? ☐

FORM GW-2 (Rev 11.March.10 - sej)

Signature

Appendix C: Laboratory Analytical Reports

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 19, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1403G24

Analytical Environmental Services, Inc. received 5 samples on 3/19/2014 10:35:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1403624

Date: 3-18-14 Page 1 of 1

COMPANY: Brown & Caldwell
ADDRESS: 990 Hammond Drive Atlanta GA 30328
PHONE:
FAX:
SAMPLED BY: Brian Steele
SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	PRESERVATION (See codes) HNO3	NA	Total Chromium / Total Hex Chromium	REMARKS	No # of Containers
1	14077-TW-1	3-18-14	1120	X		GW	X	X			2
2	14077-TW-2	↓	1310	↓		↓	X	X			2
3	14077-Dup		1330				X	X		Standard TAT	2
4	14077-TW-3		1450				X	X			2
5	14077-TW-4	↓	1610	↓		↓	X	X			2
6											
7											
8											
9											
10											
11											
12											
13											
14											

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY / DATE/TIME
1: Brian Steele 3-18-14 1730
2:
3:

RECEIVED BY / DATE/TIME
1: [signature] 3/19/14 1035
2:
3:

SPECIAL INSTRUCTIONS/COMMENTS:
Same day rush on all samples except 14077-Dup which is STAT.
*Short hold time on Hex/Tot Cr.

Bs 3-18 SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER

PROJECT INFORMATION
PROJECT NAME: Macgregor
PROJECT #: 145096
SITE ADDRESS: Albany GA
SEND REPORT TO: SJones@brwncald.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers

Turnaround Time Request
- ○ Standard 5 Business Days
- ○ 2 Business Day Rush
- ○ Next Business Day Rush
- ● Same Day Rush (auth req.)
- ○ Other

STATE PROGRAM (if any):
E-mail? (Y) N; Fax? Y (N)
DATA PACKAGE: I (II) III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 19-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14077-TW-1
Project Name:	MacGregor Golf	**Collection Date:**	3/18/2014 11:20:00 AM
Lab ID:	1403G24-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0171	0.0100		mg/L	R263594	1	03/19/2014 10:40	AB
Chromium, Hexavalent	0.143	0.0100		mg/L	R263594	1	03/19/2014 10:40	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.160	0.0100		mg/L	188421	1	03/19/2014 15:51	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 19-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14077-TW-2
Project Name:	MacGregor Golf	**Collection Date:**	3/18/2014 1:10:00 PM
Lab ID:	1403G24-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0137	0.0100		mg/L	R263594	1	03/19/2014 12:10	AB
Chromium, Hexavalent	0.0204	0.0100		mg/L	R263594	1	03/19/2014 12:10	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0341	0.0100		mg/L	188421	1	03/19/2014 15:55	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 19-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14077-DUP
Project Name:	MacGregor Golf	**Collection Date:**	3/18/2014 1:30:00 PM
Lab ID:	1403G24-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263594	1	03/19/2014 12:10	AB
Chromium, Hexavalent	0.0263	0.0100		mg/L	R263594	1	03/19/2014 12:10	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0343	0.0100		mg/L	188421	1	03/19/2014 15:59	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 19-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14077-TW-3
Project Name:	MacGregor Golf	**Collection Date:**	3/18/2014 2:50:00 PM
Lab ID:	1403G24-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263594	1	03/19/2014 12:10	AB
Chromium, Hexavalent	0.0678	0.0100		mg/L	R263594	1	03/19/2014 12:10	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0755	0.0100		mg/L	188421	1	03/19/2014 16:02	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 19-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14077-TW-4
Project Name:	MacGregor Golf	**Collection Date:**	3/18/2014 4:10:00 PM
Lab ID:	1403G24-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0146	0.0100		mg/L	R263594	1	03/19/2014 12:10	AB
Chromium, Hexavalent	0.110	0.0100		mg/L	R263594	1	03/19/2014 12:10	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.125	0.0100		mg/L	188421	1	03/19/2014 16:06	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown & Caldwell Work Order Number 1403624

Checklist completed by _____ 3.19.14
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.2 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by _____

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 19-Mar-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1403G24

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1403G24-001A	14077-TW-1	3/18/2014 11:20:00AM	Groundwater	TOTAL METALS BY ICP		03/19/2014	03/19/2014
1403G24-001B	14077-TW-1	3/18/2014 11:20:00AM	Groundwater	Hexavalent Chromium			03/19/2014
1403G24-002A	14077-TW-2	3/18/2014 1:10:00PM	Groundwater	TOTAL METALS BY ICP		03/19/2014	03/19/2014
1403G24-002B	14077-TW-2	3/18/2014 1:10:00PM	Groundwater	Hexavalent Chromium			03/19/2014
1403G24-003A	14077-DUP	3/18/2014 1:30:00PM	Groundwater	TOTAL METALS BY ICP		03/19/2014	03/19/2014
1403G24-003B	14077-DUP	3/18/2014 1:30:00PM	Groundwater	Hexavalent Chromium			03/19/2014
1403G24-004A	14077-TW-3	3/18/2014 2:50:00PM	Groundwater	TOTAL METALS BY ICP		03/19/2014	03/19/2014
1403G24-004B	14077-TW-3	3/18/2014 2:50:00PM	Groundwater	Hexavalent Chromium			03/19/2014
1403G24-005A	14077-TW-4	3/18/2014 4:10:00PM	Groundwater	TOTAL METALS BY ICP		03/19/2014	03/19/2014
1403G24-005B	14077-TW-4	3/18/2014 4:10:00PM	Groundwater	Hexavalent Chromium			03/19/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403G24

ANALYTICAL QC SUMMARY REPORT

BatchID: 188421

Sample ID: **MB-188421** Client ID: Units: **mg/L** Prep Date: **03/18/2014** Run No: **263617**
SampleType: **MBLK** TestCode: **METALS, TOTAL SW6010C** BatchID: **188421** Analysis Date: **03/19/2014** Seq No: **5546108**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.0500									
Barium	BRL	0.0200									
Cadmium	BRL	0.0050									
Calcium	BRL	0.100									
Chromium	BRL	0.0100									
Cobalt	BRL	0.0200									
Copper	BRL	0.0100									
Iron	BRL	0.100									
Lead	BRL	0.0100									
Magnesium	BRL	0.100									
Nickel	BRL	0.0200									
Selenium	BRL	0.0200									
Silver	BRL	0.0100									
Vanadium	BRL	0.0100									
Zinc	BRL	0.0200									

Sample ID: **LCS-188421** Client ID: Units: **mg/L** Prep Date: **03/18/2014** Run No: **263617**
SampleType: **LCS** TestCode: **METALS, TOTAL SW6010C** BatchID: **188421** Analysis Date: **03/19/2014** Seq No: **5546105**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.9978	0.0500	1.000		99.8	80	120				
Barium	1.068	0.0200	1.000		107	80	120				
Cadmium	1.091	0.0050	1.000		109	80	120				
Calcium	10.67	0.100	10.00		107	80	120				
Chromium	0.9841	0.0100	1.000		98.4	80	120				
Cobalt	1.053	0.0200	1.000		105	80	120				
Copper	1.037	0.0100	1.000		104	80	120				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403G24

ANALYTICAL QC SUMMARY REPORT

BatchID: 188421

Sample ID: **LCS-188421** Client ID: Units: **mg/L** Prep Date: **03/18/2014** Run No: **263617**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **188421** Analysis Date: **03/19/2014** Seq No: **5546105**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Iron	9.920	0.100	10.00		99.2	80	120				
Lead	1.046	0.0100	1.000		105	80	120				
Magnesium	10.55	0.100	10.00		105	80	120				
Nickel	1.070	0.0200	1.000		107	80	120				
Selenium	0.9749	0.0200	1.000		97.5	80	120				
Silver	0.1055	0.0100	0.1000		105	80	120				
Vanadium	1.024	0.0100	1.000		102	80	120				
Zinc	1.089	0.0200	1.000		109	80	120				

Sample ID: **1403A85-003EMS** Client ID: Units: **mg/L** Prep Date: **03/18/2014** Run No: **263617**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **188421** Analysis Date: **03/19/2014** Seq No: **5546112**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	1.002	0.0500	1.000		100	75	125				
Barium	1.022	0.0200	1.000	0.02366	99.9	75	125				
Cadmium	1.022	0.0050	1.000		102	75	125				
Calcium	118.1	0.100	10.00	110.5	76.6	75	125				
Chromium	0.9577	0.0100	1.000		95.8	75	125				
Cobalt	0.9881	0.0200	1.000		98.8	75	125				
Copper	0.9797	0.0100	1.000	0.0009845	97.9	75	125				
Iron	9.538	0.100	10.00	0.1501	93.9	75	125				
Lead	0.9735	0.0100	1.000		97.3	75	125				
Magnesium	24.00	0.100	10.00	14.37	96.4	75	125				
Nickel	0.9805	0.0200	1.000		98.1	75	125				
Selenium	0.9722	0.0200	1.000		97.2	75	125				
Silver	0.09945	0.0100	0.1000		99.5	75	125				
Vanadium	0.9957	0.0100	1.000	0.002658	99.3	75	125				
Zinc	0.9961	0.0200	1.000		99.6	75	125				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403G24

ANALYTICAL QC SUMMARY REPORT

BatchID: 188421

Sample ID: **1403A85-003EMSD** Client ID:
SampleType: **MSD** TestCode: **METALS, TOTAL SW6010C**
Units: **mg/L** Prep Date: **03/18/2014** Run No: **263617**
BatchID: **188421** Analysis Date: **03/19/2014** Seq No: **5546113**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.9870	0.0500	1.000		98.7	75	125	1.002	1.54	20	
Barium	1.008	0.0200	1.000	0.02366	98.4	75	125	1.022	1.47	20	
Cadmium	1.006	0.0050	1.000		101	75	125	1.022	1.65	20	
Calcium	115.2	0.100	10.00	110.5	46.8	75	125	118.1	2.55	20	S
Chromium	0.9418	0.0100	1.000		94.2	75	125	0.9577	1.68	20	
Cobalt	0.9719	0.0200	1.000		97.2	75	125	0.9881	1.66	20	
Copper	0.9684	0.0100	1.000	0.0009845	96.7	75	125	0.9797	1.16	20	
Iron	9.416	0.100	10.00	0.1501	92.7	75	125	9.538	1.29	20	
Lead	0.9514	0.0100	1.000		95.1	75	125	0.9735	2.30	20	
Magnesium	23.31	0.100	10.00	14.37	89.4	75	125	24.00	2.94	20	
Nickel	0.9646	0.0200	1.000		96.5	75	125	0.9805	1.63	20	
Selenium	0.9592	0.0200	1.000		95.9	75	125	0.9722	1.35	20	
Silver	0.09736	0.0100	0.1000		97.4	75	125	0.09945	2.12	20	
Vanadium	0.9818	0.0100	1.000	0.002658	97.9	75	125	0.9957	1.40	20	
Zinc	0.9737	0.0200	1.000		97.4	75	125	0.9961	2.27	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403G24

ANALYTICAL QC SUMMARY REPORT

BatchID: R263594

Sample ID: **MB-R263594** Client ID: Units: **mg/L** Prep Date: Run No: **263594**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263594** Analysis Date: **03/19/2014** Seq No: **5545470**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R263594** Client ID: Units: **mg/L** Prep Date: Run No: **263594**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263594** Analysis Date: **03/19/2014** Seq No: **5545471**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4601	0.0100	0.5000		92.0	90	110				

Sample ID: **1403G24-001BMS** Client ID: **14077-TW-1** Units: **mg/L** Prep Date: Run No: **263594**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263594** Analysis Date: **03/19/2014** Seq No: **5545481**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.6314	0.0100	0.5000	0.1434	97.6	85	115				

Sample ID: **1403G24-001BMSD** Client ID: **14077-TW-1** Units: **mg/L** Prep Date: Run No: **263594**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263594** Analysis Date: **03/19/2014** Seq No: **5545485**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.6288	0.0100	0.5000	0.1434	97.1	85	115	0.6314	0.413	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 20, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1403H45

Analytical Environmental Services, Inc. received 5 samples on 3/20/2014 10:10:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

3080 Presidential Drive • Atlanta, Georgia 30340 • Tel: 770.457.8177 • Fax: 770.457.8188 • Toll Free: 800.972.4889
www.aesatlanta.com

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1403H45

Date: 3-19-14 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Drive Atlanta GA 30328

PHONE:

FAX:

SAMPLED BY: Brian Steele

SIGNATURE:

ANALYSIS REQUESTED

PRESERVATION (See codes)

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Total Chromium HNO3	Total Hex/Tri Chromium NA	Dissolved Chromium NA	Dissolved Hex/Tri Chromium NA	REMARKS	No # of Containers
1	14078-TW-5	3-19-14	0925	X		GW	X	X				2
2	14078-EB		1005			W	X	X			standard TAT	2
3	14078-TW-6		1130			GW	X	X				2
4	14078-TW-7		1355			GW	X	X	X	X		4
5	14078-TW-8		1625			GW	X	X				2
6												
7												
8												
9												
10												
11												
12												
13												
14												

Visit our website **www.aesatlanta.com** to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Brian Steele	3-19-14 / 1730	1: [signature]	3.20.14 1010
2:		2:	
3:		3:	

PROJECT INFORMATION

PROJECT NAME: Macgregor

PROJECT #: 145096

SITE ADDRESS: Albany GA

SEND REPORT TO: SJones@brwncald.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers: 17

Turnaround Time Request
- Standard 5 Business Days
- 2 Business Day Rush
- Next Business Day Rush
- (Same Day Rush (auth req.))
- Other

STATE PROGRAM (if any):

E-mail? (Y) N; Fax? Y (N)

DATA PACKAGE: I (II) III IV

SPECIAL INSTRUCTIONS/COMMENTS:
* Note short hold times.
* All samples same day Rush, except 14078-EB which is STAT

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT (FedEx) UPS MAIL COURIER

GREYHOUND OTHER

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc

Date: 20-Mar-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab ID: 1403H45

Case Narrative

Proceed out of hold with Hex Cr per Sarah Jones email 3/20

Analytical Environmental Services, Inc **Date:** 20-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14078-TW-5
Project Name:	MacGregor Golf	**Collection Date:**	3/19/2014 9:25:00 AM
Lab ID:	1403H45-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100	H	mg/L	R263701	1	03/20/2014 11:00	AB
Chromium, Hexavalent	0.0699	0.0100	H	mg/L	R263701	1	03/20/2014 11:00	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0750	0.0100		mg/L	188530	1	03/20/2014 15:38	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 20-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14078-EB
Project Name:	MacGregor Golf	**Collection Date:**	3/19/2014 10:05:00 AM
Lab ID:	1403H45-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100	H	mg/L	R263701	1	03/20/2014 11:00	AB
Chromium, Hexavalent	BRL	0.0100	H	mg/L	R263701	1	03/20/2014 11:00	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	188530	1	03/20/2014 15:42	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 20-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14078-TW-6
Project Name:	MacGregor Golf	**Collection Date:**	3/19/2014 11:30:00 AM
Lab ID:	1403H45-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0190	0.0100		mg/L	R263701	1	03/20/2014 11:00	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R263701	1	03/20/2014 11:00	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0199	0.0100		mg/L	188530	1	03/20/2014 15:45	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 20-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14078-TW-7
Project Name:	MacGregor Golf	**Collection Date:**	3/19/2014 1:55:00 PM
Lab ID:	1403H45-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C (SW3005A)								
Chromium	BRL	0.0100		mg/L	188590	1	03/20/2014 14:55	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263701	1	03/20/2014 11:00	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R263701	1	03/20/2014 11:00	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263701	1	03/20/2014 11:00	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R263701	1	03/20/2014 11:00	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	188530	1	03/20/2014 15:49	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 20-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14078-TW-8
Project Name:	MacGregor Golf	**Collection Date:**	3/19/2014 4:25:00 PM
Lab ID:	1403H45-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263701	1	03/20/2014 11:00	AB
Chromium, Hexavalent	0.0130	0.0100		mg/L	R263701	1	03/20/2014 11:00	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0202	0.0100		mg/L	188530	1	03/20/2014 15:53	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown & Caldwell Work Order Number 1403H45

Checklist completed by [signature] 3/20/14
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.2 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes 3/20 No ✓

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by JB

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 20-Mar-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1403H45

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1403H45-001A	14078-TW-5	3/19/2014 9:25:00AM	Groundwater	TOTAL METALS BY ICP		03/20/2014	03/20/2014
1403H45-001B	14078-TW-5	3/19/2014 9:25:00AM	Groundwater	Hexavalent Chromium			03/20/2014
1403H45-002A	14078-EB	3/19/2014 10:05:00AM	Groundwater	TOTAL METALS BY ICP		03/20/2014	03/20/2014
1403H45-002B	14078-EB	3/19/2014 10:05:00AM	Groundwater	Hexavalent Chromium			03/20/2014
1403H45-003A	14078-TW-6	3/19/2014 11:30:00AM	Groundwater	TOTAL METALS BY ICP		03/20/2014	03/20/2014
1403H45-003B	14078-TW-6	3/19/2014 11:30:00AM	Groundwater	Hexavalent Chromium			03/20/2014
1403H45-004A	14078-TW-7	3/19/2014 1:55:00PM	Groundwater	TOTAL METALS BY ICP		03/20/2014	03/20/2014
1403H45-004B	14078-TW-7	3/19/2014 1:55:00PM	Groundwater	Hexavalent Chromium			03/20/2014
1403H45-004C	14078-TW-7	3/19/2014 1:55:00PM	Groundwater	DISSOLVED METALS BY ICP		03/20/2014	03/20/2014
1403H45-004D	14078-TW-7	3/19/2014 1:55:00PM	Groundwater	Hexavalent Chromium, Dissolved			03/20/2014
1403H45-005A	14078-TW-8	3/19/2014 4:25:00PM	Groundwater	TOTAL METALS BY ICP		03/20/2014	03/20/2014
1403H45-005B	14078-TW-8	3/19/2014 4:25:00PM	Groundwater	Hexavalent Chromium			03/20/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403H45

ANALYTICAL QC SUMMARY REPORT

BatchID: 188530

Sample ID: **MB-188530**	Client ID:			Units: **mg/L**	Prep Date: **03/19/2014**	Run No: **263712**
SampleType: **MBLK**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188530**	Analysis Date: **03/20/2014**	Seq No: **5548118**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-188530**	Client ID:			Units: **mg/L**	Prep Date: **03/19/2014**	Run No: **263712**
SampleType: **LCS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188530**	Analysis Date: **03/20/2014**	Seq No: **5548117**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.023	0.0100	1.000		102	80	120				

Sample ID: **1403G09-001GMS**	Client ID:			Units: **mg/L**	Prep Date: **03/19/2014**	Run No: **263712**
SampleType: **MS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188530**	Analysis Date: **03/20/2014**	Seq No: **5548120**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.028	0.0100	1.000		103	75	125				

Sample ID: **1403G09-001GMSD**	Client ID:			Units: **mg/L**	Prep Date: **03/19/2014**	Run No: **263712**
SampleType: **MSD**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188530**	Analysis Date: **03/20/2014**	Seq No: **5548121**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.029	0.0100	1.000		103	75	125	1.028	0.113	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403H45

ANALYTICAL QC SUMMARY REPORT

BatchID: 188590

Sample ID: **MB-188590**	Client ID:			Units: **mg/L**	Prep Date: **03/20/2014**	Run No: **263719**
SampleType: **MBLK**	TestCode: **METALS, DISSOLVED**	**SW6010C**		BatchID: **188590**	Analysis Date: **03/20/2014**	Seq No: **5548437**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-188590**	Client ID:			Units: **mg/L**	Prep Date: **03/20/2014**	Run No: **263719**
SampleType: **LCS**	TestCode: **METALS, DISSOLVED**	**SW6010C**		BatchID: **188590**	Analysis Date: **03/20/2014**	Seq No: **5548435**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9675	0.0100	1.000		96.7	80	120				

Sample ID: **1403H45-004CMS**	Client ID: **14078-TW-7**			Units: **mg/L**	Prep Date: **03/20/2014**	Run No: **263719**
SampleType: **MS**	TestCode: **METALS, DISSOLVED**	**SW6010C**		BatchID: **188590**	Analysis Date: **03/20/2014**	Seq No: **5548440**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.8963	0.0100	1.000		89.6	75	125				

Sample ID: **1403H45-004CMSD**	Client ID: **14078-TW-7**			Units: **mg/L**	Prep Date: **03/20/2014**	Run No: **263719**
SampleType: **MSD**	TestCode: **METALS, DISSOLVED**	**SW6010C**		BatchID: **188590**	Analysis Date: **03/20/2014**	Seq No: **5548441**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9485	0.0100	1.000		94.9	75	125	0.8963	5.67	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403H45

ANALYTICAL QC SUMMARY REPORT

BatchID: R263701

Sample ID: **MB-R263701** Client ID: Units: **mg/L** Prep Date: Run No: **263701**
SampleType: **MBLK** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R263701** Analysis Date: **03/20/2014** Seq No: **5547961**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **MB-R263701** Client ID: Units: **mg/L** Prep Date: Run No: **263701**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263701** Analysis Date: **03/20/2014** Seq No: **5547969**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R263701** Client ID: Units: **mg/L** Prep Date: Run No: **263701**
SampleType: **LCS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R263701** Analysis Date: **03/20/2014** Seq No: **5547962**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4601	0.0100	0.5000		92.0	90	110				

Sample ID: **LCS-R263701** Client ID: Units: **mg/L** Prep Date: Run No: **263701**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263701** Analysis Date: **03/20/2014** Seq No: **5547970**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4601	0.0100	0.5000		92.0	90	110				

Sample ID: **1403H45-004DMS** Client ID: **14078-TW-7** Units: **mg/L** Prep Date: Run No: **263701**
SampleType: **MS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R263701** Analysis Date: **03/20/2014** Seq No: **5547964**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4633	0.0100	0.5000		92.7	85	115				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403H45

ANALYTICAL QC SUMMARY REPORT

BatchID: R263701

Sample ID: **1403H45-005BMS** Client ID: **14078-TW-8** Units: **mg/L** Prep Date: Run No: **263701**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263701** Analysis Date: **03/20/2014** Seq No: **5547980**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4633	0.0100	0.5000	0.01300	90.1	85	115				

Sample ID: **1403H45-004DMSD** Client ID: **14078-TW-7** Units: **mg/L** Prep Date: Run No: **263701**
SampleType: **MSD** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R263701** Analysis Date: **03/20/2014** Seq No: **5547965**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4590	0.0100	0.5000		91.8	85	115	0.4633	0.932	20	

Sample ID: **1403H45-005BMSD** Client ID: **14078-TW-8** Units: **mg/L** Prep Date: Run No: **263701**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263701** Analysis Date: **03/20/2014** Seq No: **5547987**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4601	0.0100	0.5000	0.01300	89.4	85	115	0.4633	0.693	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 24, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1403I67

Analytical Environmental Services, Inc. received 7 samples on 3/21/2014 10:05:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1405I67

Date: 3-20-14 Page 1 of 1

COMPANY: Brown & Caldwell
ADDRESS: 990 Hammond Dr Atlanta GA 30328
PHONE:
FAX:
SAMPLED BY: Brian Steele
SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Total Chromium	Total Hex. Cr. Chromium	PRESERVATION (See codes) HNO3	PRESERVATION (See codes) NA	REMARKS	No # of Containers
1	14079-TW-9	3-20-14	1005	X		GW	X	X				2
2	14079-TW-10	"	1135	"		GW	"	"				2
3	14079-TW-12	"	1430	"		GW	"	"				2
4	14079-DUP	"	1725	"		GW	"	"			standard TAT	2
5	14079-EB-2	"	1745	"		W	"	"			standard TAT	2
6	14079-TW-11	"	1720	"		GW	"	"				2
7	14079-EB	3-20-14	1400	X		W					standard TAT	2
8												
9												
10												
11												
12												
13												
14												

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Brian Steele	3-20-14 1730	1:	3/21/14 10:05
2:		2:	
3:		3:	

PROJECT INFORMATION
PROJECT NAME: Macgregor
PROJECT #: 145096
SITE ADDRESS: Albany GA
SEND REPORT TO: SJones@brwncald.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers:

Turnaround Time Request
- Standard 5 Business Days
- 2 Business Day Rush
- (X) Next Business Day Rush
- Same Day Rush (auth req.)
- Other

STATE PROGRAM (if any):
E-mail? (Y) N; Fax? Y (N)
DATA PACKAGE: I (II) III IV

SPECIAL INSTRUCTIONS/COMMENTS: All samples on same day rush except 14079-DUP & 14079-EB & 14079-EB-2

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT (FedEx) UPS MAIL COURIER
GREYHOUND OTHER

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14079-TW-9
Project Name:	MacGregor Golf	**Collection Date:**	3/20/2014 10:05:00 AM
Lab ID:	1403I67-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0146	0.0100	H	mg/L	R263821	1	03/21/2014 11:15	AB
Chromium, Hexavalent	BRL	0.0100	H	mg/L	R263821	1	03/21/2014 11:15	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0146	0.0100		mg/L	188615	1	03/21/2014 16:18	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14079-TW-10
Project Name:	MacGregor Golf	**Collection Date:**	3/20/2014 11:35:00 AM
Lab ID:	1403I67-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0106	0.0100		mg/L	R263821	1	03/21/2014 11:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R263821	1	03/21/2014 11:15	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0105	0.0100		mg/L	188615	1	03/21/2014 16:22	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14079-TW-12
Project Name:	MacGregor Golf	**Collection Date:**	3/20/2014 2:30:00 PM
Lab ID:	1403I67-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0106	0.0100		mg/L	R263821	1	03/21/2014 11:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R263821	1	03/21/2014 11:15	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0106	0.0100		mg/L	188615	1	03/21/2014 16:26	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14079-DUP
Project Name:	MacGregor Golf	**Collection Date:**	3/20/2014 5:25:00 PM
Lab ID:	1403I67-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.274	0.0100		mg/L	R263821	1	03/21/2014 11:15	AB
Chromium, Hexavalent	1.46	0.0500		mg/L	R263821	5	03/21/2014 11:15	AB
METALS, TOTAL SW6010C				**(SW3010A)**				
Chromium	1.73	0.0100		mg/L	188615	1	03/21/2014 16:38	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14079-EB-2
Project Name:	MacGregor Golf	**Collection Date:**	3/20/2014 5:45:00 PM
Lab ID:	1403I67-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263821	1	03/21/2014 11:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R263821	1	03/21/2014 11:15	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	188615	1	03/21/2014 16:42	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14079-TW-11
Project Name:	MacGregor Golf	**Collection Date:**	3/20/2014 5:20:00 PM
Lab ID:	1403I67-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.250	0.0100		mg/L	R263821	1	03/21/2014 11:15	AB
Chromium, Hexavalent	1.49	0.0500		mg/L	R263821	5	03/21/2014 11:15	AB
METALS, TOTAL SW6010C				**(SW3010A)**				
Chromium	1.74	0.0100		mg/L	188615	1	03/21/2014 16:46	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14079-EB
Project Name:	MacGregor Golf	**Collection Date:**	3/20/2014 2:00:00 PM
Lab ID:	1403I67-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263821	1	03/21/2014 11:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R263821	1	03/21/2014 11:15	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	188615	1	03/21/2014 15:59	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown + Caldwell Work Order Number 1403I67

Checklist completed by _____ 3/21/14
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.1 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ~~✓~~ No ✓

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by _____

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 24-Mar-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1403I67

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1403I67-001A	14079-TW-9	3/20/2014 10:05:00AM	Groundwater	TOTAL METALS BY ICP		03/21/2014	03/21/2014
1403I67-001B	14079-TW-9	3/20/2014 10:05:00AM	Groundwater	Hexavalent Chromium			03/21/2014
1403I67-002A	14079-TW-10	3/20/2014 11:35:00AM	Groundwater	TOTAL METALS BY ICP		03/21/2014	03/21/2014
1403I67-002B	14079-TW-10	3/20/2014 11:35:00AM	Groundwater	Hexavalent Chromium			03/21/2014
1403I67-003A	14079-TW-12	3/20/2014 2:30:00PM	Groundwater	TOTAL METALS BY ICP		03/21/2014	03/21/2014
1403I67-003B	14079-TW-12	3/20/2014 2:30:00PM	Groundwater	Hexavalent Chromium			03/21/2014
1403I67-004A	14079-DUP	3/20/2014 5:25:00PM	Groundwater	TOTAL METALS BY ICP		03/21/2014	03/21/2014
1403I67-004B	14079-DUP	3/20/2014 5:25:00PM	Groundwater	Hexavalent Chromium			03/21/2014
1403I67-005A	14079-EB-2	3/20/2014 5:45:00PM	Groundwater	TOTAL METALS BY ICP		03/21/2014	03/21/2014
1403I67-005B	14079-EB-2	3/20/2014 5:45:00PM	Groundwater	Hexavalent Chromium			03/21/2014
1403I67-006A	14079-TW-11	3/20/2014 5:20:00PM	Groundwater	TOTAL METALS BY ICP		03/21/2014	03/21/2014
1403I67-006B	14079-TW-11	3/20/2014 5:20:00PM	Groundwater	Hexavalent Chromium			03/21/2014
1403I67-007A	14079-EB	3/20/2014 2:00:00PM	Groundwater	TOTAL METALS BY ICP		03/21/2014	03/21/2014
1403I67-007B	14079-EB	3/20/2014 2:00:00PM	Groundwater	Hexavalent Chromium			03/21/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403I67

ANALYTICAL QC SUMMARY REPORT

BatchID: 188615

Sample ID: **MB-188615**	Client ID:			Units: **mg/L**	Prep Date: **03/21/2014**	Run No: **263818**
SampleType: **MBLK**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188615**	Analysis Date: **03/21/2014**	Seq No: **5551066**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-188615**	Client ID:			Units: **mg/L**	Prep Date: **03/21/2014**	Run No: **263818**
SampleType: **LCS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188615**	Analysis Date: **03/21/2014**	Seq No: **5551065**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.092	0.0100	1.000	0.002478	109	80	120				

Sample ID: **1403I67-007AMS**	Client ID: **14079-EB**			Units: **mg/L**	Prep Date: **03/21/2014**	Run No: **263818**
SampleType: **MS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188615**	Analysis Date: **03/21/2014**	Seq No: **5551069**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.116	0.0100	1.000	0.003011	111	75	125				

Sample ID: **1403I67-007AMSD**	Client ID: **14079-EB**			Units: **mg/L**	Prep Date: **03/21/2014**	Run No: **263818**
SampleType: **MSD**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188615**	Analysis Date: **03/21/2014**	Seq No: **5551070**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.125	0.0100	1.000	0.003011	112	75	125	1.116	0.731	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403I67

ANALYTICAL QC SUMMARY REPORT

BatchID: R263821

Sample ID: **MB-R263821** Client ID: Units: **mg/L** Prep Date: Run No: **263821**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263821** Analysis Date: **03/21/2014** Seq No: **5550560**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R263821** Client ID: Units: **mg/L** Prep Date: Run No: **263821**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263821** Analysis Date: **03/21/2014** Seq No: **5550561**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4680	0.0100	0.5000		93.6	90	110				

Sample ID: **1403I67-002BMS** Client ID: **14079-TW-10** Units: **mg/L** Prep Date: Run No: **263821**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263821** Analysis Date: **03/21/2014** Seq No: **5550594**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4856	0.0100	0.5000	0.002900	96.5	85	115				

Sample ID: **1403I67-002BMSD** Client ID: **14079-TW-10** Units: **mg/L** Prep Date: Run No: **263821**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263821** Analysis Date: **03/21/2014** Seq No: **5550600**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4899	0.0100	0.5000	0.002900	97.4	85	115	0.4856	0.882	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 24, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1403J85

Analytical Environmental Services, Inc. received 3 samples on 3/22/2014 9:00:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704
TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

1405585 Work Order: ~~1405585~~ 2

Date: 3-21-14 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Dr Atlanta GA 30328

PHONE:

FAX:

SAMPLED BY: Brian Steele

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Total Chromium	Total Hex Cr	No # of Containers
							PRESERVATION (See codes)		
							HNO3	ND	
1	14080-TW-14	3-21-14	1225	X		GW	X	X	2
2	14080-TW-13	3-21-14	1535	X		GW	X	X	2
3	14080-TW-22	3-21-14	1650	X		GW	X	X	2
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

REMARKS

RELINQUISHED BY / DATE/TIME

1: Brian Steele 3-21-14 / 1730

2:

3:

RECEIVED BY / DATE/TIME

1: [signature] 3/22/14 9:00 AM

2:

3:

SPECIAL INSTRUCTIONS/COMMENTS:
Note short hold times.

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT (FedEx) UPS MAIL COURIER

GREYHOUND OTHER

PROJECT INFORMATION

PROJECT NAME: Macgregor

PROJECT #: 145096

SITE ADDRESS: Albany, GA

SEND REPORT TO: SJones@brwncald.com

INVOICE TO:
(IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers: 6

Turnaround Time Request

- ○ Standard 5 Business Days
- ○ 2 Business Day Rush
- ○ Next Business Day Rush
- ⊘ Same Day Rush (auth req.)
- ○ Other

STATE PROGRAM (if any):

E-mail? Y / N, Fax? Y / N

DATA PACKAGE: I II III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14080-TW-14
Project Name:	MacGregor Golf	**Collection Date:**	3/21/2014 12:25:00 PM
Lab ID:	1403J85-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263841	1	03/22/2014 12:00	VS
Chromium, Hexavalent	0.580	0.0100		mg/L	R263841	1	03/22/2014 12:00	VS
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.587	0.0100		mg/L	188682	1	03/22/2014 14:49	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14080-TW-13
Project Name:	MacGregor Golf	**Collection Date:**	3/21/2014 3:35:00 PM
Lab ID:	1403J85-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263841	1	03/22/2014 12:00	VS
Chromium, Hexavalent	0.0561	0.0100		mg/L	R263841	1	03/22/2014 12:00	VS
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0599	0.0100		mg/L	188682	1	03/22/2014 15:14	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14080-TW-22
Project Name:	MacGregor Golf	**Collection Date:**	3/21/2014 4:50:00 PM
Lab ID:	1403J85-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263841	1	03/22/2014 12:00	VS
Chromium, Hexavalent	0.0172	0.0100		mg/L	R263841	1	03/22/2014 12:00	VS
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0185	0.0100		mg/L	188682	1	03/22/2014 15:18	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown & Caldwell Work Order Number 1403J85

Checklist completed by [signature] 3/22/14
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.2°C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by BM

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403J85

ANALYTICAL QC SUMMARY REPORT

BatchID: 188682

Sample ID: **MB-188682**	Client ID:			Units: **mg/L**	Prep Date: **03/22/2014**	Run No: **263844**
SampleType: **MBLK**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188682**	Analysis Date: **03/22/2014**	Seq No: **5551431**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-188682**	Client ID:			Units: **mg/L**	Prep Date: **03/22/2014**	Run No: **263844**
SampleType: **LCS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188682**	Analysis Date: **03/22/2014**	Seq No: **5551430**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9917	0.0100	1.000		99.2	80	120				

Sample ID: **1403J85-001AMS**	Client ID: **14080-TW-14**			Units: **mg/L**	Prep Date: **03/22/2014**	Run No: **263844**
SampleType: **MS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188682**	Analysis Date: **03/22/2014**	Seq No: **5551435**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.490	0.0100	1.000	0.5866	90.3	75	125				

Sample ID: **1403J85-001AMSD**	Client ID: **14080-TW-14**			Units: **mg/L**	Prep Date: **03/22/2014**	Run No: **263844**
SampleType: **MSD**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188682**	Analysis Date: **03/22/2014**	Seq No: **5551436**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.491	0.0100	1.000	0.5866	90.4	75	125	1.490	0.091	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403J85

ANALYTICAL QC SUMMARY REPORT

BatchID: R263841

Sample ID: **MB-R263841** Client ID: Units: **mg/L** Prep Date: Run No: **263841**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263841** Analysis Date: **03/22/2014** Seq No: **5551390**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium as Cr+3	BRL	0.0100									
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R263841** Client ID: Units: **mg/L** Prep Date: Run No: **263841**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263841** Analysis Date: **03/22/2014** Seq No: **5551391**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4760	0.0100	0.5000		95.2	90	110				

Sample ID: **1403J87-001DMS** Client ID: Units: **mg/L** Prep Date: Run No: **263841**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263841** Analysis Date: **03/22/2014** Seq No: **5551393**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4824	0.0100	0.5000		96.5	85	115				

Sample ID: **1403J87-001DMSD** Client ID: Units: **mg/L** Prep Date: Run No: **263841**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263841** Analysis Date: **03/22/2014** Seq No: **5551394**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4766	0.0100	0.5000		95.3	85	115	0.4824	1.21	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 24, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1403K50

Analytical Environmental Services, Inc. received 2 samples on 3/22/2014 6:00:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704
TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1403K50

Date: 3-22-14 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Dr Atlanta GA 30328

PHONE:

FAX:

SAMPLED BY: Brian Steele

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Total Chromium	Total Hex/Tri Chromium	No # of Containers	REMARKS
							PRESERVATION (See codes)			
							HNO3	NA		
1	14081 - TW-17	3-22-14	1100	X		GW	X	X	2	
2	14081 - TW-15	3-22-14	1250	X		GW	X	X	2	
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY / DATE/TIME

1: 3-22-14/1400

2: NC 3.22.14 6:00 pm

3:

RECEIVED BY / DATE/TIME

1: N.C 3.22.14 2:00 pm

2: Tara Esbeck 3/22/14

3:

PROJECT INFORMATION

PROJECT NAME: Macgregor

PROJECT #: 145096

SITE ADDRESS: Albany GA

SEND REPORT TO: SJones@Brwncald.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers: 4

Turnaround Time Request

- ○ Standard 5 Business Days
- ○ 2 Business Day Rush
- ✓ Next Business Day Rush
- ○ Same Day Rush **(auth req.)**
- ○ Other

STATE PROGRAM (if any):

E-mail? (Y) N; Fax? Y (N)

DATA PACKAGE: I (II) III IV

SPECIAL INSTRUCTIONS/COMMENTS: Hold times are short!

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT FedEx UPS MAIL (COURIER)

GREYHOUND OTHER

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14081-TW-17
Project Name:	MacGregor Golf	**Collection Date:**	3/22/2014 11:00:00 AM
Lab ID:	1403K50-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0140	0.0100		mg/L	R263845	1	03/23/2014 09:30	AB
Chromium, Hexavalent	0.102	0.0100		mg/L	R263845	1	03/23/2014 09:30	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.116	0.0100		mg/L	188682	1	03/23/2014 11:47	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14081-TW-15
Project Name:	MacGregor Golf	**Collection Date:**	3/22/2014 12:50:00 PM
Lab ID:	1403K50-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263845	1	03/23/2014 09:30	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R263845	1	03/23/2014 09:30	AB
METALS, TOTAL SW6010C				**(SW3010A)**				
Chromium	BRL	0.0100		mg/L	188682	1	03/23/2014 11:50	TA

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown & Caldwell Work Order Number 1403K50

Checklist completed by 2 3/22/13
Signature Date

Carrier name: FedEx __ UPS __ Courier __ Client ✓ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 4.3° Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by 2

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 24-Mar-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1403K50

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1403K50-001A	14081-TW-17	3/22/2014 11:00:00AM	Groundwater	TOTAL METALS BY ICP		03/23/2014	03/23/2014
1403K50-001B	14081-TW-17	3/22/2014 11:00:00AM	Groundwater	Hexavalent Chromium			03/23/2014
1403K50-002A	14081-TW-15	3/22/2014 12:50:00PM	Groundwater	TOTAL METALS BY ICP		03/23/2014	03/23/2014
1403K50-002B	14081-TW-15	3/22/2014 12:50:00PM	Groundwater	Hexavalent Chromium			03/23/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403K50

ANALYTICAL QC SUMMARY REPORT

BatchID: 188682

Sample ID: **MB-188682**	Client ID:				Units: **mg/L**	Prep Date: **03/22/2014**	Run No: **263844**
SampleType: **MBLK**	TestCode: **METALS, TOTAL**	**SW6010C**			BatchID: **188682**	Analysis Date: **03/22/2014**	Seq No: **5551431**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-188682**	Client ID:				Units: **mg/L**	Prep Date: **03/22/2014**	Run No: **263844**
SampleType: **LCS**	TestCode: **METALS, TOTAL**	**SW6010C**			BatchID: **188682**	Analysis Date: **03/22/2014**	Seq No: **5551430**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9917	0.0100	1.000		99.2	80	120				

Sample ID: **1403J85-001AMS**	Client ID:				Units: **mg/L**	Prep Date: **03/22/2014**	Run No: **263844**
SampleType: **MS**	TestCode: **METALS, TOTAL**	**SW6010C**			BatchID: **188682**	Analysis Date: **03/22/2014**	Seq No: **5551435**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.490	0.0100	1.000	0.5866	90.3	75	125				

Sample ID: **1403J85-001AMSD**	Client ID:				Units: **mg/L**	Prep Date: **03/22/2014**	Run No: **263844**
SampleType: **MSD**	TestCode: **METALS, TOTAL**	**SW6010C**			BatchID: **188682**	Analysis Date: **03/22/2014**	Seq No: **5551436**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.491	0.0100	1.000	0.5866	90.4	75	125	1.490	0.091	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403K50

ANALYTICAL QC SUMMARY REPORT

BatchID: R263845

Sample ID: **MB-R263845** Client ID: Units: **mg/L** Prep Date: Run No: **263845**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263845** Analysis Date: **03/23/2014** Seq No: **5551458**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R263845** Client ID: Units: **mg/L** Prep Date: Run No: **263845**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263845** Analysis Date: **03/23/2014** Seq No: **5551459**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4755	0.0100	0.5000		95.1	90	110				

Sample ID: **1403K50-002BMS** Client ID: **14081-TW-15** Units: **mg/L** Prep Date: Run No: **263845**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263845** Analysis Date: **03/23/2014** Seq No: **5551462**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4819	0.0100	0.5000		96.4	85	115				

Sample ID: **1403K50-002BMSD** Client ID: **14081-TW-15** Units: **mg/L** Prep Date: Run No: **263845**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263845** Analysis Date: **03/23/2014** Seq No: **5551463**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4766	0.0100	0.5000		95.3	85	115	0.4819	1.11	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 25, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1403F09

Analytical Environmental Services, Inc. received 1 samples on 3/18/2014 10:15:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1403F09

Date: 3-17-14 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Dr Atlanta GA 30328

PHONE:

FAX:

SAMPLED BY: Brian Steele

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Total Cr	Total Hex Cr	PRESERVATION (See codes) HNO3	PRESERVATION (See codes) NA	REMARKS	No # of Containers
1	14076-EB	3-17-14	1630	X			X	X				2 BS +
2												3-17-14
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Brian Steele 3-17-14	1730	1: Jan B	3/18/14 1015
2:		2:	
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS: short hold time on Hex Cr.

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
(CLIENT) FedEx UPS MAIL COURIER
GREYHOUND OTHER_____

PROJECT INFORMATION
PROJECT NAME: Macgregor
PROJECT #:
SITE ADDRESS: Albany GA
SEND REPORT TO: SJones @ brwncald.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers

Turnaround Time Request
(Standard 5 Business Days)
2 Business Day Rush
Next Business Day Rush
Same Day Rush (auth req.)
Other _____

STATE PROGRAM (if any): _____
E-mail? (Y) N; Fax? Y (N)
DATA PACKAGE: I (II) III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 25-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14076-EB
Project Name:	MacGregor Golf	**Collection Date:**	3/17/2014 4:30:00 PM
Lab ID:	1403F09-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263592	1	03/18/2014 13:45	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R263592	1	03/18/2014 13:45	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	188530	1	03/20/2014 14:14	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown + Caldwell Work Order Number 1403F09

Checklist completed by [signature] 3/18/14
Signature Date

Carrier name: FedEx __ UPS __ Courier __ Client ✓ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.1° Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by JB

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1403F09

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1403F09-001A	14076-EB	3/17/2014 4:30:00PM	Aqueous	TOTAL METALS BY ICP		03/19/2014	03/20/2014
1403F09-001B	14076-EB	3/17/2014 4:30:00PM	Aqueous	Hexavalent Chromium			03/18/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403F09

ANALYTICAL QC SUMMARY REPORT

BatchID: 188530

Sample ID: **MB-188530**	Client ID:			Units: **mg/L**	Prep Date: **03/19/2014**	Run No: **263712**
SampleType: **MBLK**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188530**	Analysis Date: **03/20/2014**	Seq No: **5548118**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-188530**	Client ID:			Units: **mg/L**	Prep Date: **03/19/2014**	Run No: **263712**
SampleType: **LCS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188530**	Analysis Date: **03/20/2014**	Seq No: **5548117**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.023	0.0100	1.000		102	80	120				

Sample ID: **1403G09-001GMS**	Client ID:			Units: **mg/L**	Prep Date: **03/19/2014**	Run No: **263712**
SampleType: **MS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188530**	Analysis Date: **03/20/2014**	Seq No: **5548120**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.028	0.0100	1.000		103	75	125				

Sample ID: **1403G09-001GMSD**	Client ID:			Units: **mg/L**	Prep Date: **03/19/2014**	Run No: **263712**
SampleType: **MSD**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188530**	Analysis Date: **03/20/2014**	Seq No: **5548121**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.029	0.0100	1.000		103	75	125	1.028	0.113	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403F09

ANALYTICAL QC SUMMARY REPORT

BatchID: R263592

Sample ID: **MB-R263592**	Client ID:		Units: **mg/L**	Prep Date:	Run No: **263592**
SampleType: **MBLK**	TestCode: **Hexavalent Chromium in Water SW7196A**		BatchID: **R263592**	Analysis Date: **03/18/2014**	Seq No: **5545443**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R263592**	Client ID:		Units: **mg/L**	Prep Date:	Run No: **263592**
SampleType: **LCS**	TestCode: **Hexavalent Chromium in Water SW7196A**		BatchID: **R263592**	Analysis Date: **03/18/2014**	Seq No: **5545444**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4797	0.0100	0.5000		95.9	90	110				

Sample ID: **1403F09-001BMS**	Client ID: **14076-EB**		Units: **mg/L**	Prep Date:	Run No: **263592**
SampleType: **MS**	TestCode: **Hexavalent Chromium in Water SW7196A**		BatchID: **R263592**	Analysis Date: **03/18/2014**	Seq No: **5545449**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4760	0.0100	0.5000		95.2	85	115				

Sample ID: **1403F09-001BMSD**	Client ID: **14076-EB**		Units: **mg/L**	Prep Date:	Run No: **263592**
SampleType: **MSD**	TestCode: **Hexavalent Chromium in Water SW7196A**		BatchID: **R263592**	Analysis Date: **03/18/2014**	Seq No: **5545451**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4723	0.0100	0.5000		94.5	85	115	0.4760	0.780	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 26, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1403K51

Analytical Environmental Services, Inc. received 3 samples on 3/24/2014 7:30:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704
TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1403K57

Date: 3-23-14 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Dr ste 400 Atlanta GA 30328

PHONE:

FAX:

SAMPLED BY: Brian Steele

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	PRESERVATION (See codes) HNO3	PRESERVATION (See codes) NA	Total Chromium	Total Hex Cr	REMARKS	No # of Containers
1	14082 - TW-18	3-23-14	0955	X		GW	X	X				2
2	14082 - TW-20	3-23-14	1105	X		GW	X	X				2
3	14082 - TW-25	3-23-14	1220	X		GW	X	X				2
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Brian Steele	3-23-14/1500	1:	3-23-14 15:00
2:	3-23-14 1845	2:	3/24/14
3:		3:	7:30

PROJECT INFORMATION

PROJECT NAME: Macgregor

PROJECT #: 145096

SITE ADDRESS: Albany GA

SEND REPORT TO: sJones@Brwncald.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers: 6

Turnaround Time Request
- ○ Standard 5 Business Days
- ○ 2 Business Day Rush
- ● Next Business Day Rush
- ○ Same Day Rush (auth req.)
- ○ Other

STATE PROGRAM (if any):

E-mail? (Y) N; Fax? Y (N)

DATA PACKAGE: I II III IV

SPECIAL INSTRUCTIONS/COMMENTS: short hold times

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT FedEx UPS MAIL (COURIER)

GREYHOUND OTHER

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 26-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14082-TW-18
Project Name:	MacGregor Golf	**Collection Date:**	3/23/2014 9:55:00 AM
Lab ID:	1403K51-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263895	1	03/24/2014 09:30	AB
Chromium, Hexavalent	0.0981	0.0100		mg/L	R263895	1	03/24/2014 09:30	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.107	0.0100		mg/L	188229	1	03/24/2014 14:30	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 26-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14082-TW-20
Project Name:	MacGregor Golf	**Collection Date:**	3/23/2014 11:05:00 AM
Lab ID:	1403K51-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0131	0.0100		mg/L	R263895	1	03/24/2014 09:30	AB
Chromium, Hexavalent	0.185	0.0100		mg/L	R263895	1	03/24/2014 09:30	AB
METALS, TOTAL SW6010C				**(SW3010A)**				
Chromium	0.199	0.0100		mg/L	188229	1	03/24/2014 14:49	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 26-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14082-TW-25
Project Name:	MacGregor Golf	**Collection Date:**	3/23/2014 12:20:00 PM
Lab ID:	1403K51-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0110	0.0100		mg/L	R263895	1	03/24/2014 09:30	AB
Chromium, Hexavalent	0.0753	0.0100		mg/L	R263895	1	03/24/2014 09:30	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0863	0.0100		mg/L	188229	1	03/24/2014 14:52	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown + Caldwell Work Order Number 1403K57

Checklist completed by JB 3/24/14
Signature Date

Carrier name: FedEx __ UPS __ Courier ✓ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes __ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.1 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by JB

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 26-Mar-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1403K51

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1403K51-001A	14082-TW-18	3/23/2014 9:55:00AM	Groundwater	TOTAL METALS BY ICP		03/24/2014	03/24/2014
1403K51-001B	14082-TW-18	3/23/2014 9:55:00AM	Groundwater	Hexavalent Chromium			03/24/2014
1403K51-002A	14082-TW-20	3/23/2014 11:05:00AM	Groundwater	TOTAL METALS BY ICP		03/24/2014	03/24/2014
1403K51-002B	14082-TW-20	3/23/2014 11:05:00AM	Groundwater	Hexavalent Chromium			03/24/2014
1403K51-003A	14082-TW-25	3/23/2014 12:20:00PM	Groundwater	TOTAL METALS BY ICP		03/24/2014	03/24/2014
1403K51-003B	14082-TW-25	3/23/2014 12:20:00PM	Groundwater	Hexavalent Chromium			03/24/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403K51

ANALYTICAL QC SUMMARY REPORT

BatchID: 188229

Sample ID: **MB-188229**	Client ID:			Units: **mg/L**	Prep Date: **03/24/2014**	Run No: **263915**
SampleType: **MBLK**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188229**	Analysis Date: **03/24/2014**	Seq No: **5553038**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-188229**	Client ID:			Units: **mg/L**	Prep Date: **03/24/2014**	Run No: **263915**
SampleType: **LCS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188229**	Analysis Date: **03/24/2014**	Seq No: **5553035**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.018	0.0100	1.000		102	80	120				

Sample ID: **1403K51-001AMS**	Client ID: **14082-TW-18**			Units: **mg/L**	Prep Date: **03/24/2014**	Run No: **263915**
SampleType: **MS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188229**	Analysis Date: **03/24/2014**	Seq No: **5553042**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.076	0.0100	1.000	0.1070	96.9	75	125				

Sample ID: **1403K51-001AMSD**	Client ID: **14082-TW-18**			Units: **mg/L**	Prep Date: **03/24/2014**	Run No: **263915**
SampleType: **MSD**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188229**	Analysis Date: **03/24/2014**	Seq No: **5553043**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.064	0.0100	1.000	0.1070	95.7	75	125	1.076	1.06	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403K51

ANALYTICAL QC SUMMARY REPORT

BatchID: R263895

Sample ID: **MB-R263895**	Client ID:			Units: **mg/L**	Prep Date:		Run No: **263895**
SampleType: **MBLK**	TestCode: **Hexavalent Chromium in Water SW7196A**			BatchID: **R263895**	Analysis Date: **03/24/2014**		Seq No: **5552637**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R263895**	Client ID:			Units: **mg/L**	Prep Date:		Run No: **263895**
SampleType: **LCS**	TestCode: **Hexavalent Chromium in Water SW7196A**			BatchID: **R263895**	Analysis Date: **03/24/2014**		Seq No: **5552638**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4755	0.0100	0.5000		95.1	90	110				

Sample ID: **1403K51-001BMS**	Client ID: **14082-TW-18**			Units: **mg/L**	Prep Date:		Run No: **263895**
SampleType: **MS**	TestCode: **Hexavalent Chromium in Water SW7196A**			BatchID: **R263895**	Analysis Date: **03/24/2014**		Seq No: **5552646**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.5846	0.0100	0.5000	0.09810	97.3	85	115				

Sample ID: **1403K51-001BMSD**	Client ID: **14082-TW-18**			Units: **mg/L**	Prep Date:		Run No: **263895**
SampleType: **MSD**	TestCode: **Hexavalent Chromium in Water SW7196A**			BatchID: **R263895**	Analysis Date: **03/24/2014**		Seq No: **5552650**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.5910	0.0100	0.5000	0.09810	98.6	85	115	0.5846	1.09	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 26, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor

Dear Sarah Jones: Order No: 1403L28

Analytical Environmental Services, Inc. received 2 samples on 3/25/2014 10:05:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1403128

Date: 3-24-14 Page 1 of 1

COMPANY: Brown & Caldwell
ADDRESS: 990 Hammond Dr ste 400 Atlanta GA 30328
PHONE:
FAX:
SAMPLED BY: Brian Steele
SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	ANALYSIS REQUESTED: Total Chromium	ANALYSIS REQUESTED: Total Hex/Tri Chromium	PRESERVATION (See codes): HNO3	PRESERVATION (See codes): NA	REMARKS	No # of Containers
1	14083-TW-23	3-24-14	1455	X		GW	X	X				2
2	14083-TW-24	3-24-14	1700	X		GW	X	X				2
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY / DATE/TIME
1: Brian Steele 3-24-14 / 1730
2:
3:

RECEIVED BY / DATE/TIME
1: Jan B 3/25/14 10:05
2:
3:

SPECIAL INSTRUCTIONS/COMMENTS: Short hold times

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT (FedEx) UPS MAIL COURIER
GREYHOUND OTHER

PROJECT INFORMATION
PROJECT NAME: Macgregor
PROJECT #: 145096
SITE ADDRESS: Albany GA
SEND REPORT TO: JJones@brwncald.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers: 41

Turnaround Time Request
- ○ Standard 5 Business Days
- ○ 2 Business Day Rush
- ○ Next Business Day Rush
- ◉ Same Day Rush **(auth req.)**
- ○ Other

STATE PROGRAM (if any):
E-mail? (Y) N; Fax? Y (N)
DATA PACKAGE: I (II) III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Page 2 of 8

Analytical Environmental Services, Inc **Date:** 26-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14083-TW-23
Project Name:	MacGregor	**Collection Date:**	3/24/2014 2:55:00 PM
Lab ID:	1403L28-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263986	1	03/25/2014 10:45	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R263986	1	03/25/2014 10:45	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	188734	1	03/25/2014 16:41	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 26-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14083-TW-24
Project Name:	MacGregor	**Collection Date:**	3/24/2014 5:00:00 PM
Lab ID:	1403L28-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R263986	1	03/25/2014 10:45	AB
Chromium, Hexavalent	0.0125	0.0100		mg/L	R263986	1	03/25/2014 10:45	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0205	0.0100		mg/L	188734	1	03/25/2014 16:23	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown + Caldwell Work Order Number 1403L26

Checklist completed by [signature] 3/25/14
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.2°C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by [signature]

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Client: BROWN AND CALDWELL
Project: MacGregor
Lab Order: 1403L28

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1403L28-001A	14083-TW-23	3/24/2014 2:55:00PM	Groundwater	TOTAL METALS BY ICP		03/25/2014	03/25/2014
1403L28-001B	14083-TW-23	3/24/2014 2:55:00PM	Groundwater	Hexavalent Chromium			03/25/2014
1403L28-002A	14083-TW-24	3/24/2014 5:00:00PM	Groundwater	TOTAL METALS BY ICP		03/25/2014	03/25/2014
1403L28-002B	14083-TW-24	3/24/2014 5:00:00PM	Groundwater	Hexavalent Chromium			03/25/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor
Workorder: 1403L28

ANALYTICAL QC SUMMARY REPORT

BatchID: 188734

Sample ID: **MB-188734**	Client ID:			Units: **mg/L**	Prep Date: **03/25/2014**	Run No: **264039**
SampleType: **MBLK**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188734**	Analysis Date: **03/25/2014**	Seq No: **5556147**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-188734**	Client ID:			Units: **mg/L**	Prep Date: **03/25/2014**	Run No: **264039**
SampleType: **LCS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188734**	Analysis Date: **03/25/2014**	Seq No: **5556141**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.051	0.0100	1.000		105	80	120				

Sample ID: **1403L28-002AMS**	Client ID: **14083-TW-24**			Units: **mg/L**	Prep Date: **03/25/2014**	Run No: **264039**
SampleType: **MS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188734**	Analysis Date: **03/25/2014**	Seq No: **5556158**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.041	0.0100	1.000	0.02054	102	75	125				

Sample ID: **1403L28-002AMSD**	Client ID: **14083-TW-24**			Units: **mg/L**	Prep Date: **03/25/2014**	Run No: **264039**
SampleType: **MSD**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **188734**	Analysis Date: **03/25/2014**	Seq No: **5556164**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.042	0.0100	1.000	0.02054	102	75	125	1.041	0.044	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor
Workorder: 1403L28

ANALYTICAL QC SUMMARY REPORT

BatchID: R263986

Sample ID: **MB-R263986** Client ID: Units: **mg/L** Prep Date: Run No: **263986**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263986** Analysis Date: **03/25/2014** Seq No: **5554757**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R263986** Client ID: Units: **mg/L** Prep Date: Run No: **263986**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263986** Analysis Date: **03/25/2014** Seq No: **5554758**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4771	0.0100	0.5000		95.4	90	110				

Sample ID: **1403L23-001DMS** Client ID: Units: **mg/L** Prep Date: Run No: **263986**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263986** Analysis Date: **03/25/2014** Seq No: **5554794**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2.380	0.0500	2.500		95.2	85	115				

Sample ID: **1403L23-001DMSD** Client ID: Units: **mg/L** Prep Date: Run No: **263986**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R263986** Analysis Date: **03/25/2014** Seq No: **5554797**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2.383	0.0500	2.500		95.3	85	115	2.380	0.126	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 27, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1403N01

Analytical Environmental Services, Inc. received 4 samples on 3/26/2014 2:20:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 403.001

Date: 3-25-14 Page (of (

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Dr Atlanta GA 30328

PHONE:

FAX:

SAMPLED BY: Brian Steele

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	PRESERVATION (See codes) HN03	PRESERVATION (See codes) NA	Total Chromium	Total Hexavalent Chromium	REMARKS	No # of Containers
1	14084-TW-26	3-25-14	0925	X		GW	X	X				2
2	14084-TW-27	↓	1110	↓		↓	X	X				2
3	14084-TW-30	↓	1435	↓		↓	X	X				2
4	14084-TW-28	↓	1655	↓		↓	X	X				2
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY / DATE/TIME
1: Brian Steele 3-25-14/1730
2:
3:

RECEIVED BY / DATE/TIME
1: [signature] 3/26/14 0920
2:
3:

SPECIAL INSTRUCTIONS/COMMENTS: Short hold times

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT (FedEx) UPS MAIL COURIER
GREYHOUND OTHER

PROJECT INFORMATION
PROJECT NAME: Macgregor
PROJECT #: 145096
SITE ADDRESS: Albany GA
SEND REPORT TO: SJones@brwncald.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers: 8

Turnaround Time Request
- ○ Standard 5 Business Days
- ○ 2 Business Day Rush
- ○ Next Business Day Rush
- ✓ Same Day Rush (auth req.)
- ○ Other

STATE PROGRAM (if any):
E-mail? Y / N; Fax? Y / N
DATA PACKAGE I / II / III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc

Date: 27-Mar-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab ID: 1403N01

Case Narrative

Proceed with Hex Cr out of hold samples per SJ 3/26/14

Analytical Environmental Services, Inc **Date:** 27-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14084-TW-26
Project Name:	MacGregor Golf	**Collection Date:**	3/25/2014 9:25:00 AM
Lab ID:	1403N01-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0149	0.0100	H	mg/L	R264098	1	03/26/2014 14:35	AB
Chromium, Hexavalent	0.0683	0.0100	H	mg/L	R264098	1	03/26/2014 14:35	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0832	0.0100		mg/L	188780	1	03/27/2014 10:06	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 27-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14084- TW-27
Project Name:	MacGregor Golf	**Collection Date:**	3/25/2014 11:10:00 AM
Lab ID:	1403N01-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0217	0.0100	H	mg/L	R264098	1	03/26/2014 14:35	AB
Chromium, Hexavalent	0.147	0.0100	H	mg/L	R264098	1	03/26/2014 14:35	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.168	0.0100		mg/L	188780	1	03/27/2014 10:13	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 27-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14084- TW-30
Project Name:	MacGregor Golf	**Collection Date:**	3/25/2014 2:35:00 PM
Lab ID:	1403N01-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0165	0.0100		mg/L	R264098	1	03/26/2014 14:35	AB
Chromium, Hexavalent	0.0471	0.0100		mg/L	R264098	1	03/26/2014 14:35	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0636	0.0100		mg/L	188780	1	03/27/2014 10:16	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 27-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14084- TW-28
Project Name:	MacGregor Golf	**Collection Date:**	3/25/2014 4:55:00 PM
Lab ID:	1403N01-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0150	0.0100		mg/L	R264098	1	03/26/2014 14:35	AB
Chromium, Hexavalent	0.0236	0.0100		mg/L	R264098	1	03/26/2014 14:35	AB
METALS, TOTAL SW6010C				**(SW3010A)**				
Chromium	0.0386	0.0100		mg/L	188780	1	03/27/2014 10:20	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown + Caldwell Work Order Number 1403N01

Checklist completed by _____ 3.26.14
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.1 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes __ No ✓

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by AP

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 27-Mar-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1403N01

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1403N01-001A	14084-TW-26	3/25/2014 9:25:00AM	Groundwater	TOTAL METALS BY ICP		03/26/2014	03/27/2014
1403N01-001B	14084-TW-26	3/25/2014 9:25:00AM	Groundwater	Hexavalent Chromium			03/26/2014
1403N01-002A	14084- TW-27	3/25/2014 11:10:00AM	Groundwater	TOTAL METALS BY ICP		03/26/2014	03/27/2014
1403N01-002B	14084- TW-27	3/25/2014 11:10:00AM	Groundwater	Hexavalent Chromium			03/26/2014
1403N01-003A	14084- TW-30	3/25/2014 2:35:00PM	Groundwater	TOTAL METALS BY ICP		03/26/2014	03/27/2014
1403N01-003B	14084- TW-30	3/25/2014 2:35:00PM	Groundwater	Hexavalent Chromium			03/26/2014
1403N01-004A	14084- TW-28	3/25/2014 4:55:00PM	Groundwater	TOTAL METALS BY ICP		03/26/2014	03/27/2014
1403N01-004B	14084- TW-28	3/25/2014 4:55:00PM	Groundwater	Hexavalent Chromium			03/26/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403N01

ANALYTICAL QC SUMMARY REPORT

BatchID: 188780

Sample ID: **MB-188780** Client ID: Units: **mg/L** Prep Date: **03/25/2014** Run No: **264152**
SampleType: **MBLK** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **188780** Analysis Date: **03/26/2014** Seq No: **5559180**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-188780** Client ID: Units: **mg/L** Prep Date: **03/25/2014** Run No: **264152**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **188780** Analysis Date: **03/26/2014** Seq No: **5559174**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.086	0.0100	1.000		109	80	120				

Sample ID: **1403K44-001BMS** Client ID: Units: **mg/L** Prep Date: **03/25/2014** Run No: **264152**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **188780** Analysis Date: **03/26/2014** Seq No: **5559184**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.069	0.0100	1.000		107	75	125				

Sample ID: **1403K44-001BMSD** Client ID: Units: **mg/L** Prep Date: **03/25/2014** Run No: **264152**
SampleType: **MSD** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **188780** Analysis Date: **03/26/2014** Seq No: **5559186**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.082	0.0100	1.000		108	75	125	1.069	1.21	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403N01

ANALYTICAL QC SUMMARY REPORT

BatchID: R264098

Sample ID: **MB-R264098** Client ID: Units: **mg/L** Prep Date: Run No: **264098**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R264098** Analysis Date: **03/26/2014** Seq No: **5558088**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R264098** Client ID: Units: **mg/L** Prep Date: Run No: **264098**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R264098** Analysis Date: **03/26/2014** Seq No: **5558089**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4771	0.0100	0.5000		95.4	90	110				

Sample ID: **1403M27-048DMS** Client ID: Units: **mg/L** Prep Date: Run No: **264098**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R264098** Analysis Date: **03/26/2014** Seq No: **5558110**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4792	0.0100	0.5000		95.8	85	115				

Sample ID: **1403M27-048DMSD** Client ID: Units: **mg/L** Prep Date: Run No: **264098**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R264098** Analysis Date: **03/26/2014** Seq No: **5558113**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4782	0.0100	0.5000		95.6	85	115	0.4792	0.209	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 27, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1403N27

Analytical Environmental Services, Inc. received 1 samples on 3/26/2014 3:40:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1403N27

Date: 3-26-14 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS:

PHONE:

FAX:

SAMPLED BY: Brian Steele

SIGNATURE:

ANALYSIS REQUESTED

Visit our website **www.aesatlanta.com** to check on the status of your results, place bottle orders, etc.

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	PRESERVATION (See codes) H+I	PRESERVATION (See codes) N	Total Chromium / Total Hexavalent Chromium	REMARKS	No # of Containers
	B# 3-26-14										
1	#14085-TW-29	3-26-14	1100	X		GW	X	X			2
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											

RELINQUISHED BY / DATE/TIME

1: 3-26-14 / 1540

2:

3:

RECEIVED BY / DATE/TIME

1: Latoya R 3/26/14 3:40p

2:

3:

SPECIAL INSTRUCTIONS/COMMENTS:
Short hold time

SHIPMENT METHOD
OUT / / VIA
IN / / VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER

PROJECT INFORMATION

PROJECT NAME: Macgregor

PROJECT #: 145096

SITE ADDRESS: Albany GA

SEND REPORT TO: BA SJones@brwncald.com

INVOICE TO:
(IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers: 2

Turnaround Time Request
- ○ Standard 5 Business Days
- ○ 2 Business Day Rush
- ○ Next Business Day Rush
- ○ Same Day Rush (auth req.)
- ○ Other

STATE PROGRAM (if any):
E-mail? Y/N Fax? Y/N
DATA PACKAGE: I II III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M-I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 27-Mar-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14085-TW-29
Project Name:	MacGregor Golf	**Collection Date:**	3/26/2014 11:00:00 AM
Lab ID:	1403N27-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R264180	1	03/27/2014 08:30	LW
Chromium, Hexavalent	BRL	0.0100		mg/L	R264180	1	03/27/2014 08:30	LW
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	188780	1	03/27/2014 10:24	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown & Caldwell Work Order Number 1403N27

Checklist completed by JamB 3/26/14
Signature Date

Carrier name: FedEx __ UPS __ Courier __ Client ✓ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.1 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by JB

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Proccdurcs Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1403N27

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1403N27-001A	14085-TW-29	3/26/2014 11:00:00AM	Groundwater	TOTAL METALS BY ICP		03/26/2014	03/27/2014
1403N27-001B	14085-TW-29	3/26/2014 11:00:00AM	Groundwater	Hexavalent Chromium			03/27/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403N27

ANALYTICAL QC SUMMARY REPORT

BatchID: 188780

Sample ID: **MB-188780** Client ID: Units: **mg/L** Prep Date: **03/25/2014** Run No: **264152**
SampleType: **MBLK** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **188780** Analysis Date: **03/26/2014** Seq No: **5559180**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-188780** Client ID: Units: **mg/L** Prep Date: **03/25/2014** Run No: **264152**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **188780** Analysis Date: **03/26/2014** Seq No: **5559174**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.086	0.0100	1.000		109	80	120				

Sample ID: **1403K44-001BMS** Client ID: Units: **mg/L** Prep Date: **03/25/2014** Run No: **264152**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **188780** Analysis Date: **03/26/2014** Seq No: **5559184**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.069	0.0100	1.000		107	75	125				

Sample ID: **1403K44-001BMSD** Client ID: Units: **mg/L** Prep Date: **03/25/2014** Run No: **264152**
SampleType: **MSD** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **188780** Analysis Date: **03/26/2014** Seq No: **5559186**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.082	0.0100	1.000		108	75	125	1.069	1.21	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403N27

ANALYTICAL QC SUMMARY REPORT

BatchID: R264180

Sample ID: **MB-R264180** Client ID: Units: **mg/L** Prep Date: Run No: **264180**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R264180** Analysis Date: **03/26/2014** Seq No: **5560006**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R264180** Client ID: Units: **mg/L** Prep Date: Run No: **264180**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R264180** Analysis Date: **03/26/2014** Seq No: **5560007**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4803	0.0100	0.5000		96.1	90	110				

Sample ID: **1403N27-001BMS** Client ID: **14085-TW-29** Units: **mg/L** Prep Date: Run No: **264180**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R264180** Analysis Date: **03/27/2014** Seq No: **5560013**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4808	0.0100	0.5000		96.2	85	115				

Sample ID: **1403N27-001BMSD** Client ID: **14085-TW-29** Units: **mg/L** Prep Date: Run No: **264180**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R264180** Analysis Date: **03/27/2014** Seq No: **5560014**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4760	0.0100	0.5000		95.2	85	115	0.4808	1.00	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

April 02, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1403N50

Analytical Environmental Services, Inc. received 3 samples on 3/26/2014 3:40:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704
TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1403N50

Date: _____ Page 1 of 2

COMPANY: Brown & Caldwell	ADDRESS: 990 Hammond Drive, Ste 400 Atlanta, Ga 30328
PHONE:	FAX:
SAMPLED BY: George Hala	SIGNATURE: G Hala

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab 3-26-14	Composite	Matrix (See codes)	PRESERVATION (See codes) H+I	TCLP Metals	REMARKS	No # of Containers
1	14085-Soil-10W-D1	3-26-14	1105	X	X	SO	X		Hold	
2	14085-Soil-10W-D2	3-26-14	1105							
3	D3									
4	14085-Soil-10W-D4	3-26-14	1100							
5	14085-Soil-10W-D5		1105							
6	14085-Soil-10W-D6		1105							
7	14085-Soil-10W-D7		1105							
8	14085-Soil-10W-D8		1100							
9	14085-Soil-10W-D9	↓	1100							
10	14084-Soil-10W-D10	3-25-14	1640							
11	14084-Soil-10W-D11		1645							
12	14084-Soil-10W-D12		1635							
13	14084-Soil-10W-D13		1635							
14	14084-Soil-10W-D14	↓	1635	↓	↓	↓	↓		↓	

Visit our website **www.aesatlanta.com** to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	3-26-14 / 1540	1: Latoya R	3/26/14 3:40p
2:		2:	
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS:
Waste characterization, No D3,
Hold all composites samples

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
(CLIENT) FedEx UPS MAIL COURIER
GREYHOUND OTHER_____

PROJECT INFORMATION
PROJECT NAME: MacGregor
PROJECT #:
SITE ADDRESS:
SEND REPORT TO: SEJones@brwncald.com
INVOICE TO:
(IF DIFFERENT FROM ABOVE)
QUOTE #:_____ PO#:_____

RECEIPT
Total # of Containers

Turnaround Time Request
- (O) Standard 5 Business Days
- ( ) 2 Business Day Rush
- ( ) Next Business Day Rush
- ( ) Same Day Rush (auth req.)
- ( ) Other _____

STATE PROGRAM (if any): _____
E-mail? (Y) / N; Fax? Y / (N)
DATA PACKAGE: I (II) III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1403N50

Date: _____ Page 2 of 2

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Drive, Ste 400 Atlanta, Ga 30328

PHONE:

FAX:

SAMPLED BY: George Mikula

SIGNATURE: Mikula IV

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	TCLP Metals	PRESERVATION (See codes) I	REMARKS	No # of Containers
1	14084-Soil-MW-D15	3-25-14	1640		X	SO	X		Hold	1
2	14084-Soil-MW-D16		1645							
3	14084-Soil-MW-D17		1640							
4	14084-Soil-MW-D18		1650							
5	14084-Soil-MW D19		1650							
6										
7										
8										
9										
10										
11										
12										
13										
14										

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	3-26-14 / 1740	1: Latoya R	3/26/14 3:40p
2:		2:	
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
(CLIENT) FedEx UPS MAIL COURIER
GREYHOUND OTHER_____

PROJECT INFORMATION
PROJECT NAME: MacGregor
PROJECT #:
SITE ADDRESS:
SEND REPORT TO: SEJones@brwncald.com
INVOICE TO:
(IF DIFFERENT FROM ABOVE)
QUOTE #: _____ PO#: _____

RECEIPT
Total # of Containers
Turnaround Time Request
(1) Standard 5 Business Days
( ) 2 Business Day Rush
( ) Next Business Day Rush
( ) Same Day Rush (auth req.)
( ) Other _____
STATE PROGRAM (if any): _____
E-mail? (Y) / N; Fax? Y / N
DATA PACKAGE: I (II) III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc

Date: 2-Apr-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab ID: 1403N50

Case Narrative

14085-Soil-IDW-D7, 14084-Soil-IDW-D13, 14084-Soil-IDW-D19 analyzed for TCLP metals at std turn per SJ 3/27/14

Analytical Environmental Services, Inc **Date:** 2-Apr-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14085-SOIL-IDW-D7
Project Name:	MacGregor Golf	**Collection Date:**	3/26/2014 11:05:00 AM
Lab ID:	1403N50-006	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
MERCURY, TCLP SW1311/7470A				**(SW7470A)**				
Mercury	BRL	0.00400		mg/L	189041	1	04/01/2014 15:23	CG
ICP METALS, TCLP SW1311/6010C				**(SW3010A)**				
Arsenic	BRL	0.250		mg/L	189059	1	04/01/2014 15:31	JL
Barium	BRL	0.500		mg/L	189059	1	04/01/2014 15:31	JL
Cadmium	BRL	0.0250		mg/L	189059	1	04/01/2014 15:31	JL
Chromium	BRL	0.0500		mg/L	189059	1	04/01/2014 15:31	JL
Lead	BRL	0.0500		mg/L	189059	1	04/01/2014 15:31	JL
Selenium	BRL	0.100		mg/L	189059	1	04/01/2014 15:31	JL
Silver	BRL	0.0250		mg/L	189059	1	04/01/2014 15:31	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 2-Apr-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14084-SOIL-IDW-D13
Project Name:	MacGregor Golf	**Collection Date:**	3/25/2014 4:35:00 PM
Lab ID:	1403N50-012	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
MERCURY, TCLP SW1311/7470A				**(SW7470A)**				
Mercury	BRL	0.00400		mg/L	189041	1	04/01/2014 15:25	CG
ICP METALS, TCLP SW1311/6010C				**(SW3010A)**				
Arsenic	BRL	0.250		mg/L	189059	1	04/01/2014 15:36	JL
Barium	BRL	0.500		mg/L	189059	1	04/01/2014 15:36	JL
Cadmium	BRL	0.0250		mg/L	189059	1	04/01/2014 15:36	JL
Chromium	BRL	0.0500		mg/L	189059	1	04/01/2014 15:36	JL
Lead	BRL	0.0500		mg/L	189059	1	04/01/2014 15:36	JL
Selenium	BRL	0.100		mg/L	189059	1	04/01/2014 15:36	JL
Silver	BRL	0.0250		mg/L	189059	1	04/01/2014 15:36	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 2-Apr-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14084-SOIL-IDW-D19
Project Name:	MacGregor Golf	**Collection Date:**	3/25/2014 4:50:00 PM
Lab ID:	1403N50-018	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
MERCURY, TCLP SW1311/7470A				**(SW7470A)**				
Mercury	BRL	0.00400		mg/L	189041	1	04/01/2014 15:27	CG
ICP METALS, TCLP SW1311/6010C				**(SW3010A)**				
Arsenic	BRL	0.250		mg/L	189059	1	04/01/2014 15:41	JL
Barium	BRL	0.500		mg/L	189059	1	04/01/2014 15:41	JL
Cadmium	BRL	0.0250		mg/L	189059	1	04/01/2014 15:41	JL
Chromium	BRL	0.0500		mg/L	189059	1	04/01/2014 15:41	JL
Lead	BRL	0.0500		mg/L	189059	1	04/01/2014 15:41	JL
Selenium	BRL	0.100		mg/L	189059	1	04/01/2014 15:41	JL
Silver	BRL	0.0250		mg/L	189059	1	04/01/2014 15:41	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown + Caldwell Work Order Number 1403N60

Checklist completed by [signature] 3/26/14
Signature Date

Carrier name: FedEx __ UPS __ Courier __ Client ✓ US Mail __ Other _____

Shipping container/cooler in good condition?	Yes ✓	No __	Not Present __
Custody seals intact on shipping container/cooler?	Yes ✓	No __	Not Present __
Custody seals intact on sample bottles?	Yes ✓	No __	Not Present __
Container/Temp Blank temperature in compliance? (4°C±2)*	Yes ✓	No __	

Cooler #1 3.2°C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present?	Yes ✓	No __
Chain of custody signed when relinquished and received?	Yes ✓	No __
Chain of custody agrees with sample labels?	Yes ✓	No __
Samples in proper container/bottle?	Yes ✓	No __
Sample containers intact?	Yes ✓	No __
Sufficient sample volume for indicated test?	Yes ✓	No __
All samples received within holding time?	Yes ✓	No __
Was TAT marked on the COC?	Yes ✓	No __
Proceed with Standard TAT as per project history?	Yes __	No __ Not Applicable ✓
Water - VOA vials have zero headspace?	No VOA vials submitted ✓	Yes __ No __
Water - pH acceptable upon receipt?	Yes __	No __ Not Applicable ✓

Adjusted? _____ Checked by _____

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403N50

ANALYTICAL QC SUMMARY REPORT

BatchID: 189041

Sample ID: **MB-189041** Client ID: Units: **mg/L** Prep Date: **04/01/2014** Run No: **264471**
SampleType: **MBLK** TestCode: **MERCURY, TCLP SW1311/7470A** BatchID: **189041** Analysis Date: **04/01/2014** Seq No: **5568172**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	BRL	0.00400									

Sample ID: **LCS-189041** Client ID: Units: **mg/L** Prep Date: **04/01/2014** Run No: **264471**
SampleType: **LCS** TestCode: **MERCURY, TCLP SW1311/7470A** BatchID: **189041** Analysis Date: **04/01/2014** Seq No: **5568173**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.04216	0.00400	0.0400		105	85	115				

Sample ID: **1403Q68-002AMS** Client ID: Units: **mg/L** Prep Date: **04/01/2014** Run No: **264471**
SampleType: **MS** TestCode: **MERCURY, TCLP SW1311/7470A** BatchID: **189041** Analysis Date: **04/01/2014** Seq No: **5568216**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.04411	0.00400	0.0400		110	80	120				

Sample ID: **1403Q68-002AMSD** Client ID: Units: **mg/L** Prep Date: **04/01/2014** Run No: **264471**
SampleType: **MSD** TestCode: **MERCURY, TCLP SW1311/7470A** BatchID: **189041** Analysis Date: **04/01/2014** Seq No: **5568217**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.04419	0.00400	0.0400		110	80	120	0.04411	0.162	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403N50

ANALYTICAL QC SUMMARY REPORT

BatchID: 189059

Sample ID: **MB-189059** Client ID: Units: **mg/L** Prep Date: **04/01/2014** Run No: **264522**
SampleType: **MBLK** TestCode: **ICP METALS, TCLP SW1311/6010C** BatchID: **189059** Analysis Date: **04/01/2014** Seq No: **5568389**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.250									
Barium	BRL	0.500									
Cadmium	BRL	0.0250									
Chromium	BRL	0.0500									
Lead	BRL	0.0500									
Selenium	BRL	0.100									
Silver	BRL	0.0250									

Sample ID: **MB-189059-2** Client ID: Units: **mg/L** Prep Date: **04/01/2014** Run No: **264522**
SampleType: **MBLK** TestCode: **ICP METALS, TCLP SW1311/6010C** BatchID: **189059** Analysis Date: **04/01/2014** Seq No: **5568391**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.250									
Barium	BRL	0.500									
Cadmium	BRL	0.0250									
Chromium	BRL	0.0500									
Lead	BRL	0.0500									
Selenium	BRL	0.100									
Silver	BRL	0.0250									

Sample ID: **LCS-189059** Client ID: Units: **mg/L** Prep Date: **04/01/2014** Run No: **264522**
SampleType: **LCS** TestCode: **ICP METALS, TCLP SW1311/6010C** BatchID: **189059** Analysis Date: **04/01/2014** Seq No: **5568388**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	4.915	0.250	5.000		98.3	85	115				
Barium	4.701	0.500	5.000		94.0	80	120				
Cadmium	4.780	0.0250	5.000		95.6	85	115				
Chromium	4.735	0.0500	5.000		94.7	85	115				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1403N50

ANALYTICAL QC SUMMARY REPORT

BatchID: 189059

Sample ID: **LCS-189059** Client ID: Units: **mg/L** Prep Date: **04/01/2014** Run No: **264522**
SampleType: **LCS** TestCode: **ICP METALS, TCLP SW1311/6010C** BatchID: **189059** Analysis Date: **04/01/2014** Seq No: **5568388**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	4.656	0.0500	5.000		93.1	85	115				
Selenium	4.967	0.100	5.000		99.3	85	115				
Silver	0.4728	0.0250	0.5000		94.6	85	115				

Sample ID: **1403O63-001BMS** Client ID: Units: **mg/L** Prep Date: **04/01/2014** Run No: **264522**
SampleType: **MS** TestCode: **ICP METALS, TCLP SW1311/6010C** BatchID: **189059** Analysis Date: **04/01/2014** Seq No: **5568395**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	4.846	0.250	5.000		96.9	50	150				
Barium	4.942	0.500	5.000	0.3196	92.4	50	150				
Cadmium	4.769	0.0250	5.000	0.07523	93.9	50	150				
Chromium	4.660	0.0500	5.000		93.2	50	150				
Lead	4.785	0.0500	5.000	0.2102	91.5	50	150				
Selenium	4.910	0.100	5.000		98.2	50	150				
Silver	0.4661	0.0250	0.5000		93.2	50	150				

Sample ID: **1403O63-001BMSD** Client ID: Units: **mg/L** Prep Date: **04/01/2014** Run No: **264522**
SampleType: **MSD** TestCode: **ICP METALS, TCLP SW1311/6010C** BatchID: **189059** Analysis Date: **04/01/2014** Seq No: **5568397**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	4.928	0.250	5.000		98.6	50	150	4.846	1.66	30	
Barium	5.010	0.500	5.000	0.3196	93.8	50	150	4.942	1.37	30	
Cadmium	4.855	0.0250	5.000	0.07523	95.6	50	150	4.769	1.79	30	
Chromium	4.729	0.0500	5.000		94.6	50	150	4.660	1.45	30	
Lead	4.845	0.0500	5.000	0.2102	92.7	50	150	4.785	1.26	30	
Selenium	5.005	0.100	5.000		100	50	150	4.910	1.92	30	
Silver	0.4713	0.0250	0.5000		94.3	50	150	0.4661	1.11	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

June 04, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1406096

Analytical Environmental Services, Inc. received 2 samples on 6/3/2014 10:25:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1406096

Date: 6-2-14 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Dr. Ste 400 Atlanta GA 30328

PHONE:

FAX:

SAMPLED BY: Brian Stuck

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Total Cr	Total Hex/Tri Cr	No # of Containers
							PRESERVATION (See codes)		
							HNO3	NA	
1	14153-TW-42	6-2-14	1550	X		GW	X	X	2
2	14153-TW-16	6-2-14	1735	X		GW	X	X	2
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

REMARKS

RELINQUISHED BY / DATE/TIME
1: 6-2-14/1800
2:
3:

RECEIVED BY / DATE/TIME
1: 6/3/14 10.25
2:
3:

PROJECT INFORMATION
PROJECT NAME: MacGregor
PROJECT #:
SITE ADDRESS: Albany GA
SEND REPORT TO: JJones@brwnald.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers: 4

Turnaround Time Request
- Standard 5 Business Days
- 2 Business Day Rush
- Next Business Day Rush
- Same Day Rush (auth req.)
- Other

STATE PROGRAM (if any):
E-mail? Y / N; Fax? Y / N
DATA PACKAGE: I II III IV

SPECIAL INSTRUCTIONS/COMMENTS: Short hold time Hex/Tri Chromium

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 4-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14153-TW-42
Project Name:	MacGregor Golf	**Collection Date:**	6/2/2014 3:50:00 PM
Lab ID:	1406096-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R268986	1	06/03/2014 13:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R268986	1	06/03/2014 13:15	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	191881	1	06/03/2014 17:28	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 4-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14153-TW-16
Project Name:	MacGregor Golf	**Collection Date:**	6/2/2014 5:35:00 PM
Lab ID:	1406096-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0175	0.0100		mg/L	R268986	1	06/03/2014 13:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R268986	1	06/03/2014 13:15	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0175	0.0100		mg/L	191881	1	06/03/2014 17:09	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown + Caldwell Work Order Number 1406096

Checklist completed by [signature] 6/3/14
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.2 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by JB

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 4-Jun-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1406096

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1406096-001A	14153-TW-42	6/2/2014 3:50:00PM	Groundwater	TOTAL METALS BY ICP		06/03/2014	06/03/2014
1406096-001B	14153-TW-42	6/2/2014 3:50:00PM	Groundwater	Hexavalent Chromium			06/03/2014
1406096-002A	14153-TW-16	6/2/2014 5:35:00PM	Groundwater	TOTAL METALS BY ICP		06/03/2014	06/03/2014
1406096-002B	14153-TW-16	6/2/2014 5:35:00PM	Groundwater	Hexavalent Chromium			06/03/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1406096

ANALYTICAL QC SUMMARY REPORT

BatchID: 191881

Sample ID: **MB-191881**	Client ID:			Units: **mg/L**	Prep Date: **06/03/2014**	Run No: **269035**
SampleType: **MBLK**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **191881**	Analysis Date: **06/03/2014**	Seq No: **5674889**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-191881**	Client ID:			Units: **mg/L**	Prep Date: **06/03/2014**	Run No: **269035**
SampleType: **LCS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **191881**	Analysis Date: **06/03/2014**	Seq No: **5674886**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.031	0.0100	1.000		103	80	120				

Sample ID: **1406096-002AMS**	Client ID: **14153-TW-16**			Units: **mg/L**	Prep Date: **06/03/2014**	Run No: **269035**
SampleType: **MS**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **191881**	Analysis Date: **06/03/2014**	Seq No: **5674894**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.038	0.0100	1.000	0.01752	102	75	125				

Sample ID: **1406096-002AMSD**	Client ID: **14153-TW-16**			Units: **mg/L**	Prep Date: **06/03/2014**	Run No: **269035**
SampleType: **MSD**	TestCode: **METALS, TOTAL**	**SW6010C**		BatchID: **191881**	Analysis Date: **06/03/2014**	Seq No: **5674898**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.012	0.0100	1.000	0.01752	99.5	75	125	1.038	2.48	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1406096

ANALYTICAL QC SUMMARY REPORT

BatchID: R268986

Sample ID: **MB-R268986** Client ID: Units: **mg/L** Prep Date: Run No: **268986**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R268986** Analysis Date: **06/03/2014** Seq No: **5673924**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R268986** Client ID: Units: **mg/L** Prep Date: Run No: **268986**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R268986** Analysis Date: **06/03/2014** Seq No: **5673925**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4744	0.0100	0.5000		94.9	90	110				

Sample ID: **1406096-001BMS** Client ID: **14153-TW-42** Units: **mg/L** Prep Date: Run No: **268986**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R268986** Analysis Date: **06/03/2014** Seq No: **5673928**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4707	0.0100	0.5000		94.1	85	115				

Sample ID: **1406096-001BMSD** Client ID: **14153-TW-42** Units: **mg/L** Prep Date: Run No: **268986**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R268986** Analysis Date: **06/03/2014** Seq No: **5673929**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4648	0.0100	0.5000		93.0	85	115	0.4707	1.26	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

June 10, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1406217

Analytical Environmental Services, Inc. received 6 samples on 6/4/2014 10:15:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704

AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 14061217

Date: 6-3-14 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Dr, ste 400 Atlanta GA 30328

PHONE:

FAX:

SAMPLED BY: Brian steele

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Total Chromium	Total Hex/Tri-Chromium	PRESERVATION (See codes) H2S	PRESERVATION (See codes) H3	REMARKS	No # of Containers
1	14154-TW-40	6-3-14	1625	X		GW	X	X			standard TAT	2
2	14154-TW-41		1425				X	X			same DAY TAT	2
3	14154-TW-37		1240				X	X			standard TAT	2
4	14154-TW-36		1005				X	X			standard TAT	2
5	14154-DUP		1400				X	X			standard TAT	2
6	14154-EB		1300			W	X	X			standard TAT	2
7												
8												
9												
10												
11												
12												
13												
14												

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY DATE/TIME

1:

2:

3:

RECEIVED BY DATE/TIME

1: JanB 6/4/14 10:15

2:

3:

SPECIAL INSTRUCTIONS/COMMENTS:
- Short hold time on Hex Cr.
- Note different Turn around time for 14154-TW-41

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT FedEx UPS MAIL COURIER

GREYHOUND OTHER

PROJECT INFORMATION

PROJECT NAME: MacGregor

PROJECT #:

SITE ADDRESS: Albany GA

SEND REPORT TO: SJones@brwncald.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers 12

Turnaround Time Request

- [x] Standard 5 Business Days
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [x] Same Day Rush (auth req.)
- [ ] Other

STATE PROGRAM (if any):

E-mail? Y (N); Fax? Y (N)

DATA PACKAGE: I (II) III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc

Date: 10-Jun-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab ID: 1406217

Case Narrative

Sample Receiving Nonconformance:

Sample [1406217-004B] was received outside EPA/Method specified holding time of [24 hours] for method [7196_W]. Proceed per Sarah Jones email 6/4.

Analytical Environmental Services, Inc **Date:** 10-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14154-TW-40
Project Name:	MacGregor Golf	**Collection Date:**	6/3/2014 4:25:00 PM
Lab ID:	1406217-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R269092	1	06/04/2014 11:30	EH
Chromium, Hexavalent	BRL	0.0100		mg/L	R269092	1	06/04/2014 11:30	EH
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	191980	1	06/05/2014 17:49	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 10-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14154-TW-41
Project Name:	MacGregor Golf	**Collection Date:**	6/3/2014 2:25:00 PM
Lab ID:	1406217-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0115	0.0100		mg/L	R269092	1	06/04/2014 11:30	EH
Chromium, Hexavalent	0.0370	0.0100		mg/L	R269092	1	06/04/2014 11:30	EH
METALS, TOTAL SW6010C					**(SW3010A)**			
Chromium	0.0485	0.0100		mg/L	191980	1	06/04/2014 17:30	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 10-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14154-TW-37
Project Name:	MacGregor Golf	**Collection Date:**	6/3/2014 12:40:00 PM
Lab ID:	1406217-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R269092	1	06/04/2014 11:30	EH
Chromium, Hexavalent	BRL	0.0100		mg/L	R269092	1	06/04/2014 11:30	EH
METALS, TOTAL SW6010C				**(SW3010A)**				
Chromium	0.0145	0.0100		mg/L	191980	1	06/05/2014 17:56	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 10-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14154-TW-36
Project Name:	MacGregor Golf	**Collection Date:**	6/3/2014 10:05:00 AM
Lab ID:	1406217-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0124	0.0100	H	mg/L	R269092	1	06/04/2014 11:30	EH
Chromium, Hexavalent	0.0281	0.0100	H	mg/L	R269092	1	06/04/2014 11:30	EH
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0405	0.0100		mg/L	191980	1	06/05/2014 17:59	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 10-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14154-DUP
Project Name:	MacGregor Golf	**Collection Date:**	6/3/2014 2:00:00 PM
Lab ID:	1406217-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0123	0.0100		mg/L	R269092	1	06/04/2014 11:30	EH
Chromium, Hexavalent	0.0375	0.0100		mg/L	R269092	1	06/04/2014 11:30	EH
METALS, TOTAL SW6010C				**(SW3010A)**				
Chromium	0.0498	0.0100		mg/L	191980	1	06/05/2014 18:03	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 10-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14154-EB
Project Name:	MacGregor Golf	**Collection Date:**	6/3/2014 1:00:00 PM
Lab ID:	1406217-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R269092	1	06/04/2014 11:30	EH
Chromium, Hexavalent	BRL	0.0100		mg/L	R269092	1	06/04/2014 11:30	EH
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	191980	1	06/05/2014 18:07	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown + Caldwell Work Order Number 1406217

Checklist completed by _____ 6/4/14
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.2°C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No ✓

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes __ No ✓

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by _____

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 10-Jun-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1406217

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1406217-001A	14154-TW-40	6/3/2014 4:25:00PM	Groundwater	TOTAL METALS BY ICP		06/05/2014	06/05/2014
1406217-001B	14154-TW-40	6/3/2014 4:25:00PM	Groundwater	Hexavalent Chromium			06/04/2014
1406217-002A	14154-TW-41	6/3/2014 2:25:00PM	Groundwater	TOTAL METALS BY ICP		06/04/2014	06/04/2014
1406217-002B	14154-TW-41	6/3/2014 2:25:00PM	Groundwater	Hexavalent Chromium			06/04/2014
1406217-003A	14154-TW-37	6/3/2014 12:40:00PM	Groundwater	TOTAL METALS BY ICP		06/05/2014	06/05/2014
1406217-003B	14154-TW-37	6/3/2014 12:40:00PM	Groundwater	Hexavalent Chromium			06/04/2014
1406217-004A	14154-TW-36	6/3/2014 10:05:00AM	Groundwater	TOTAL METALS BY ICP		06/05/2014	06/05/2014
1406217-004B	14154-TW-36	6/3/2014 10:05:00AM	Groundwater	Hexavalent Chromium			06/04/2014
1406217-005A	14154-DUP	6/3/2014 2:00:00PM	Groundwater	TOTAL METALS BY ICP		06/05/2014	06/05/2014
1406217-005B	14154-DUP	6/3/2014 2:00:00PM	Groundwater	Hexavalent Chromium			06/04/2014
1406217-006A	14154-EB	6/3/2014 1:00:00PM	Groundwater	TOTAL METALS BY ICP		06/05/2014	06/05/2014
1406217-006B	14154-EB	6/3/2014 1:00:00PM	Groundwater	Hexavalent Chromium			06/04/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1406217

ANALYTICAL QC SUMMARY REPORT

BatchID: 191980

Sample ID: **MB-191980** Client ID: Units: **mg/L** Prep Date: **06/04/2014** Run No: **269140**
SampleType: **MBLK** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **191980** Analysis Date: **06/04/2014** Seq No: **5677238**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-191980** Client ID: Units: **mg/L** Prep Date: **06/04/2014** Run No: **269140**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **191980** Analysis Date: **06/04/2014** Seq No: **5677237**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.026	0.0100	1.000		103	80	120				

Sample ID: **1406171-001AMS** Client ID: Units: **mg/L** Prep Date: **06/04/2014** Run No: **269140**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **191980** Analysis Date: **06/04/2014** Seq No: **5677240**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.023	0.0100	1.000		102	75	125				

Sample ID: **1406171-001AMSD** Client ID: Units: **mg/L** Prep Date: **06/04/2014** Run No: **269140**
SampleType: **MSD** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **191980** Analysis Date: **06/04/2014** Seq No: **5677241**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.000	0.0100	1.000		100	75	125	1.023	2.25	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1406217

ANALYTICAL QC SUMMARY REPORT

BatchID: R269092

Sample ID: **MB-R269092** Client ID: Units: **mg/L** Prep Date: Run No: **269092**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269092** Analysis Date: **06/04/2014** Seq No: **5676110**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R269092** Client ID: Units: **mg/L** Prep Date: Run No: **269092**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269092** Analysis Date: **06/04/2014** Seq No: **5676111**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.5012	0.0100	0.5000		100	90	110				

Sample ID: **1406217-002BMS** Client ID: **14154-TW-41** Units: **mg/L** Prep Date: Run No: **269092**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269092** Analysis Date: **06/04/2014** Seq No: **5676114**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.5285	0.0100	0.5000	0.03700	98.3	85	115				

Sample ID: **1406217-002BMSD** Client ID: **14154-TW-41** Units: **mg/L** Prep Date: Run No: **269092**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269092** Analysis Date: **06/04/2014** Seq No: **5676115**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.5395	0.0100	0.5000	0.03700	100	85	115	0.5285	2.06	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

June 12, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1406359

Analytical Environmental Services, Inc. received 5 samples on 6/5/2014 10:00:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

...VIRONMENTAL SERVICES, INC

...al Drive, Atlanta GA 30340-3704

...(770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1406359

Date: 6-4-14 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Dr ste 400 Atlanta GA 30328

PHONE:

FAX:

SAMPLED BY: Brian Steck

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	PRESERVATION (See codes) HNO3	PRESERVATION (See codes) NA	Total Chromium Total Hexavalent Chromium	REMARKS	No # of Containers
1	14155-EB	6.4.14	0940	X		W	X	X			2
2	14155-TW-32		1550	X		GW	X	X			2
3	14155-TW-31		1350	X		GW	X	X			2
4	14155-TW-38		1130	X		GW	X	X			2
5	~~14155~~ 14155-TW-39 BS 6.9.14	↓	0940	X		GW	X	X			2
6											
7											
8											
9											
10											
11											
12											
13											
14											

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY: 1: 6.4.14 / 1730 DATE/TIME

RECEIVED BY: 1: Jason B 6/5/14 10.00 DATE/TIME

2:

3:

PROJECT INFORMATION

PROJECT NAME: MacGregor

PROJECT #:

SITE ADDRESS: Albany GA

SEND REPORT TO: SJones@brwncald.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers: 10

Turnaround Time Request

- (X) Standard 5 Business Days
- ( ) 2 Business Day Rush
- ( ) Next Business Day Rush
- ( ) Same Day Rush (auth req.)
- ( ) Other

STATE PROGRAM (if any):

E-mail? (Y) / N; Fax? Y / (N)

DATA PACKAGE: I (II) III IV

SPECIAL INSTRUCTIONS/COMMENTS: Short hold time Total Hex/ Tri Chromium

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT (FedEx) UPS MAIL COURIER

GREYHOUND OTHER

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc

Date: 12-Jun-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab ID: 1406359

Case Narrative

Sample 1406359-001B and -005B were received out of hold. Proceed per Sarah Jones.

Analytical Environmental Services, Inc **Date:** 12-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14155-EB
Project Name:	MacGregor Golf	**Collection Date:**	6/4/2014 9:40:00 AM
Lab ID:	1406359-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100	H	mg/L	R269092	1	06/05/2014 11:15	EH
Chromium, Hexavalent	BRL	0.0100	H	mg/L	R269092	1	06/05/2014 11:15	EH
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	192134	1	06/10/2014 18:59	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 12-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14155-TW-32
Project Name:	MacGregor Golf	**Collection Date:**	6/4/2014 3:50:00 PM
Lab ID:	1406359-002	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R269092	1	06/05/2014 11:15	EH
Chromium, Hexavalent	BRL	0.0100		mg/L	R269092	1	06/05/2014 11:15	EH
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	192134	1	06/10/2014 19:17	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 12-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14155-TW-31
Project Name:	MacGregor Golf	**Collection Date:**	6/4/2014 1:50:00 PM
Lab ID:	1406359-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0113	0.0100		mg/L	R269092	1	06/05/2014 11:15	EH
Chromium, Hexavalent	0.0129	0.0100		mg/L	R269092	1	06/05/2014 11:15	EH
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0242	0.0100		mg/L	192134	1	06/10/2014 19:21	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 12-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14155-TW-38
Project Name:	MacGregor Golf	**Collection Date:**	6/4/2014 11:30:00 AM
Lab ID:	1406359-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R269092	1	06/05/2014 11:15	EH
Chromium, Hexavalent	BRL	0.0100		mg/L	R269092	1	06/05/2014 11:15	EH
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	192134	1	06/10/2014 18:24	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 12-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14155-TW-39
Project Name:	MacGregor Golf	**Collection Date:**	6/4/2014 9:40:00 AM
Lab ID:	1406359-005	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100	H	mg/L	R269092	1	06/05/2014 11:15	EH
Chromium, Hexavalent	0.0344	0.0100	H	mg/L	R269092	1	06/05/2014 11:15	EH
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.0396	0.0100		mg/L	192134	1	06/10/2014 19:24	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown & Caldwell Work Order Number 1406359

Checklist completed by Signature Date 6/5/14

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.2 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ~~✓~~ No ✓

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by JB

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 12-Jun-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1406359

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1406359-001A	14155-EB	6/4/2014 9:40:00AM	Aqueous	TOTAL METALS BY ICP		06/10/2014	06/10/2014
1406359-001B	14155-EB	6/4/2014 9:40:00AM	Aqueous	Hexavalent Chromium			06/05/2014
1406359-002A	14155-TW-32	6/4/2014 3:50:00PM	Aqueous	TOTAL METALS BY ICP		06/10/2014	06/10/2014
1406359-002B	14155-TW-32	6/4/2014 3:50:00PM	Aqueous	Hexavalent Chromium			06/05/2014
1406359-003A	14155-TW-31	6/4/2014 1:50:00PM	Aqueous	TOTAL METALS BY ICP		06/10/2014	06/10/2014
1406359-003B	14155-TW-31	6/4/2014 1:50:00PM	Aqueous	Hexavalent Chromium			06/05/2014
1406359-004A	14155-TW-38	6/4/2014 11:30:00AM	Aqueous	TOTAL METALS BY ICP		06/10/2014	06/10/2014
1406359-004B	14155-TW-38	6/4/2014 11:30:00AM	Aqueous	Hexavalent Chromium			06/05/2014
1406359-005A	14155-TW-39	6/4/2014 9:40:00AM	Aqueous	TOTAL METALS BY ICP		06/10/2014	06/10/2014
1406359-005B	14155-TW-39	6/4/2014 9:40:00AM	Aqueous	Hexavalent Chromium			06/05/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1406359

ANALYTICAL QC SUMMARY REPORT

BatchID: 192134

Sample ID: **MB-192134** Client ID: Units: **mg/L** Prep Date: **06/10/2014** Run No: **269579**
SampleType: **MBLK** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **192134** Analysis Date: **06/10/2014** Seq No: **5686884**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-192134** Client ID: Units: **mg/L** Prep Date: **06/10/2014** Run No: **269579**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **192134** Analysis Date: **06/10/2014** Seq No: **5686883**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.012	0.0100	1.000		101	80	120				

Sample ID: **1406359-004AMS** Client ID: **14155-TW-38** Units: **mg/L** Prep Date: **06/10/2014** Run No: **269579**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **192134** Analysis Date: **06/10/2014** Seq No: **5686892**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9793	0.0100	1.000	0.004657	97.5	75	125				

Sample ID: **1406359-004AMSD** Client ID: **14155-TW-38** Units: **mg/L** Prep Date: **06/10/2014** Run No: **269579**
SampleType: **MSD** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **192134** Analysis Date: **06/10/2014** Seq No: **5686894**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9777	0.0100	1.000	0.004657	97.3	75	125	0.9793	0.157	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1406359

ANALYTICAL QC SUMMARY REPORT

BatchID: R269092

Sample ID: **MB-R269092** Client ID: Units: **mg/L** Prep Date: Run No: **269092**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269092** Analysis Date: **06/04/2014** Seq No: **5676110**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R269092** Client ID: Units: **mg/L** Prep Date: Run No: **269092**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269092** Analysis Date: **06/04/2014** Seq No: **5676111**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.5012	0.0100	0.5000		100	90	110				

Sample ID: **1406217-002BMS** Client ID: Units: **mg/L** Prep Date: Run No: **269092**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269092** Analysis Date: **06/04/2014** Seq No: **5676114**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.5285	0.0100	0.5000	0.03700	98.3	85	115				

Sample ID: **1406217-002BMSD** Client ID: Units: **mg/L** Prep Date: Run No: **269092**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269092** Analysis Date: **06/04/2014** Seq No: **5676115**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.5395	0.0100	0.5000	0.03700	100	85	115	0.5285	2.06	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

June 13, 2014

Sarah Jones
BROWN AND CALDWELL
990 Hammond Drive
Atlanta GA 30328

TEL: (770) 394-2997
FAX: (770) 396-9495

RE: MacGregor Golf

Dear Sarah Jones: Order No: 1406513

Analytical Environmental Services, Inc. received 4 samples on 6/6/2014 10:05:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704
TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1406513

Date: 6-5-14 Page 1 of 1

COMPANY: Brown + Caldwell
ADDRESS: 990 Hammond Dr, Ste 400 Atlanta, Ga 30328
PHONE:
FAX:
SAMPLED BY: Skala
SIGNATURE: M Skala IV

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Total Chromium	Total Hex/Tri Cr	Dissolved Cr	Dissolved Hex/Tri Cr	REMARKS	No # of Containers
	PRESERVATION (See codes)						N	I	I	I		
1	14156-TW-33	6-5-14	0925	X		GW	X	X				2
2	14156-DUP	6-5-14	1200	X			X	X				
3	14156-TW-34	6-5-14	1110	X			X	X				
4	14156-TW-35	6-5-14	1515	X			X	X	X	X		2
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY: 1: M Skala IV DATE/TIME: 6-5-14 1600
2:
3:

RECEIVED BY: 1:
2: 6/6/14 10:05
3:

SPECIAL INSTRUCTIONS/COMMENTS:
Cr = Chromium

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER

PROJECT INFORMATION
PROJECT NAME: MacGregor
PROJECT #:
SITE ADDRESS:
SEND REPORT TO: SEJones@brwncald.com
INVOICE TO:
(IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers

Turnaround Time Request
- (X) Standard 5 Business Days
- ( ) 2 Business Day Rush
- ( ) Next Business Day Rush
- ( ) Same Day Rush (auth req.)
- ( ) Other

STATE PROGRAM (if any):
E-mail? (Y) / N; Fax? Y / N
DATA PACKAGE: I (II) III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab ID: 1406513

Case Narrative

Sample Receiving Nonconformance:

Sample [1406513-001B] was received outside EPA/Method specified holding time of [24 hours] for method [7196_W]. Proceed per Sarah Jones.

Analytical Environmental Services, Inc **Date:** 13-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14156-TW-33
Project Name:	MacGregor Golf	**Collection Date:**	6/5/2014 9:25:00 AM
Lab ID:	1406513-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100	H	mg/L	R269296	1	06/06/2014 11:05	AB
Chromium, Hexavalent	BRL	0.0100	H	mg/L	R269296	1	06/06/2014 11:05	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	192251	1	06/12/2014 12:31	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 13-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14156-DUP
Project Name:	MacGregor Golf	**Collection Date:**	6/5/2014 12:00:00 PM
Lab ID:	1406513-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R269296	1	06/06/2014 11:05	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R269296	1	06/06/2014 11:05	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	192251	1	06/12/2014 12:35	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 13-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14156-TW-34
Project Name:	MacGregor Golf	**Collection Date:**	6/5/2014 11:10:00 AM
Lab ID:	1406513-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R269296	1	06/06/2014 11:05	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R269296	1	06/06/2014 11:05	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	192251	1	06/12/2014 12:38	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 13-Jun-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14156-TW-35
Project Name:	MacGregor Golf	**Collection Date:**	6/5/2014 3:15:00 PM
Lab ID:	1406513-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C (SW3005A)								
Chromium	BRL	0.0100		mg/L	192135	1	06/09/2014 16:12	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R269295	1	06/06/2014 08:20	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R269295	1	06/06/2014 08:20	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R269296	1	06/06/2014 11:05	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R269296	1	06/06/2014 11:05	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	192251	1	06/12/2014 12:42	JL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Brown + Caldwell Work Order Number 1406513

Checklist completed by [signature] 6/6/14
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes ✓ No __ Not Present __

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.2°C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes __ No ✓

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by [signature]

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 13-Jun-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1406513

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1406513-001A	14156-TW-33	6/5/2014 9:25:00AM	Groundwater	TOTAL METALS BY ICP		06/11/2014	06/12/2014
1406513-001B	14156-TW-33	6/5/2014 9:25:00AM	Groundwater	Hexavalent Chromium			06/06/2014
1406513-002A	14156-DUP	6/5/2014 12:00:00PM	Groundwater	TOTAL METALS BY ICP		06/11/2014	06/12/2014
1406513-002B	14156-DUP	6/5/2014 12:00:00PM	Groundwater	Hexavalent Chromium			06/06/2014
1406513-003A	14156-TW-34	6/5/2014 11:10:00AM	Groundwater	TOTAL METALS BY ICP		06/11/2014	06/12/2014
1406513-003B	14156-TW-34	6/5/2014 11:10:00AM	Groundwater	Hexavalent Chromium			06/06/2014
1406513-004A	14156-TW-35	6/5/2014 3:15:00PM	Groundwater	TOTAL METALS BY ICP		06/11/2014	06/12/2014
1406513-004B	14156-TW-35	6/5/2014 3:15:00PM	Groundwater	Hexavalent Chromium			06/06/2014
1406513-004C	14156-TW-35	6/5/2014 3:15:00PM	Groundwater	DISSOLVED METALS BY ICP		06/09/2014	06/09/2014
1406513-004D	14156-TW-35	6/5/2014 3:15:00PM	Groundwater	Hexavalent Chromium, Dissolved			06/06/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1406513

ANALYTICAL QC SUMMARY REPORT

BatchID: 192135

Sample ID: **MB-192135**	Client ID:			Units: **mg/L**	Prep Date: **06/09/2014**	Run No: **269526**
SampleType: **MBLK**	TestCode: **METALS, DISSOLVED**	**SW6010C**		BatchID: **192135**	Analysis Date: **06/09/2014**	Seq No: **5685631**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-192135**	Client ID:			Units: **mg/L**	Prep Date: **06/09/2014**	Run No: **269526**
SampleType: **LCS**	TestCode: **METALS, DISSOLVED**	**SW6010C**		BatchID: **192135**	Analysis Date: **06/09/2014**	Seq No: **5685630**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.005	0.0100	1.000		101	80	120				

Sample ID: **1406632-001AMS**	Client ID:			Units: **mg/L**	Prep Date: **06/09/2014**	Run No: **269526**
SampleType: **MS**	TestCode: **METALS, DISSOLVED**	**SW6010C**		BatchID: **192135**	Analysis Date: **06/09/2014**	Seq No: **5685637**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9381	0.0100	1.000		93.8	75	125				

Sample ID: **1406632-001AMSD**	Client ID:			Units: **mg/L**	Prep Date: **06/09/2014**	Run No: **269526**
SampleType: **MSD**	TestCode: **METALS, DISSOLVED**	**SW6010C**		BatchID: **192135**	Analysis Date: **06/09/2014**	Seq No: **5685638**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9492	0.0100	1.000		94.9	75	125	0.9381	1.17	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1406513

ANALYTICAL QC SUMMARY REPORT

BatchID: 192251

Sample ID: **MB-192251** Client ID: Units: **mg/L** Prep Date: **06/11/2014** Run No: **269715**
SampleType: **MBLK** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **192251** Analysis Date: **06/12/2014** Seq No: **5689868**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	BRL	0.0100									

Sample ID: **LCS-192251** Client ID: Units: **mg/L** Prep Date: **06/11/2014** Run No: **269715**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **192251** Analysis Date: **06/12/2014** Seq No: **5689867**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.035	0.0100	1.000		103	80	120				

Sample ID: **1406622-001BMS** Client ID: Units: **mg/L** Prep Date: **06/11/2014** Run No: **269715**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **192251** Analysis Date: **06/12/2014** Seq No: **5689871**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.009	0.0100	1.000	0.002728	101	75	125				

Sample ID: **1406622-001BMSD** Client ID: Units: **mg/L** Prep Date: **06/11/2014** Run No: **269715**
SampleType: **MSD** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **192251** Analysis Date: **06/12/2014** Seq No: **5689873**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9990	0.0100	1.000	0.002728	99.6	75	125	1.009	0.951	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1406513

ANALYTICAL QC SUMMARY REPORT

BatchID: R269295

Sample ID: **MB-R269295** Client ID: Units: **mg/L** Prep Date: Run No: **269295**
SampleType: **MBLK** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R269295** Analysis Date: **06/06/2014** Seq No: **5680659**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R269295** Client ID: Units: **mg/L** Prep Date: Run No: **269295**
SampleType: **LCS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R269295** Analysis Date: **06/06/2014** Seq No: **5680660**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4851	0.0100	0.5000		97.0	90	110				

Sample ID: **1406473-001CMS** Client ID: Units: **mg/L** Prep Date: Run No: **269295**
SampleType: **MS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R269295** Analysis Date: **06/06/2014** Seq No: **5680664**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4680	0.0100	0.5000		93.6	85	115				

Sample ID: **1406473-001CMSD** Client ID: Units: **mg/L** Prep Date: Run No: **269295**
SampleType: **MSD** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R269295** Analysis Date: **06/06/2014** Seq No: **5680666**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4829	0.0100	0.5000		96.6	85	115	0.4680	3.13	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1406513

ANALYTICAL QC SUMMARY REPORT

BatchID: R269296

Sample ID: **MB-R269296** Client ID: Units: **mg/L** Prep Date: Run No: **269296**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269296** Analysis Date: **06/06/2014** Seq No: **5680710**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	0.0100									

Sample ID: **LCS-R269296** Client ID: Units: **mg/L** Prep Date: Run No: **269296**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269296** Analysis Date: **06/06/2014** Seq No: **5680711**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4808	0.0100	0.5000		96.2	90	110				

Sample ID: **1406513-001BMS** Client ID: **14156-TW-33** Units: **mg/L** Prep Date: Run No: **269296**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269296** Analysis Date: **06/06/2014** Seq No: **5680716**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4766	0.0100	0.5000		95.3	85	115				H

Sample ID: **1406513-001BMSD** Client ID: **14156-TW-33** Units: **mg/L** Prep Date: Run No: **269296**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R269296** Analysis Date: **06/06/2014** Seq No: **5680717**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4851	0.0100	0.5000		97.0	85	115	0.4766	1.77	20	H

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Appendix D: Laboratory Stipulation Letter

AES

Analytical Environmental Services, Inc.,
3785 Presidential Parkway
Atlanta, GA 30340

Stipulation of Approval for Commercial Laboratory

According to Georgia State Law (O.C.G.A. 12-2-9) Commercial Rules for Commercial Laboratory Accreditation, any person submitting data to EPD prepared by a commercial laboratory shall stipulate that the laboratory is approved (Chapter 391-3-26-.05). The following information is provided as requested.

Laboratory	Analytical Environmental Services, Inc. (AES) 3785 Presidential Parkway, NE Atlanta, GA 30340 (770) 457-8177
Accredited By:	State of Florida, Department of Health, Bureau of Laboratories; Accrediting NELAP Authority
Accreditation ID:	E87582
Scope:	Clean Water Act – Extractable Organics, General Chemistry, Metals, Microbiology, Pesticides-Herbicides, PCBs, Volatile Organics RCRA/CERCLA – Extractable Organics, General Chemistry, Metals, Pesticides-Herbicides, PCBs, Volatile Organics
Effective:	July 1, 2012
Expires:	June 30, 2013

I further certify that the sample(s) for which this data is being submitted has been handled pursuant to the appropriate chain of custody. Any question regarding this stipulation of approval may be directed to AES at 770 457-8177. Thank you for your business and please do not hesitate contacting us if we can be of further assistance.

James Forrest

Director of Project Management
September, 19 2012