Voluntary Remediation Program Semiannual Progress Report

Prepared for

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

January 30, 2014

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Semiannual Progress Report

Prepared for

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

January 30, 2014

Submitted to the Georgia Environmental Protection Division

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

Brown AND Caldwell

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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 July 30, 2013 through January 30, 2014.

1.1 Background

The Former MacGregor Golf Company 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 subsequent addenda (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 January and July 2013 Semiannual Progress Reports. 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 July 30, 2013 to January 30, 2014, and includes the results of groundwater level measurements and groundwater sampling.

This report is organized into seven 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. References cited are provided at the conclusion of the report.

Section 2

Work Performed this Period

Work at the Site since the submittal of the last Semiannual Progress Report dated July 30, 2013 involved groundwater assessment and consisted of the following tasks:

- Groundwater level measurements
- Groundwater sampling at MW-4, MW-11, MW-19, MW-23, MW-24 and MW-26.

These activities are discussed in the following sections. The work was completed in October 2013 and January 2014. The monitoring well locations are shown on Figure 2.

2.1 Groundwater Level Measurement

Groundwater levels were measured in the monitoring wells at the Site and off-site Spartan wells MW-1 and MW-2 on October 22, 2013 and January 7, 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. All measurements were completed prior to any purging or other monitoring activities, using a Heron 100-foot water level meter. 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 monitoring wells in the upper and lower water bearing zones were used to calculate the groundwater elevations and prepare potentiometric surface maps for the upper and lower water bearing zones.

2.2 Groundwater Sample Collection and Analysis

Groundwater sample collection and analysis performed during the reporting period are discussed below.

2.2.1 Sample Collection

Groundwater samples were collected from selected monitoring wells in October 2013 and January 2014 to determine delineation and/or cleanup compliance of Site constituents of concern (COCs). Samples were collected from monitoring wells MW-4, MW-11, MW-19, MW-24 and MW-26 in both events, and from monitoring wells MW-23 and MW-24 in October 2013 only. The locations of these wells are shown on Figure 2.

During each sampling event, the groundwater was 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 A. A summary of these results is provided in Table 2. Water level measurements were also recorded during purging to ensure minimal drawdown. An 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). When a turbidity of less than 10 NTU could not be achieved,

samples were collected once stabilization occurred and after purging approximately 5 well volumes. 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. Quality assurance/quality control (QA/QC) samples were also collected as follows:

- One duplicate sample was collected from MW-26 during the October 2013 sampling event, and one duplicate sample was collected from MW-19 during the January 2014 sampling event.
- One equipment blank was collected during each sampling event.
- Trip blanks were submitted with each cooler containing samples for volatile organic compounds (VOCs) analysis.

2.2.2 Sample Analysis

After collection, the samples were immediately placed on ice and then delivered to Analytical Environmental Services, Inc. (AES) in Atlanta, Georgia for analysis. Copies of the completed chain-of-custody forms are included in Appendix B with the laboratory reports. In October 2013, the samples from MW-4, MW-11, MW-19, MW-23, MW-24, MW-26 and associated duplicate and equipment blank samples were analyzed for total and dissolved chromium using United States Environmental Protection Agency (USEPA) Method 6010B, and total and dissolved hexavalent chromium using USEPA Method SW 7196. In addition, the sample from MW-4 was analyzed for total and dissolved nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B. In January 2014, the samples from MW-11, MW-19, MW-26, and associated duplicate and equipment blank samples were analyzes for total and dissolved chromium, and total and dissolved hexavalent chromium. The sample from MW-4 was analyzed for VOCs. The trip blanks were analyzed for VOCs.

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

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 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. The potentiometric maps of the upper and lower water bearing zones groundwater surface in October 2013 and January 2014 are presented on Figures 3 through 6.

Similar to the groundwater elevations measured earlier in 2013, the groundwater elevations in this reporting period were higher than those measured prior to January 2012. However, the mounding of the upper water bearing zone in the area of wells MW-4, MW-22, MW-23 and MW-25 from January 2012 to July 2013 was not present in the October 22, 2013 and January 7, 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 October 2013 sampling event, the groundwater gradient is primarily to the southwest, with some southeasterly flow in the southeast corner of the Site in the area of wells MW-3, MW-12 and MW-13 (Figure 3). In the January 2014 event, the groundwater in the upper water bearing zone appears to flow more to the south and southeast, except in the area of monitoring wells MW-1, MW-2, MW-3, MW-13 and MW-19 where a groundwater divide appears to be present, resulting in groundwater flow toward the northwest around MW-12 (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 October 2013 event, water level elevations indicate northeasterly groundwater flow across the Site, except at the north end of the property (in the area of monitoring wells MW-6, MW-24, MW-26, Spartan MW-1 and Spartan MW-2) where a localized trough centered around monitoring well MW-24 is indicated (Figure 5). In January 2014, water levels at the Site were higher and a more consistent easterly gradient is apparent across the Site except at the northwestern corner (around MW-6, MW-24, MW-26, Spartan MW-1 and Spartan MW-2) where a very localized flow to the southeast is indicated (Figure 6).

Outside of localized water level fluctuations, the groundwater gradients observed in this reporting period were similar to those observed in May 2013 and the predominant groundwater flow directions appear consistent.

3.2 Groundwater Sampling Results

Groundwater samples were collected from monitoring wells MW-4, MW-11, MW-19, MW-23, MW-24 and MW-26 in October 2013, and from monitoring wells MW-4, MW-11, MW-19, and MW-26 in January 2014.

The results of groundwater parameters measured in the field are summarized in Table 2, and chemicals detected in laboratory analyses for these sampling events are summarized in Table 3. Chemical detections from historical sampling events are presented in Table 4. The tables show the sample collection dates, reported concentrations, laboratory reporting limits where specific constituent were not detected, and the applicable site-specific delineation and cleanup standards. Figure 7 depicts the recent COC detections graphically. The groundwater sampling field forms and the laboratory analytical reports are included as Appendices A and B, respectively. The results of the laboratory analyses are discussed below.

3.2.1 Inorganic Compounds

In October 2013, groundwater samples from monitoring wells MW-11, MW-19, and MW-24 contained total chromium at concentrations of 0.0459 milligrams per liter (mg/L), 0.296 mg/L and 0.0829 mg/L, respectively. Hexavalent chromium was detected in these wells at concentrations of 0.0402 mg/L, 0.284 mg/L and 0.0513 mg/L, respectively. Thus, the majority of chromium in groundwater appears to be in hexavalent form. Total chromium and hexavalent chromium concentrations in groundwater from monitoring wells MW-4, MW-23, and MW-26 (and its duplicate) were less than the laboratory reporting limit of 0.01 mg/L. The total chromium cleanup standard (0.10 mg/L) is met in all wells sampled except monitoring well MW-19. Hexavalent chromium concentrations meet the cleanup standard (0.01 mg/L) in all monitoring wells sampled except MW-24, MW-11, and MW-19.

In January 2014, groundwater samples from monitoring wells MW-11 and MW-19 contained total chromium at concentrations of 0.0319 mg/L and 0.196 mg/L, respectively. Hexavalent chromium was detected in these wells at concentrations of 0.0351 mg/L and 0.199 mg/L, respectively. Total chromium and hexavalent chromium concentrations in MW-26 were less than the reporting limit. Consistent with October 2013 results, the majority of chromium detected in groundwater in January 2014 appears to be in hexavalent form, and in January 2014 cleanup standards for total and hexavalent chromium were met in all wells sampled except monitoring well MW-19 and monitoring wells MW-11 and MW-19, respectively.

The delineation standards for total and hexavalent chromium are the same as the cleanup standards (0.10 mg/L and 0.01 mg/L, respectively). Delineation has been achieved to the north based on data from monitoring well MW-26; however, recent groundwater concentrations measured in samples from monitoring well MW-19 indicate that delineation has not been achieved south of this well.

In addition, a groundwater sample from MW-4 was analyzed for total and dissolved nickel in October 2013. This sample contained total nickel at a concentration of 0.203 mg/L, which is greater than the delineation standard of 0.10 mg/L but less than the cleanup standard of 2.04 mg/L.

3.2.2 Organic Compounds

The groundwater samples collected from MW-4 were also analyzed for VOCs during both sampling events. Results indicated that trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (VC) were detected at concentrations above the cleanup standards (0.204 mg/L, 0.038 mg/L and 0.0033 mg/L, respectively). In October 2013, concentrations of TCE, cis-1,2-DCE, and VC in the sample collected from MW-4 were 0.380 mg/L, 0.120 mg/L, and 0.015 mg/L, respectively. In January 2014, concentrations of these COCs were slightly lower at 0.290 mg/L, 0.097 mg/L, and 0.011 mg/L, respectively. VOC concentrations in monitoring well MW-4 have declined almost an order of magnitude since the well was installed in 1995.

3.2.3 Quality Assurance/Quality Control Samples

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

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 VRP Application to illustrate the approximate extent of 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 8 and 9 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 9. 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 below ground surface (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.

Figures 8 and 9 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. 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.

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.

Concentrations of 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 TCE, cis-1,2-DCE, and 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 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 shrink.

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 8 and 9, 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

The Group will meet the milestones as required 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 groundwater relative to 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 10.

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. The historical soil results are presented in Table 5.

5.1.2 Groundwater Delineation

On-Site Horizontal Groundwater Delineation

On-site horizontal delineation of total and hexavalent chromium in groundwater had previously been achieved (north of monitoring well MW-26). However, based on the recent detection of chromium in monitoring well MW-19, horizontal delineation of total and hexavalent chromium has not yet been achieved to the south. VOCs were previously delineated on-site.

Off-Site Horizontal Groundwater Delineation

As discussed in the July 2013 Semiannual Progress Report, off-site horizontal delineation of total and hexavalent chromium to the north of MW-26 has been achieved. Delineation of total and hexavalent chromium to the south of MW-19 has not yet been achieved.

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

Soil cleanup standards have been developed for the Site. The Site soil is in compliance with these standards 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 these soil cleanup standards.

5.2.2 Groundwater

Total chromium concentrations in monitoring well MW-19 currently exceed the cleanup standard of 0.10 mg/L. Hexavalent chromium concentrations in monitoring wells MW-11, MW-19, and MW-24 currently exceed the cleanup standard of 0.01 mg/L. In addition, 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.

5.3 Future Work

As total and hexavalent chromium concentrations in groundwater in monitoring well MW-19 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 (hexavalent only) currently exceed the cleanup standards. Therefore, remedial strategies for chromium will be evaluated over the next two reporting periods for groundwater in these areas. The point of demonstration (POD) wells for the chromium impact in groundwater will be presented 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 two reporting periods, 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 left in soil will result in exceedances of the applicable groundwater risk reduction standards at the point of compliance or unacceptable health risks to potential receptors. For this Site, the point of compliance is the property boundary as no groundwater water wells have been or will be installed on-site.

The updated milestone schedule is presented on Figure 10. Horizontal delineation of Site COCs on property previously inaccessible will be completed by the VRP deadline of July 30, 2014 and will be discussed in the Semiannual Progress Report submitted by this date. 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

This section presents a summary of the professional engineer's work on this project since the last submittal to the EPD. Table 6 summarizes the hours charged and the services of BC's professional engineer for this project during this period.

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 and September 18, 2013. 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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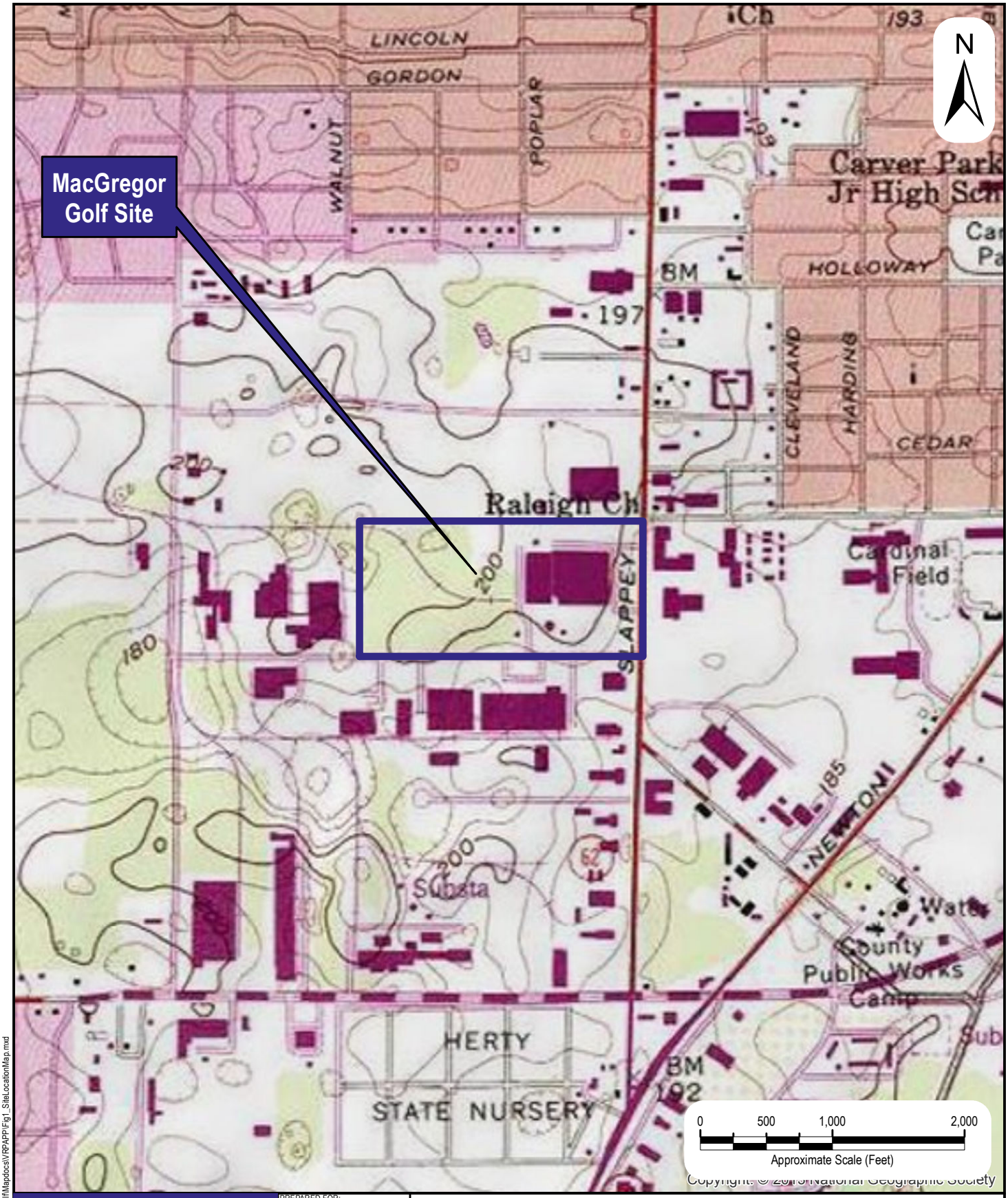


Brown AND Caldwell

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

DATE:	01/11/2013
SCALE:	AS SHOWN
DRAWN BY:	JBM
CHECKED BY:	TCB, PCR
PROJECT #:	145096

Figure 1

Site Location Map

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

FILE PATH: R:\Projects\MacGregorGolf\Mapdocs\VRPAPP\Fig1_SiteLocationMap.mxd

SOURCE: NATIONAL GEOGRAPHIC SEAMLESS USGS, 2010

LEGEND

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

0 150 300 450
Approximate Scale in Feet

, USDA, USGS

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:	01/15/2014
SCALE:	AS SHOWN
DRAWN BY:	GS4
CHECKED BY:	TCB
PROJECT #:	145096

Accessed By: BSTEELE at 01/15/2014 14:21

Path: R:\Projects\MacGregorGolf\Maps\docs\Jan 2014 Status Report\Figure 2- Site Map.mxd

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

Figure 3

Potentiometric Surface Map
Upper Water Bearing Zone
October 22, 2013

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:	01/15/2014
SCALE:	AS SHOWN
DRAWN BY:	BAS
CHECKED BY:	TCB
PROJECT #:	145096

Accessed By: BSTEELE at 01/15/2014 14:19

Path: R:\Projects\MacGregorGolf\Maps\docs\Jan 2014 Status Report\Figure 3 - Shallow Pot Map - October 22, 2013.mxd

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

Figure 4

Potentiometric Surface Map
Upper Water Bearing Zone
January 07, 2014

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

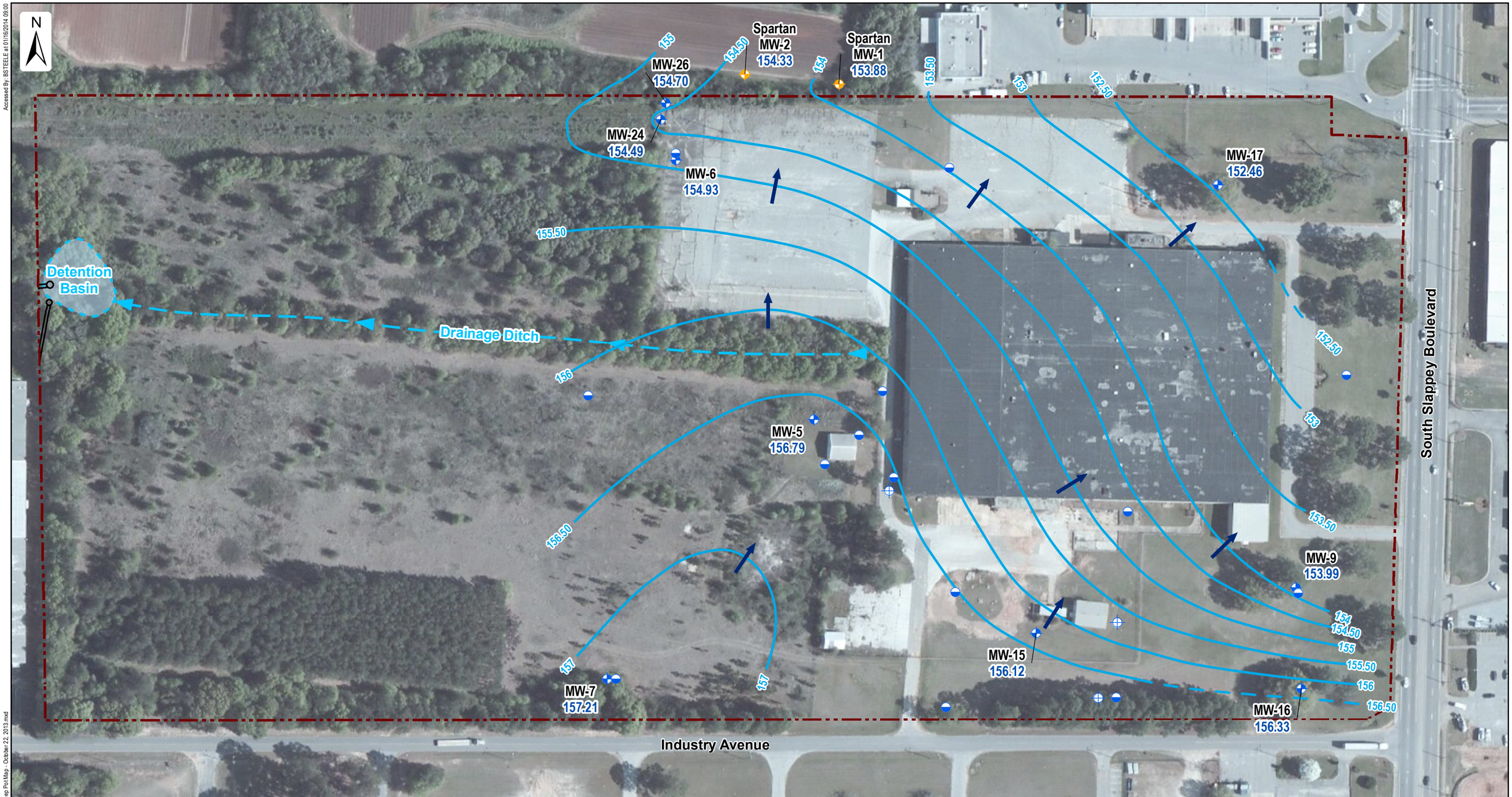
Brown AND Caldwell

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

DATE:	01/16/2014
SCALE:	AS SHOWN
DRAWN BY:	BAS
CHECKED BY:	JBC
PROJECT #:	145096

Accessed By: BSTEELE at 01/16/2014 08:58

Path: R:\Projects\MacGregorGolf\Mapdocs\Jan 2014 Status Report\Figure 4 - Shallow Pot Map - January 07, 2014.mxd



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

Figure 5

Potentiometric Surface Map
Lower Water Bearing Zone
October 22, 2013

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:	01/16/2014
SCALE:	AS SHOWN
DRAWN BY:	BAS
CHECKED BY:	JBC
PROJECT #:	145096

Accessed By: BSTEELE at 01/16/2014 09:00

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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

Figure 6

Potentiometric Surface Map
Lower Water Bearing Zone
January 07, 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:	01/16/2014
SCALE:	AS SHOWN
DRAWN BY:	BAS
CHECKED BY:	XXX
PROJECT #:	145096

Accessed By: BSTEELE at 01/16/2014 12:40

Path: R:\Projects\MacGregorGolf\Maps\docs\Jan 2014 Status Report\Figure 6 - Deep Pot Map - Jan 07, 2014.mxd

MW-26	10/24/2013*	1/8/2014
Total Chromium	<0.010/<0.010	<0.010
Hexavalent Chromium	<0.010/<0.010	<0.010
Trivalent Chromium	<0.010/<0.010	<0.010

MW-24	10/24/2013
Total Chromium	0.0829
Hexavalent Chromium	**0.0513**
Trivalent Chromium	0.0316

MW-11	10/23/2013	1/7/2014
Total Chromium	0.0459	0.0319
Hexavalent Chromium	**0.0402**	**0.0351**
Trivalent Chromium	<0.010	<0.010

MW-4	10/22/2013	1/7/2014
Total Chromium	<0.010	NA
Hexavalent Chromium	<0.010	NA
Trivalent Chromium	<0.010	NA
Total Nickel	0.203	NA
cis-1,2-Dichloroethene	**0.380**	**0.29**
Trichloroethene	**0.120**	**0.097**
Vinyl Chloride	**0.015**	**0.011**

MW-23	10/22/2013
Total Chromium	<0.010
Hexavalent Chromium	<0.010
Trivalent Chromium	<0.010

MW-19	10/23/2013	1/8/2014*
Total Chromium	**0.296**	**0.196/0.204**
Hexavalent Chromium	**0.284**	**0.199/0.198**
Trivalent Chromium	0.0113	<0.010/<0.010

LEGEND

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

Notes:
*Duplicate sample collected
Concentrations shown in milligrams per liter (mg/L).
Bold indicates concentration is greater than delineation and cleanup standard. Standards (mg/L) are as follows:

Parameter	Delineation Standard	Cleanup Standard
Total Chromium	0.10	0.10
Hexavalent Chromium	0.01	0.01
Trivalent Chromium	0.01	153
Total Nickel	0.10	2.04
cis-1,2-Dichloroethene	0.07	0.204
Trichloroethene	0.005	0.038
Vinyl Chloride	0.002	0.0033

Figure 7

Recent Groundwater Detections

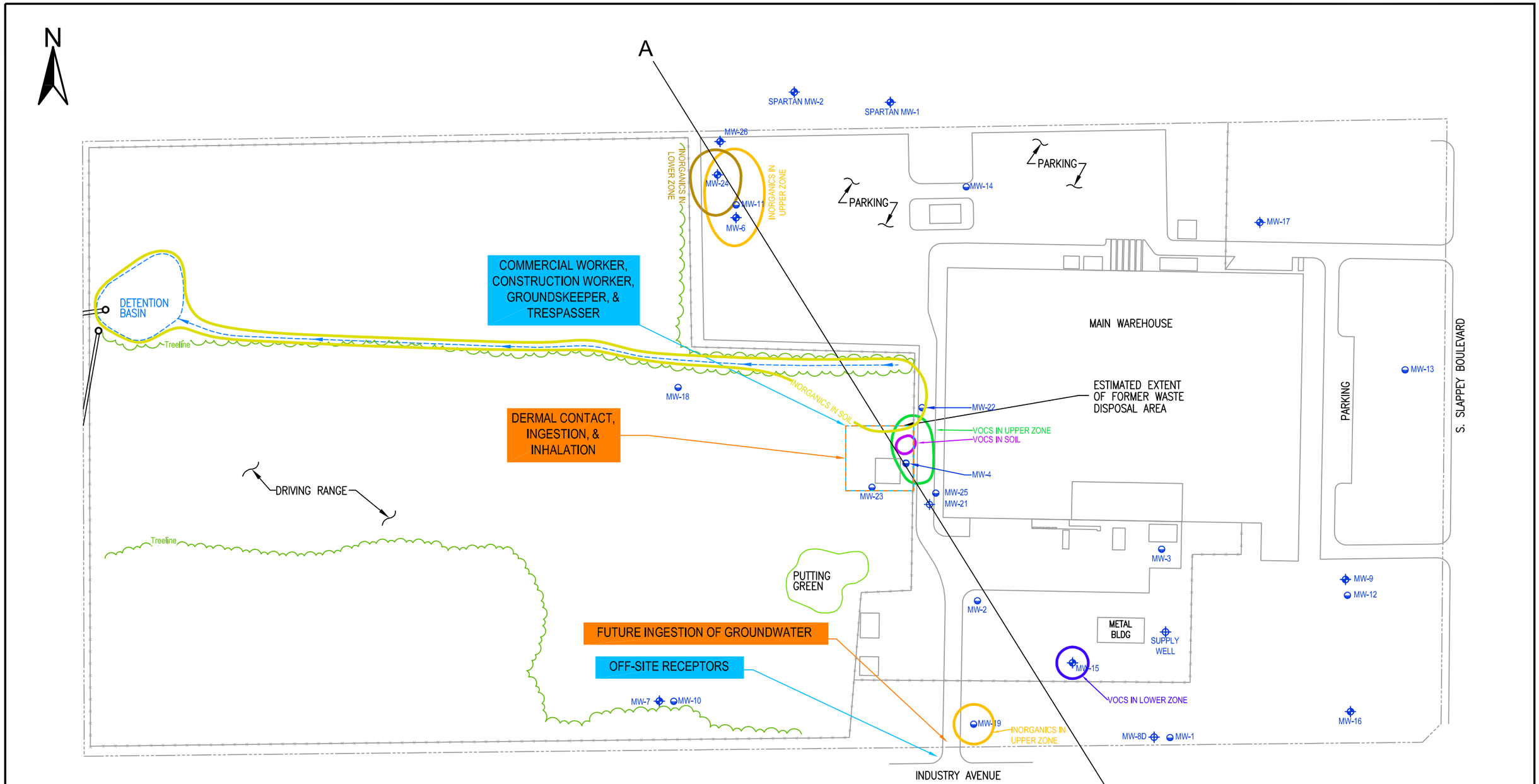
Former MacGregor Golf Company
1601 South Slappey Blvd; Albany, Dougherty County, Georgia

Brown AND Caldwell

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

DATE:	01/15/2014
SCALE:	AS SHOWN
DRAWN BY:	GS4
CHECKED BY:	SEJ
PROJECT #:	145096

Accessed By: BSTEELE at 01/15/2014 15:14
Path: R:\Projects\MacGregorGolf\Mapdocs\Jan 2014 Status Report\Figure 7- Groundwater Concentration Map.mxd



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 8

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:	01/15/2014
SCALE:	AS SHOWN
DRAWN BY:	BAS
CHECKED BY:	TCB
PROJECT #:	145069

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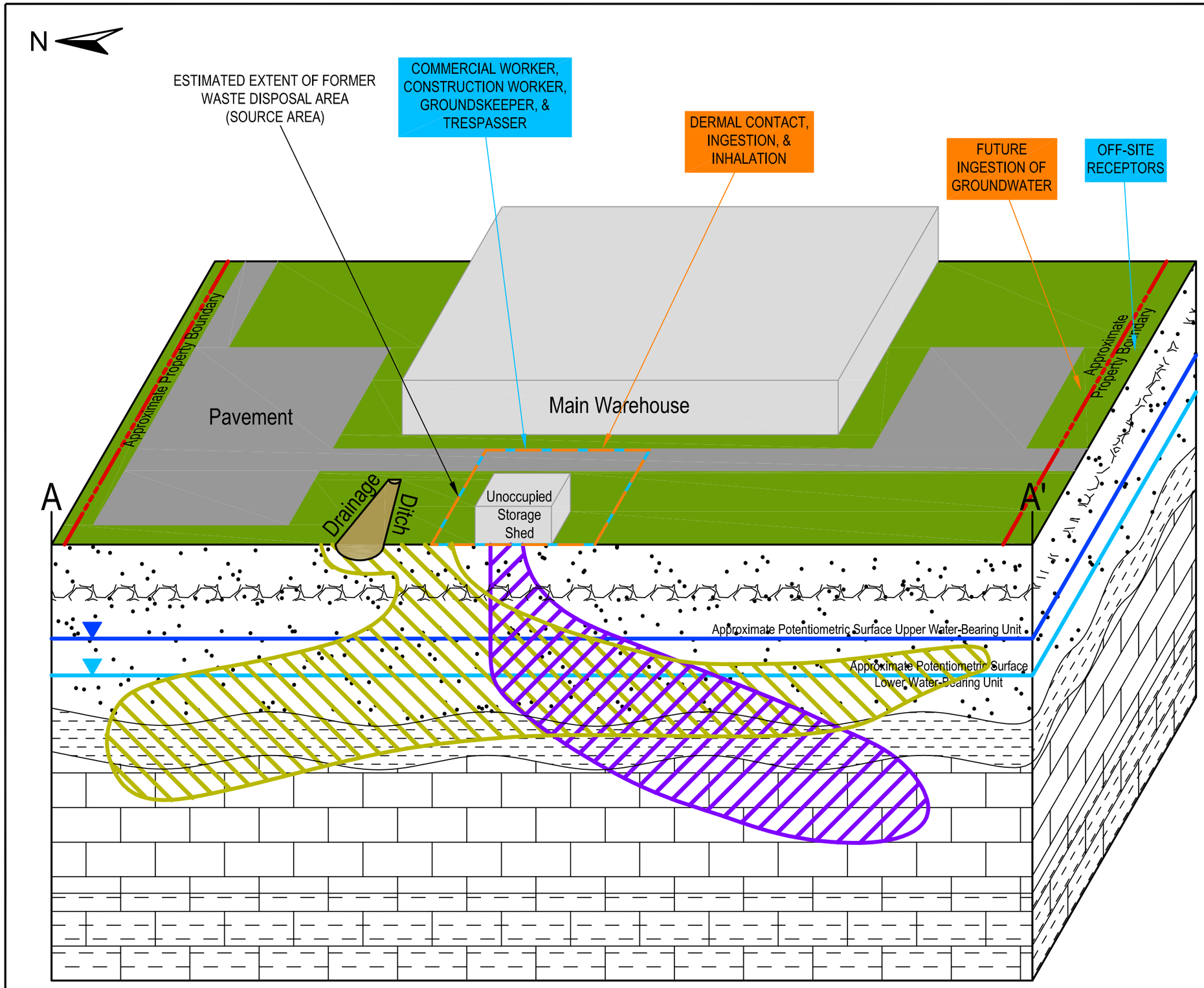

LEGEND

- 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 9

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:	01/15/2014
SCALE:	NOT TO SCALE
DRAWN BY:	GS4
CHECKED BY:	TCB
PROJECT #:	145096

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Figure 10. 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																					
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																					

On-site Horizontal Delineation

Off-site Horizontal Delineation

Vertical Delineation, Final Remediation Plan, and Final Cost Estimate

CSR Submittal to VRP with Certifications

Indicates due date indicated on VRP Application Form.

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

Indicates task accomplished.

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)	October 22,2013		January 7, 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	36.31	160.23	37.24	159.30
MW-2	6/28/1995	Upper	566220.01	2292765.44	40.19	25-40	NA	196.61	36.11	160.50	37.47	159.14
MW-3	6/29/1995	Upper	566348.21	2293042.11	46.33	32.50-47.50	NA	198.41	37.14	161.27	39.20	159.21
MW-4	6/29/1995	Upper	566470.82	2292611.54	46.96	28-41.50	NA	198.43	37.28	161.15	36.60	161.83
MW-10	7/15/1998	Upper	566080.73	2292221.58	48.37	33.30-48.30	NA	193.75	36.22	157.53	35.21	158.54
MW-11	7/15/1998	Upper	566921.91	2292317.31	48.30	33-48	NA	200.25	38.21	162.04	37.68	162.57
MW-12	7/16/1998	Upper	566218.48	2293315.55	45.28	35-50	NA	194.70	34.66	160.04	35.18	159.52
MW-13	10/22/1998	Upper	566566.74	2293392.86	50.38	35-50	NA	196.48	35.09	161.39	37.17	159.31
MW-14	10/20/1998	Upper	566899.03	2292756.18	49.71	34.80-49.80	NA	196.99	35.59	161.40	36.55	160.44
MW-18	6/17/1999	Upper	566533.98	2292176.82	43.70	28.8-43.8	NA	196.49	35.13	161.36	34.40	162.09
MW-19	6/17/1999	Upper	566035.83	2292750.34	44.12	29-44	NA	193.40	34.68	158.72	34.17	159.23
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	35.33	161.56	35.35	161.54
MW-23	3/11/2003	Upper	566423.91	2292556.49	48.10	37.95-47.95	NA	199.73	38.41	161.32	38.21	161.52
MW-25[d]	10/21/2009	Upper	566402.83	2292666.80	39.16	29-39	NA	195.82	35.04	160.78	35.56	160.26
Lower Water Bearing Zone												
MW-5	7/23/1998	Lower	566495.97	2292539.09	60.50	NA	60-73	199.89	43.10	156.79	41.73	158.16
MW-6	7/25/1998	Lower	566911.71	2292317.29	60.13	NA	60-73	200.14	45.21	154.93	42.07	158.07
MW-7	7/22/1998	Lower	566080.91	2292207.62	69.35	60-70	NA	194.22	37.01	157.21	36.01	158.21
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	40.69	153.99	37.20	157.48
MW-15	10/23/1998	Lower	566153.85	2292894.90	75.38	65.70-75.70	NA	199.23	43.11	156.12	41.45	157.78
MW-16	10/21/1998	Lower	566065.57	2293320.44	75.47	64.70-74.70	NA	193.61	37.28	156.33	35.88	157.73
MW-17	6/17/1999	Lower	566871.51	2293186.97	73.81	66-76	NA	198.73	46.27	152.46	41.62	157.11
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	45.90	154.49	42.13	158.26
MW-26	11/26/2012	Lower	567002.52	2292301.47	62.20	52.20-62.20	NA	200.90	46.20	154.70	42.30	158.60
Spartan MW-1	11/10/2008	Lower	567032.71	2292578.90	68.5	52-67	NA	206.37	52.49	153.88	48.12	158.25
Spartan MW-2	11/10/2008	Lower	567048.65	2292428.10	65.0	49.5-64.5	NA	205.78	51.45	154.33	47.32	158.46
Supply Well	1958	Lower	NM	NM	168.0	NA	NA	NM	NM	NM	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.

NA - Not Applicable

NM - Not Measured

NAD83 - North American Datum of 1983

Table 2. 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]
MW-4	10/22/2013	5.00	6.83	20.88	0.738	8.7	0.24	0.79
	1/7/2014	5.50	6.87	18.62	0.643	77.8	0.21	6.87
MW-11	10/23/2013	2.30	6.86	22.37	0.667	31.3	5.48	4.11
	1/7/2014	6.00	6.83	16.36	0.651	95.2	5.57	4.07
MW-19	10/23/2013	3.30	7.54	21.25	0.261	10.8	6.24	2.54
	1/8/2014	6.00	7.21	18.18	0.282	56.1	6.02	7.49
MW-23	10/22/2013	5.50	6.91	20.67	0.411	47.1	5.15	1.71
MW-24	10/23/2013	11.8	7.10	22.91	0.556	15.8	5.96	117
MW-26	10/24/2013	2.10	6.97	20.13	0.578	2.3	6.39	4.66
	1/8/2014	5.00	6.79	18.54	0.570	77.0	6.30	7.97

[a] mS/cm = millisiemens per centimeter.

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

[c] mg/L=milligrams per liter.

[d] NTU = Nephelometric Turbidity Unit.

Table 3. Recent Groundwater Detections of Site COCs Former MacGregor Golf Company Albany, Georgia								
Well ID	Sampling Date	Concentration (mg/L)						
		Total Chromium	Hexavalent Chromium	Trivalent Chromium	Total Nickel	cis-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride
GW Delineation Standard		0.10	0.01	0.01	0.10	0.07	0.005	0.002
GW Cleanup Standard		0.10	0.01	153	2.04	0.204	0.038	0.0033
MW-4	10/22/2013	< 0.010	< 0.010	< 0.010	0.203	0.380	0.120	0.015
	1/7/2014	NA	NA	NA	NA	0.290	0.097	0.011
MW-11	10/23/2013	0.0459	0.0402	< 0.010	NA	NA	NA	NA
	1/7/2014	0.0319	0.0351	< 0.010	NA	NA	NA	NA
MW-19	10/23/2013	0.296	0.284 J	0.0113 J	NA	NA	NA	NA
	1/8/2014	0.196	0.199	< 0.010	NA	NA	NA	NA
	1/8/2014 Dup	0.204	0.198	< 0.010	NA	NA	NA	NA
MW-23	10/22/2013	< 0.010	< 0.010	< 0.010	NA	NA	NA	NA
MW-24	10/24/2013	0.0829	0.0513	0.0316	NA	NA	NA	NA
MW-26	10/24/2013	< 0.010	< 0.010	< 0.010	NA	NA	NA	NA
	10/24/2013 Dup	< 0.010	< 0.010	< 0.010	NA	NA	NA	NA
	1/8/2014	< 0.010	< 0.010	< 0.010	NA	NA	NA	NA

mg/L - milligrams per liter

NA - Not analyzed for this parameter

J - Result qualified as estimated by the laboratory or 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 4. 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

Table 4. 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-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

Table 4. 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-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	< 0.005	< 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

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 5. Historical Soil Detections of Site COCs Former MacGregor Golf Company Albany, Georgia														
			Inorganics: Concentration (mg/kg)					Organics: Concentration (mg/kg)						
Location	Sample Depth (feet)	Sampling Date	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 5. Historical Soil Detections of Site COCs Former MacGregor Golf Company Albany, Georgia														
			Inorganics: Concentration (mg/kg)					Organics: Concentration (mg/kg)						
Location	Sample Depth (feet)	Sampling Date	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

Table 5. Historical Soil Detections of Site COCs Former MacGregor Golf Company Albany, Georgia														
			Inorganics: Concentration (mg/kg)					Organics: Concentration (mg/kg)						
Location	Sample Depth (feet)	Sampling Date	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	3300[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

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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 6. 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	August 2013	1.00	*Monitored regulatory and financial status of project.
	September 2013	2.25	*Monitored regulatory and financial status of project.
	October 2013	0.50	*Oversight during on-site monitoring activities. *Monitored regulatory and financial status of project.
	November 2013	3.50	*Monitored regulatory and financial status of project.
	December 2013	0.75	*Monitored regulatory and financial status of project.
	January 2014	6.00	*Oversight during on-site monitoring activities. *Monitored regulatory and financial status of project. *Review of January 2014 Semiannual Progress Report
Total Hours Invoiced this Period		14.00	

Appendix A: Field Data Sheets

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-4

1. PROJECT INFORMATION

Project Number: 143096 Task Number: 100 Area of Concern: _____

Client: MacGregor Personnel: MJ

Project Location: Albany, Ga Weather: 70° overcast

2. WELL DATA

Date Measured: 10-22-13 Time: Am Temporary Well: ☐ Yes ☑ No

Casing Diameter: 2 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 2 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 46.96 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 37.38 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: 9.68 feet Well Volume: 1.58 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: 10-22-13 Time: 1310

Equipment Model(s)
1. YSI
2. GeoMotto
3. MP-50
4. _____

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 4.73 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
1315	.3	6.60	21.05	.577	53.6	.65	80.1	37.41	
1325	.90	6.62	20.97	.647	46.9	.50	20.9	37.41	
1335	1.3	6.67	20.92	.701	38.7	.36	9.25	37.41	
1345	1.6	6.69	20.89	.731	33.8	.33	8.18	37.41	
1355	2.1	6.73	20.86	.749	26.9	.28	5.64	37.41	

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: 1325-MW-4 Sample Date: 10-22-13 Sample Time: 1455 # of Containers: 6

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: MJ

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-4

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
1405	2.5	6.76	20.85	.759	21.1	.26	3.33	37.41	
1415	3.0	6.78	20.86	.755	17.9	.24	2.53	37.41	
1425	3.5	6.81	20.86	.750	12.6	.23	2.11	37.41	
1435	4.0	6.82	20.86	.748	11.1	.21	1.15	37.41	
1445	4.5	6.83	20.87	.740	8.1	.19	1.08	37.41	
1455	5.0	6.83	20.88	.738	8.7	.24	0.79	37.41	
		pH,		ORP,	DO,	Turb			
				1455					

Purge data continued on next sheet? ☐

2 of 2

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-11

1. PROJECT INFORMATION

Project Number: 143096 Task Number: 100 Area of Concern: _____

Client: Mac Gregor Personnel: MM

Project Location: Albany, Ga Weather: ~75° Sunny

2. WELL DATA

Date Measured: 10-22-13 Time: 4pm Temporary Well: ☐ Yes ☑ No

Casing Diameter: 2 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 2 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 48.30 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 38.21 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: 10.09 feet Well Volume: 1.64 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: 10-23-13 Time: 1030

Equipment Model(s)

1. YSI
2. LaMotte
3. MP-50
4. _____

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 4.93 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
1035	.1	6.88	22.25	.642	26.2	5.62	117	40.00	
1045	.4	6.86	22.29	.640	28.8	5.42	54.5	40.00	
1055	1.0	6.85	22.33	.653	29.7	5.40	31.7	40.00	
1105	1.4	6.84	22.38	.668	38.0	5.46	9.97	41.10	
1115	1.8	6.86	22.37	.664	27.7	5.49	5.08	41.10	
1125	2.3	6.86	22.37	.667	31.3	5.48	4.11	41.10	

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: 143296 MW-11 Sample Date: 10-23-13 Sample Time: 1125 # 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

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

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1 of 1

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-19

1. PROJECT INFORMATION

Project Number: 143096 Task Number: 100 Area of Concern: _____

Client: MacGregor Personnel: _____

Project Location: Albany, Ga Weather: ~60° Cloudy

2. WELL DATA

Date Measured: 10-23-13 Time: AM Temporary Well: ☐Yes ☑No

Casing Diameter: 2 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 2 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 44.12 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 34.68 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: 9.44 feet Well Volume: 1.54 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: 10-23-13 Time: 0815

Equipment Model(s)
1. YSI
2. LaMotte
3. _____
4. _____

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 4.61 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
0825	.1	6.67	20.94	.225	23.6	6.47	<1000	34.71	
0835	.5	7.31	21.13	.252	1.4	6.35	154	34.71	
0845	.9	7.46	21.12	.252	2.9	6.34	102	34.71	
0855	1.3	7.51	21.17	.253	4.7	6.27	81	34.71	
0905	1.7	7.49	21.11	.267	9.0	6.07	14.8	34.71	

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: 143296-MW-19 Sample Date: 10-23-13 Sample Time: 0935 # 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

Pump @ ~41

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

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Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-19

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
0915	2.3	7.52	21.13	.263	9.2	6.16	9.01	34.71	
0925	2.8	7.54	21.15	.260	10.2	6.24	5.50	34.71	
0935	3.3	7.54	21.25	.261	10.8	6.24	2.54	34.71	

Sample 0935

Purge data continued on next sheet? ☐

2 of 2

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-23

1. PROJECT INFORMATION

Project Number: 143094 Task Number: 100 Area of Concern: _____

Client: MacGregor Personnel: M

Project Location: Albany, Ga Weather: 70° overcast

2. WELL DATA

Date Measured: 10-22-13 Time: 4m Temporary Well: ☐Yes ☑No

Casing Diameter: 2 inches Type: ☐ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 2 inches Type: ☐ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 48.10 feet From: ☐ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 38.41 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: 9.69 feet Well Volume: 1.57 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: 10-22-13 Time: 1115

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 4.74 gallons

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

Equipment Model(s)
1. YSI
2. LaMotte
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
1120	.10	6.51	20.82	.417	82.1	5.96	70.1	38.60	water is cloudy
1130	.50	6.77	20.74	.417	69.0	5.13	19.1	38.60	
1140	~~.85~~ 1.0	6.85	20.71	.416	59.0	5.09	21.6	38.60	
1150	1.5	6.87	20.68	.415	56.1	~~6.68~~	12.10	38.60	5.11 for DO
1200	2.0	6.91	20.67	.412	51.0	5.13	11.1	38.60	

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: 13295-MW-23 Sample Date: 10-22-13 Sample Time: 1240 # 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

Intake at ~43 ft

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

Signature: M

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-23

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
1210	2.5	6.91	20.67	.412	50.9	5.10	5.79	38.69	
1220	3.5	6.91	20.68	.411	49.7	5.15	2.59	38.60	increase flow
1230	4.5	6.91	20.68	.411	47.5	5.15	1.98	38.60	
1240	5.5	6.91	20.67	.411	47.1	5.15	1.71	38.60	

1240

Sample

pH, Spec, ORP, DO, Turb

Purge data continued on next sheet? ☐

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2 of 2

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-24

1. PROJECT INFORMATION

Project Number: 14309d Task Number: 100 Area of Concern: ____

Client: MacGregor Personnel: MJ

Project Location: Albany, Ga Weather: ~80 sunny

2. WELL DATA

Date Measured: 10-22-13 Time: AM Temporary Well: ☐Yes ☑No

Casing Diameter: 2 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: ____

Screen Diameter: 2 inches Type: ☑ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: ____

Total Depth of Well: 58.75 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: ____

Depth to Static Water: 45.90 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: 12.85 feet Well Volume: 2.09 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: 10-23-13 Time: 1230

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 6.28 gallons

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

Equipment Model(s)

1. YSI
2. LaMotte
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
1235	.1	7.23	22.83	.554	-26.4	5.96	<1000	45.95	water is white
1245	.3	7.09	22.60	.553	4.8	5.97	<1000	45.95	w/ sediment
1255	.8	7.14	22.48	.551	11.3	5.89	<1000	45.95	pump at 20/10
1305	1.3	7.14	22.60	.548	12.4	6.19	<1000	45.95	refill discharge
1315	1.7	7.13	22.57	.550	11.0	5.99	<1000	45.95	

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: 13296-MW-24 Sample Date: 10-23-13 Sample Time: 1625 # 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

~54 ft

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)

1 of 2

Signature: Mikala TF

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-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
1325	2.2	7.11	22.60	.552	9.8	5.98	<1000	45.95	
1335	2.6	7.11	22.52	.552	~~7.11~~ 11.3	6.05	<1000	45.95	
1345	3.0	7.10	22.51	.553	~~X~~ 10.6	6.00	<1000	45.95	
1355	3.5	7.10	22.55	.553	10.2	6.00	<1000	45.95	
1415	4.5	7.10	22.54	.554	9.8	6.09	<1000	45.95	switch to 20 mins
1435	6.5	7.07	21.84	.553	7.6	6.02	<1000	45.95	
1455	~~7.8~~ 8.5	7.08	21.82	.557	8.8	6.05	<1000	45.95	water still white
1515	~~8.5~~ 9.5	7.09	22.11	.555	10.1	5.90	660 Au	45.95	and murky
1535	9.5	7.10	22.21	.555	14.9	5.96	125	45.95	
1555	10.5	7.10	23.00	.556	14.9	6.04	109	45.95	10 mins
1605	11.0	7.10	23.01	.556	14.6	5.99	113	45.95	
1615	11.4	7.10	22.93	.556	15.3	5.97	123	45.95	
1625	11.8	7.10	22.91	.559	15.6	5.96	117	45.95	

1625

5 well vol

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 051812 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-26

1. PROJECT INFORMATION

Project Number: 143096 Task Number: 100 Area of Concern: _____

Client: Albany - MacGregor Personnel: MJ

Project Location: Albany, Ga Weather: ~70° sunny

2. WELL DATA

Date Measured: 10-22-13 Time: Am Temporary Well: ☐Yes ☑No

Casing Diameter: 2 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 2 inches Type: ☑PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 62.20 feet From: ☑ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 46.20 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: 16.0 feet Well Volume: 2.6 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: 10-24-13 Time: 0825

Equipment Model(s)
1. YSI
2. LaMotte
3. MP-50
4. _____

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 7.8 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
0830	.1	6.85	20.06	.581	101.8	6.64	698 Am	46.20	white, murky water
0840	.4	6.94	20.14	.582	45.7	6.38	91	46.20	
0850	.7	6.95	20.21	.583	33.3	6.39	40.9	46.20	slowed purge
0900	1.0	6.97	20.18	.586	19.4	6.39	21.3	46.20	
0910	1.3	6.97	20.08	.586	17.4	6.39	14.0	46.20	
0920	1.7	6.97	20.10	.578	1.8	6.39	16.9		

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: 13297-MW-26 Sample Date: 10-24-13 Sample Time: 0930 # of Containers: 4

Duplicate Sample Collected? ☑ Yes ☐ No ID: 13297-Dup # of Containers: 4

Equipment Blank Collected? ☑ Yes ☐ No ID: 13297-EB # of Containers: 4

Geochemical Analyses

Ferrous Iron: _____ mg/L

DO: _____ mg/L

Nitrate: _____ mg/L

Sulfate: _____ mg/L

Alkalinity: _____ mg/L

5. COMMENTS

EB at 1015

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

Signature: MJ

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-26

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
0930	2.1	6.97	20.13	.578	2.3	6.39	4.66	46.20	

0930 Sample

Purge data continued on next sheet? ☐

FORM GW-2 (Rev 051812 - sej)

Signature

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-4

1. PROJECT INFORMATION

Project Number: 143327 Task Number: _____ Area of Concern: _____

Client: Macgregor Golf Personnel: BS

Project Location: Albany GA Weather: 19°F, wind

2. WELL DATA

Date Measured: ~~1-7-13~~ 1-7-14 Time: AM Temporary Well: ☐Yes ☒No

Casing Diameter: 2 inches Type: ☒PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 2 inches Type: ☒PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 46.96 feet From: ☒ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 36.48 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: 10.48 feet Well Volume: 1.75 gal Screened Interval (from GS): _____

01-07-2014

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: ~~1-7-13~~ 01-7-14 Time: 1124

Equipment Model(s)

1. Sample Pro 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 5.25 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
1129	0.50	6.85	17.50	0.619	124.5	1.16	407	36.90'	
1139	0.75	6.77	17.92	0.605	120.8	0.89	198	37.20'	
1149	1.25	6.76	17.93	0.616	100.5	0.73	123	37.20'	
1159	1.50	6.76	18.19	0.639	100.3	0.59	68.1	37.20	
1209	2.00	6.79	18.03	0.651	97.3	0.45	45.9	37.20'	

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: 14007-MW-4 Sample Date: 1-7-14 Sample Time: 1300 # 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

Pump intake at ~ 46 ft.

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: MW-4

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
1219	2.75	6.82	18.66	0.653	91.3	0.35	28.5	37.20	
1229	3.50	6.80	18.03	0.651	88.2	0.31	18.3	37.20	
1239	4.50	6.84	18.06	0.649	87.3	0.26	16.6	37.20	
1249	5.00	6.85	18.14	0.643	81.0	0.21	14.3	37.20	
1259	5.50	6.87	18.62	0.643	77.8	0.21	6.87	37.20	
1300	Co	llect	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: MW-11

1. PROJECT INFORMATION

Project Number: 143327 Task Number: _____ Area of Concern: _____

Client: Macgregor Golf Personnel: BS

Project Location: Albany GA Weather: 20°F

2. WELL DATA

Date Measured: 1-7-13 Time: AM Temporary Well: ☐Yes ☒No

Casing Diameter: 2 inches Type: ☒PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 2 inches Type: ☒PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 48.30 feet From: ☒ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 37.68 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: 10.62 feet Well Volume: 1.77 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: 1-7-13 Time: 1346

Equipment Model(s)

1. Sample Pro
2. QED 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 5.32 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
1351	0.25	6.93	19.87	0.618	61.8	5.60	134	38.20'	
1401	0.50	6.90	19.85	0.611	77.3	5.54	121	38.70'	
1411	0.75	6.91	20.06	0.608	77.9	5.48	49.6	39.80'	
1421	1.25	6.85	20.54	0.634	83.4	5.33	31.4	40.30'	
BS 1-7-13 1431 1426	1.75	6.83	20.16	0.659	75.4	5.40	20.1	40.50	readings at 5 m

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: 14007-MW-11 Sample Date: 1-7-13 Sample Time: 1540 # of Containers: 3

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

Pump intake at ~ 47.5 ft

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 11.March.10 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-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
1431	2.50	6.81	20.47	0.676	78.8	5.38	16.7	40.90'	
1436	3.00	6.81	20.40	0.678	82.8	5.45	14.5	41.30	
1441	3.75	6.80	20.40	0.689	80.8	5.53	22.3	41.7	
1446	4.00	6.71	19.73	0.693	90.6	5.49	40.6	42.1	
1451	4.50	6.72	18.87	0.687	93.3	5.53	55.6	42.4	
1456	5.00	6.71	17.35	0.689	87.5	5.61	54.1	42.5	
1506	5.25	6.70	16.54	0.681	94.4	5.61	49.3	42.65	reading every 10
1516	5.50	6.75	16.63	0.680	95.5	5.57	37.5	42.8	min
1526	5.75	6.78	16.58	0.672	95.8	5.53	15.2	42.95	
1536	6.06	6.83	16.36	0.651	95.2	5.57	4.07	43.05	
1540	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: MW-19

1. PROJECT INFORMATION

Project Number: 143327 Task Number: _____ Area of Concern: _____

Client: Macgregor Golf Personnel: BS

Project Location: Albany GA 1.7.14 Weather: 35°F

2. WELL DATA

Date Measured: 1.7.14 Time: AM Temporary Well: ☐Yes ☒No

Casing Diameter: 2 inches Type: ☒PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 2 inches Type: ☒PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 44.12 feet From: ☒ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 34.17 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: 9.95 feet Well Volume: 1.66 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: 1.8.14 Time: 1134

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 4.98 gallons

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

Equipment Model(s)
1. Sample Pro
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
1139	Purge stop, BS to get gas for car.								
1152	Continue purge								
1153	0.25	7.09	17.97	0.270	71.1	5.28	183	34.50'	
1203	0.75	7.26	18.77	0.276	62.6	5.09	130	34.70'	
1213	1.25	7.25	19.05	0.275	64.5	5.29	66.2	35.10'	

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: 14008-MW-19 Sample Date: 1.8.14 Sample Time: 1405 # of Containers: 3

Duplicate Sample Collected? ☒ Yes ☐ No ID: 14008-DUP @ 1200 # of Containers: 2

Equipment Blank Collected? ☒ Yes ☐ No ID: 14008-EB @ 1100 # of Containers: 2

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

FORM GW-2 (Rev 11.March.10 - sej)

Brown AND Caldwell

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW-19

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
1223	1.75	7.26	19.19	0.291	63.0	5.53	31.7	35.40	
1233	2.25	7.25	19.40	0.292	61.4	5.70	18.9	35.70	
1243	3.00	7.27	19.41	0.289	63.3	5.89	14.5	35.90'	
1253	3.50	7.27	19.32	0.283	56.3	5.89	17.0	36.1	
1303	3.75	7.30	19.76	0.279	57.8	5.89	17.4	36.3	
1313	4.25	7.28	19.53	0.277	56.2	5.96	18.3	36.35	
1323	5.00	7.31	19.67	0.274	52.6	5.93	19.4	36.6'	
1333	5.25	7.31	19.54	0.271	52.3	5.91	32.4	36.75'	
1343	5.50	7.24	18.96	0.274	56.4	6.00	26.4	36.75'	
1353	5.75	7.31	18.94	0.277	50.1	5.86	15.5	36.75'	
1403	6.00	7.21	18.18	0.282	56.1	6.02	7.49	36.75'	
1406	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: MW-26

1. PROJECT INFORMATION

Project Number: 143327 Task Number: _____ Area of Concern: _____

Client: Macgregor Golf Personnel: BS

Project Location: Albany GA Weather: 19°F

2. WELL DATA

Date Measured: 1-7-14 Time: 4 PM Temporary Well: ☐ Yes ☒ No

Casing Diameter: 2 inches Type: ☒ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Screen Diameter: 2 inches Type: ☒ PVC ☐ Stainless ☐ Galv. Steel ☐ Teflon® ☐ Other: _____

Total Depth of Well: 62.20 feet From: ☒ Top of Well Casing (TOC) ☐ Top of Protective Casing ☐ Other: _____

Depth to Static Water: 42.30 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: 19.9 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: 1-8-14 Time: 0907

Equipment Model(s)

1. MP-50
2. Sample Pro Bladder
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 3.32 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
0912	0.25	6.75	16.76	0.563	121.2	6.53	184	43.12'	
0922	0.75	6.84	17.16	0.574	99.7	6.74	195	43.12'	
0932	1.25	6.83	17.25	0.573	94.1	6.59	137	43.12	
0942	1.75	6.82	17.21	0.572	91.0	6.49	75.1	43.12'	
0952	2.25	6.82	17.55	0.571	88.7	6.44	47.1	43.12'	

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: 14008-MW-26 Sample Date: 1-8-14 Sample Time: 1045 # of Containers: 3

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

intake at ~ 57 ft

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: MW-26

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
1002	2.75	6.81	17.96	0.571	82.4	6.37	21.7	43.12'	
1012	3.25	6.79	17.80	0.572	80.0	6.37	18.6	43.12'	
1022	3.75	6.81	18.30	0.569	75.3	6.34	14.9	43.12'	
1032	4.25	6.80	18.31	0.570	76.0	6.36	13.1	43.12'	
1042	5.00	6.79	18.54	0.570	77.0	6.30	7.97	43.12'	
1045	collect	sample							

Purge data continued on next sheet? ☐

Signature

FORM GW-2 (Rev 11.March.10 - sej)

2 2

Appendix B: Laboratory Analytical Reports

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

October 31, 2013

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: 1310J74

Analytical Environmental Services, Inc. received 3 samples on 10/24/2013 10:20:00 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

3785 PRESIDENTIAL PARKWAY • ATLANTA, GEORGIA 30340 • TEL: (770) 457-8177 • FAX: (770)457-8188

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: 1310J74

Date: 10-23-13 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Drive Ste 900, Atlanta, Ga 30328

PHONE:

FAX:

SAMPLED BY: George Algala

SIGNATURE: [signature]

ANALYSIS REQUESTED: Total Cr; Dissolved Cr; Hexavalent Cr; Hexa Cr dissolved

PRESERVATION (See codes): HNO3

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)	Total Cr	Dissolved Cr	Hexavalent Cr	Hexa Cr dissolved	REMARKS	No # of Containers
1	13296-MW-19	10-23-13	0935	X		GW	X	X	X	X	Hold dissolved Cr	4
2	13296-MW-11	10-23-13	1125	X		↓	X	X	X	X	↓	4
3	13296-MW-24	10-23-13	1625	X		GW	X	X	X	X		4
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: [signature]	10-23-13 1700	1: [signature]	10/24/13
2:		2:	10:20
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS: Hold "dissolved Cr" analysis

SHIPMENT METHOD
OUT / / VIA:
IN / VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER_____

PROJECT INFORMATION
PROJECT NAME: Marc Gregor
PROJECT #:
SITE ADDRESS:
SEND REPORT TO: SEJones@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
- [ ] 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: 31-Oct-13

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab ID: 1310J74

Case Narrative

Sample Receiving Nonconformance:

A Trip Blank was provided but not listed on the Chain of Custody. Trip blank was placed on hold.

Sample " 13296-MW-19" was received outside EPA/Method specified holding time of one day for methods 7196_W and 7196_W_D. Proceed per Sarah Jones 10/24/13.

Dissolved analysis was run per Sarah Jones 10/24/13.

Metals Analysis by Method 6010B:

Samples 1310J74-001B and -002B Cr results were reported as estimated due to suspected matrix interference with sample QC critera below 0.01 mg/L. All associated batch QC were within limits.

Analytical Environmental Services, Inc **Date:** 31-Oct-13

Client:	BROWN AND CALDWELL	**Client Sample ID:**	13296-MW-19
Project Name:	MacGregor Golf	**Collection Date:**	10/23/2013 9:35:00 AM
Lab ID:	1310J74-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C					**(SW3005A)**			
Chromium	0.273	0.0100		mg/L	182712	1	10/25/2013 15:41	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100	H	mg/L	R254673	1	10/24/2013 11:20	AB
Chromium, Hexavalent	0.287	0.0100	H	mg/L	R254673	1	10/24/2013 11:20	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0113	0.0100	H	mg/L	R254723	1	10/24/2013 11:00	AB
Chromium, Hexavalent	0.284	0.0100	H	mg/L	R254723	1	10/24/2013 11:00	AB
METALS, TOTAL SW6010C					**(SW3010A)**			
Chromium	0.296	0.0100		mg/L	182838	1	10/25/2013 12:55	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:** 31-Oct-13

Client:	BROWN AND CALDWELL	**Client Sample ID:**	13296-MW-11
Project Name:	MacGregor Golf	**Collection Date:**	10/23/2013 11:25:00 AM
Lab ID:	1310J74-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C					**(SW3005A)**			
Chromium	0.0473	0.0100		mg/L	182712	1	10/25/2013 15:45	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254673	1	10/24/2013 11:20	AB
Chromium, Hexavalent	0.0465	0.0100		mg/L	R254673	1	10/24/2013 11:20	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254723	1	10/24/2013 11:00	AB
Chromium, Hexavalent	0.0402	0.0100		mg/L	R254723	1	10/24/2013 11:00	AB
METALS, TOTAL SW6010C					**(SW3010A)**			
Chromium	0.0459	0.0100		mg/L	182838	1	10/25/2013 13:06	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:** 31-Oct-13

Client:	BROWN AND CALDWELL	**Client Sample ID:**	13296-MW-24
Project Name:	MacGregor Golf	**Collection Date:**	10/23/2013 4:25:00 PM
Lab ID:	1310J74-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C					**(SW3005A)**			
Chromium	0.0820	0.0100		mg/L	182712	1	10/25/2013 15:48	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254673	1	10/24/2013 11:20	AB
Chromium, Hexavalent	0.0775	0.0100		mg/L	R254673	1	10/24/2013 11:20	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	0.0316	0.0100		mg/L	R254723	1	10/24/2013 11:00	AB
Chromium, Hexavalent	0.0513	0.0100		mg/L	R254723	1	10/24/2013 11:00	AB
METALS, TOTAL SW6010C					**(SW3010A)**			
Chromium	0.0829	0.0100		mg/L	182838	1	10/25/2013 13:10	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 + C Work Order Number 1310J74

Checklist completed by [signature] 10/24/13
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 3.6 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 PT

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: 31-Oct-13

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1310J74

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1310J74-001A	13296-MW-19	10/23/2013 9:35:00AM	Groundwater	TOTAL METALS BY ICP		10/24/2013	10/25/2013
1310J74-001B	13296-MW-19	10/23/2013 9:35:00AM	Groundwater	DISSOLVED METALS BY ICP		10/25/2013	10/25/2013
1310J74-001C	13296-MW-19	10/23/2013 9:35:00AM	Groundwater	Hexavalent Chromium			10/24/2013
1310J74-001D	13296-MW-19	10/23/2013 9:35:00AM	Groundwater	Hexavalent Chromium, Dissolved			10/24/2013
1310J74-002A	13296-MW-11	10/23/2013 11:25:00AM	Groundwater	TOTAL METALS BY ICP		10/24/2013	10/25/2013
1310J74-002B	13296-MW-11	10/23/2013 11:25:00AM	Groundwater	DISSOLVED METALS BY ICP		10/25/2013	10/25/2013
1310J74-002C	13296-MW-11	10/23/2013 11:25:00AM	Groundwater	Hexavalent Chromium			10/24/2013
1310J74-002D	13296-MW-11	10/23/2013 11:25:00AM	Groundwater	Hexavalent Chromium, Dissolved			10/24/2013
1310J74-003A	13296-MW-24	10/23/2013 4:25:00PM	Groundwater	TOTAL METALS BY ICP		10/24/2013	10/25/2013
1310J74-003B	13296-MW-24	10/23/2013 4:25:00PM	Groundwater	DISSOLVED METALS BY ICP		10/25/2013	10/25/2013
1310J74-003C	13296-MW-24	10/23/2013 4:25:00PM	Groundwater	Hexavalent Chromium			10/24/2013
1310J74-003D	13296-MW-24	10/23/2013 4:25:00PM	Groundwater	Hexavalent Chromium, Dissolved			10/24/2013

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1310J74

ANALYTICAL QC SUMMARY REPORT

BatchID: 182712

Sample ID: **MB-182712** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **MBLK** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348353**

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-182712** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **LCS** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348352**

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		104	80	120				

Sample ID: **1310I54-007BMS** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **MS** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348357**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9595	0.0100	1.000		96.0	75	125				

Sample ID: **1310I54-007BMSD** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **MSD** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348359**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9726	0.0100	1.000		97.3	75	125	0.9595	1.35	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: 1310J74

ANALYTICAL QC SUMMARY REPORT

BatchID: 182838

Sample ID: **MB-182838** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254707**
SampleType: **MBLK** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182838** Analysis Date: **10/25/2013** Seq No: **5348270**

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-182838** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254707**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182838** Analysis Date: **10/25/2013** Seq No: **5348268**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9947	0.0100	1.000		99.5	80	120				

Sample ID: **1310I54-001AMS** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254707**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182838** Analysis Date: **10/25/2013** Seq No: **5348280**

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		100	75	125				

Sample ID: **1310I54-001AMSD** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254707**
SampleType: **MSD** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182838** Analysis Date: **10/25/2013** Seq No: **5348281**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.021	0.0100	1.000		102	75	125	1.005	1.68	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: 1310J74

ANALYTICAL QC SUMMARY REPORT

BatchID: **R254673**

Sample ID: **MB-R254673** Client ID: Units: **mg/L** Prep Date: Run No: **254673**
SampleType: **MBLK** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254673** Analysis Date: **10/24/2013** Seq No: **5347312**

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-R254673** Client ID: Units: **mg/L** Prep Date: Run No: **254673**
SampleType: **LCS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254673** Analysis Date: **10/24/2013** Seq No: **5347313**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4670	0.0100	0.5000		93.4	90	110				

Sample ID: **1310K44-003DMS** Client ID: Units: **mg/L** Prep Date: Run No: **254673**
SampleType: **MS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254673** Analysis Date: **10/24/2013** Seq No: **5347323**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4828	0.0100	0.5000		96.6	85	115				

Sample ID: **1310K44-003DMSD** Client ID: Units: **mg/L** Prep Date: Run No: **254673**
SampleType: **MSD** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254673** Analysis Date: **10/24/2013** Seq No: **5347333**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4864	0.0100	0.5000		97.3	85	115	0.4828	0.743	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: 1310J74

ANALYTICAL QC SUMMARY REPORT

BatchID: **R254723**

Sample ID: **MB-R254723** Client ID: Units: **mg/L** Prep Date: Run No: **254723**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254723** Analysis Date: **10/24/2013** Seq No: **5348563**

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-R254723** Client ID: Units: **mg/L** Prep Date: Run No: **254723**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254723** Analysis Date: **10/24/2013** Seq No: **5348564**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4670	0.0100	0.5000		93.4	90	110				

Sample ID: **1310K44-001CMS** Client ID: Units: **mg/L** Prep Date: Run No: **254723**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254723** Analysis Date: **10/24/2013** Seq No: **5348574**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4639	0.0100	0.5000		92.8	85	115				

Sample ID: **1310K44-001CMSD** Client ID: Units: **mg/L** Prep Date: Run No: **254723**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254723** Analysis Date: **10/24/2013** Seq No: **5348575**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4822	0.0100	0.5000		96.4	85	115	0.4639	3.87	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		

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

October 31, 2013

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: 1310K44

Analytical Environmental Services, Inc. received 3 samples on 10/24/2013 1:40:00 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
3785 Presidential Parkway, Atlanta GA 30340-3704
TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1310644

Date: 10-24-13 Page 1 of 1

COMPANY: Brown + Caldwell

ADDRESS: 990 Hammond Dr, Ste 400 Atlanta, Ga 30328

PHONE:

FAX:

SAMPLED BY: George Akala

SIGNATURE: [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)	Total Cr	Dissolved Cr	Hexavalent Cr	Hexa Cr dissolved	VOC								REMARKS	No # of Containers
1	13297-MW-26	10-24-13	0930	X		GW	X	X	X	X									Hold Dissolved Cr	
2	13297-Dup	↓	1200	↓		GW	X	X	X	X									↓	
3	13297-EB	↓	1015	↓		W	X	X	X	X	+								↓	
4	trip blanks	—	—																	
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				

PRESERVATION (See codes)

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: [signature]	1340	Latoya R	10/24/13 1:40pm
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: SEJonea@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: 31-Oct-13

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab ID: 1310K44

Case Narrative

Client did not send any vial for sample 1310k44-003 as indicated on the COC. Vials were trip blanks

Dissolved analysis run per Sarah Jones 10/24.

Analytical Environmental Services, Inc **Date:** 31-Oct-13

Client:	BROWN AND CALDWELL	**Client Sample ID:**	13297-MW-26
Project Name:	MacGregor Golf	**Collection Date:**	10/24/2013 9:30:00 AM
Lab ID:	1310K44-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C					**(SW3005A)**			
Chromium	BRL	0.0100		mg/L	182712	1	10/25/2013 15:52	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254673	1	10/24/2013 14:00	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R254673	1	10/24/2013 14:00	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254723	1	10/24/2013 11:00	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R254723	1	10/24/2013 11:00	AB
METALS, TOTAL SW6010C					**(SW3010A)**			
Chromium	BRL	0.0100		mg/L	182838	1	10/28/2013 15:17	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:** 31-Oct-13

Client:	BROWN AND CALDWELL	**Client Sample ID:**	13297-DUP
Project Name:	MacGregor Golf	**Collection Date:**	10/24/2013 12:00:00 PM
Lab ID:	1310K44-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C					**(SW3005A)**			
Chromium	BRL	0.0100		mg/L	182712	1	10/25/2013 15:55	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254673	1	10/24/2013 14:00	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R254673	1	10/24/2013 14:00	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254723	1	10/24/2013 11:00	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R254723	1	10/24/2013 11:00	AB
METALS, TOTAL SW6010C					**(SW3010A)**			
Chromium	BRL	0.0100		mg/L	182838	1	10/28/2013 15:20	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 **Date:** 31-Oct-13

Client:	BROWN AND CALDWELL	**Client Sample ID:**	13297-EB
Project Name:	MacGregor Golf	**Collection Date:**	10/24/2013 10:15:00 AM
Lab ID:	1310K44-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C					**(SW3005A)**			
Chromium	BRL	0.0100		mg/L	182712	1	10/25/2013 15:59	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254673	1	10/24/2013 14:00	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R254673	1	10/24/2013 14:00	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254723	1	10/24/2013 11:00	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R254723	1	10/24/2013 11:00	AB
METALS, TOTAL SW6010C					**(SW3010A)**			
Chromium	BRL	0.0100		mg/L	182838	1	10/28/2013 15:24	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 1310K44

Checklist completed by [signature] 10/24/13
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 3.6 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 [initials]

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: 31-Oct-13

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1310K44

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1310K44-001A	13297-MW-26	10/24/2013 9:30:00AM	Groundwater	TOTAL METALS BY ICP		10/25/2013	10/28/2013
1310K44-001B	13297-MW-26	10/24/2013 9:30:00AM	Groundwater	DISSOLVED METALS BY ICP		10/25/2013	10/25/2013
1310K44-001C	13297-MW-26	10/24/2013 9:30:00AM	Groundwater	Hexavalent Chromium			10/24/2013
1310K44-001D	13297-MW-26	10/24/2013 9:30:00AM	Groundwater	Hexavalent Chromium, Dissolved			10/24/2013
1310K44-002A	13297-DUP	10/24/2013 12:00:00PM	Groundwater	TOTAL METALS BY ICP		10/25/2013	10/28/2013
1310K44-002B	13297-DUP	10/24/2013 12:00:00PM	Groundwater	DISSOLVED METALS BY ICP		10/25/2013	10/25/2013
1310K44-002C	13297-DUP	10/24/2013 12:00:00PM	Groundwater	Hexavalent Chromium			10/24/2013
1310K44-002D	13297-DUP	10/24/2013 12:00:00PM	Groundwater	Hexavalent Chromium, Dissolved			10/24/2013
1310K44-003A	13297-EB	10/24/2013 10:15:00AM	Aqueous	TOTAL METALS BY ICP		10/25/2013	10/28/2013
1310K44-003B	13297-EB	10/24/2013 10:15:00AM	Aqueous	DISSOLVED METALS BY ICP		10/25/2013	10/25/2013
1310K44-003C	13297-EB	10/24/2013 10:15:00AM	Aqueous	Hexavalent Chromium			10/24/2013
1310K44-003D	13297-EB	10/24/2013 10:15:00AM	Aqueous	Hexavalent Chromium, Dissolved			10/24/2013

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1310K44

ANALYTICAL QC SUMMARY REPORT

BatchID: 182712

Sample ID: **MB-182712** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **MBLK** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348353**

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-182712** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **LCS** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348352**

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		104	80	120				

Sample ID: **1310I54-007BMS** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **MS** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348357**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9595	0.0100	1.000		96.0	75	125				

Sample ID: **1310I54-007BMSD** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **MSD** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348359**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9726	0.0100	1.000		97.3	75	125	0.9595	1.35	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: 1310K44

ANALYTICAL QC SUMMARY REPORT

BatchID: 182838

Sample ID: **MB-182838** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254707**
SampleType: **MBLK** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182838** Analysis Date: **10/25/2013** Seq No: **5348270**

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-182838** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254707**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182838** Analysis Date: **10/25/2013** Seq No: **5348268**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9947	0.0100	1.000		99.5	80	120				

Sample ID: **1310I54-001AMS** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254707**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182838** Analysis Date: **10/25/2013** Seq No: **5348280**

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		100	75	125				

Sample ID: **1310I54-001AMSD** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254707**
SampleType: **MSD** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182838** Analysis Date: **10/25/2013** Seq No: **5348281**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.021	0.0100	1.000		102	75	125	1.005	1.68	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: 1310K44

ANALYTICAL QC SUMMARY REPORT

BatchID: R254673

Sample ID: **MB-R254673** Client ID: Units: **mg/L** Prep Date: Run No: **254673**
SampleType: **MBLK** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254673** Analysis Date: **10/24/2013** Seq No: **5347312**

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-R254673** Client ID: Units: **mg/L** Prep Date: Run No: **254673**
SampleType: **LCS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254673** Analysis Date: **10/24/2013** Seq No: **5347313**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4670	0.0100	0.5000		93.4	90	110				

Sample ID: **1310K44-003DMS** Client ID: **13297-EB** Units: **mg/L** Prep Date: Run No: **254673**
SampleType: **MS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254673** Analysis Date: **10/24/2013** Seq No: **5347323**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4828	0.0100	0.5000		96.6	85	115				

Sample ID: **1310K44-003DMSD** Client ID: **13297-EB** Units: **mg/L** Prep Date: Run No: **254673**
SampleType: **MSD** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254673** Analysis Date: **10/24/2013** Seq No: **5347333**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4864	0.0100	0.5000		97.3	85	115	0.4828	0.743	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: 1310K44

ANALYTICAL QC SUMMARY REPORT

BatchID: **R254723**

Sample ID: **MB-R254723** Client ID: Units: **mg/L** Prep Date: Run No: **254723**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254723** Analysis Date: **10/24/2013** Seq No: **5348563**

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-R254723** Client ID: Units: **mg/L** Prep Date: Run No: **254723**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254723** Analysis Date: **10/24/2013** Seq No: **5348564**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4670	0.0100	0.5000		93.4	90	110				

Sample ID: **1310K44-001CMS** Client ID: **13297-MW-26** Units: **mg/L** Prep Date: Run No: **254723**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254723** Analysis Date: **10/24/2013** Seq No: **5348574**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4639	0.0100	0.5000		92.8	85	115				

Sample ID: **1310K44-001CMSD** Client ID: **13297-MW-26** Units: **mg/L** Prep Date: Run No: **254723**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254723** Analysis Date: **10/24/2013** Seq No: **5348575**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4822	0.0100	0.5000		96.4	85	115	0.4639	3.87	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		

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

October 29, 2013

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: 1310I53

Analytical Environmental Services, Inc. received 3 samples on 10/23/2013 10:20:00 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: 1310I53

Date: 10-22-13 Page 1 of 1

COMPANY: Brown + Caldwell

ADDRESS: 990 Hammond Drive Ste 400 Atlanta, Ga 30328

PHONE:

FAX:

SAMPLED BY: George Micala IV

SIGNATURE: George Micala IV

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)	Total Cr	Dissolved Cr	Hexavalent Cr	Hexa. Cr dissolved	VOCs	Total Ni	Dissolved Nickel								No # of Containers	REMARKS
							PRESERVATION (See codes)															
							HNO3 HE	I	I	I												
1	13295-MW-23	10/22/13	1240	X		GW	X	X	X	X											4	Hold Dissolved
2	13295 MW-4	10/22/13	~~1630~~	X		↓	X	X	X	X	X	X	X								6	↓
3	~~Trip Blanks~~	—	1455↑																			Sample 13295-MW-4
4	trip blanks	—	—	X		W					X											at 1455
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: George Micala IV	10-22-13 1630	1: [illegible]	10/23/13
2:		2:	10:20
3:		3:	

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
- ✓ 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: Hexavalent Cr + Trivalent Cr for Sam Analysis "Hexavalent Cr"

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: 29-Oct-13

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab ID: 1310I53

Case Narrative

Proceed with dissolved analysis per Sarah Jones 10/23/13

Analytical Environmental Services, Inc **Date:** 29-Oct-13

Client:	BROWN AND CALDWELL	**Client Sample ID:**	13295-MW-23
Project Name:	MacGregor Golf	**Collection Date:**	10/22/2013 12:40:00 PM
Lab ID:	1310I53-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C					**(SW3005A)**			
Chromium	BRL	0.0100		mg/L	182712	1	10/25/2013 14:17	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254503	1	10/23/2013 11:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R254503	1	10/23/2013 11:15	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254500	1	10/23/2013 11:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R254500	1	10/23/2013 11:15	AB
METALS, TOTAL SW6010C					**(SW3010A)**			
Chromium	BRL	0.0100		mg/L	182804	1	10/24/2013 20:40	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:** 29-Oct-13

Client:	BROWN AND CALDWELL	**Client Sample ID:**	13295 MW-4
Project Name:	MacGregor Golf	**Collection Date:**	10/22/2013 2:55:00 PM
Lab ID:	1310I53-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,1,2-Trichloroethane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,1-Dichloroethane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,1-Dichloroethene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,2-Dibromoethane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,2-Dichlorobenzene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,2-Dichloroethane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,2-Dichloropropane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,3-Dichlorobenzene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
1,4-Dichlorobenzene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
2-Butanone	BRL	50		ug/L	182829	1	10/24/2013 20:24	AK
2-Hexanone	BRL	10		ug/L	182829	1	10/24/2013 20:24	AK
4-Methyl-2-pentanone	BRL	10		ug/L	182829	1	10/24/2013 20:24	AK
Acetone	BRL	50		ug/L	182829	1	10/24/2013 20:24	AK
Benzene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Bromodichloromethane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Bromoform	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Bromomethane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Carbon disulfide	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Carbon tetrachloride	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Chlorobenzene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Chloroethane	BRL	10		ug/L	182829	1	10/24/2013 20:24	AK
Chloroform	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Chloromethane	BRL	10		ug/L	182829	1	10/24/2013 20:24	AK
cis-1,2-Dichloroethene	380	50		ug/L	182829	10	10/25/2013 10:31	AK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Cyclohexane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Dibromochloromethane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Dichlorodifluoromethane	BRL	10		ug/L	182829	1	10/24/2013 20:24	AK
Ethylbenzene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Freon-113	BRL	10		ug/L	182829	1	10/24/2013 20:24	AK
Isopropylbenzene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
m,p-Xylene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Methyl acetate	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Methyl tert-butyl ether	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Methylcyclohexane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Methylene chloride	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
o-Xylene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK

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:** 29-Oct-13

Client:	BROWN AND CALDWELL	**Client Sample ID:**	13295 MW-4
Project Name:	MacGregor Golf	**Collection Date:**	10/22/2013 2:55:00 PM
Lab ID:	1310I53-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Tetrachloroethene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Toluene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Trichloroethene	120	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Trichlorofluoromethane	BRL	5.0		ug/L	182829	1	10/24/2013 20:24	AK
Vinyl chloride	15	2.0		ug/L	182829	1	10/24/2013 20:24	AK
Surr: 4-Bromofluorobenzene	81.4	66.2-120		%REC	182829	1	10/24/2013 20:24	AK
Surr: 4-Bromofluorobenzene	82.2	66.2-120		%REC	182829	10	10/25/2013 10:31	AK
Surr: Dibromofluoromethane	105	79.5-121		%REC	182829	1	10/24/2013 20:24	AK
Surr: Dibromofluoromethane	105	79.5-121		%REC	182829	10	10/25/2013 10:31	AK
Surr: Toluene-d8	97.4	77-117		%REC	182829	10	10/25/2013 10:31	AK
Surr: Toluene-d8	98.4	77-117		%REC	182829	1	10/24/2013 20:24	AK
METALS, DISSOLVED SW6010C				**(SW3005A)**				
Chromium	BRL	0.0100		mg/L	182712	1	10/25/2013 14:20	JL
Nickel	0.200	0.0200		mg/L	182712	1	10/25/2013 14:20	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254503	1	10/23/2013 11:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R254503	1	10/23/2013 11:15	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R254500	1	10/23/2013 11:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R254500	1	10/23/2013 11:15	AB
METALS, TOTAL SW6010C				**(SW3010A)**				
Chromium	BRL	0.0100		mg/L	182804	1	10/24/2013 20:44	JL
Nickel	0.203	0.0200		mg/L	182804	1	10/24/2013 20:44	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: 29-Oct-13

Client:	BROWN AND CALDWELL	**Client Sample ID:**	TRIP BLANKS
Project Name:	MacGregor Golf	**Collection Date:**	10/23/2013
Lab ID:	1310I53-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,1-Dichloroethane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,1-Dichloroethene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,2-Dibromoethane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,2-Dichloroethane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,2-Dichloropropane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
2-Butanone	BRL	50		ug/L	182829	1	10/25/2013 15:05	NP
2-Hexanone	BRL	10		ug/L	182829	1	10/25/2013 15:05	NP
4-Methyl-2-pentanone	BRL	10		ug/L	182829	1	10/25/2013 15:05	NP
Acetone	BRL	50		ug/L	182829	1	10/25/2013 15:05	NP
Benzene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Bromodichloromethane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Bromoform	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Bromomethane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Carbon disulfide	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Carbon tetrachloride	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Chlorobenzene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Chloroethane	BRL	10		ug/L	182829	1	10/25/2013 15:05	NP
Chloroform	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Chloromethane	BRL	10		ug/L	182829	1	10/25/2013 15:05	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Cyclohexane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Dibromochloromethane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Dichlorodifluoromethane	BRL	10		ug/L	182829	1	10/25/2013 15:05	NP
Ethylbenzene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Freon-113	BRL	10		ug/L	182829	1	10/25/2013 15:05	NP
Isopropylbenzene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
m,p-Xylene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Methyl acetate	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Methylcyclohexane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Methylene chloride	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
o-Xylene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP

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:** 29-Oct-13

Client:	BROWN AND CALDWELL	**Client Sample ID:**	TRIP BLANKS
Project Name:	MacGregor Golf	**Collection Date:**	10/23/2013
Lab ID:	1310I53-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Tetrachloroethene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Toluene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Trichloroethene	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Trichlorofluoromethane	BRL	5.0		ug/L	182829	1	10/25/2013 15:05	NP
Vinyl chloride	BRL	2.0		ug/L	182829	1	10/25/2013 15:05	NP
Surr: 4-Bromofluorobenzene	78.3	66.2-120		%REC	182829	1	10/25/2013 15:05	NP
Surr: Dibromofluoromethane	107	79.5-121		%REC	182829	1	10/25/2013 15:05	NP
Surr: Toluene-d8	98.2	77-117		%REC	182829	1	10/25/2013 15:05	NP

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 + C. Work Order Number 1310I53

Checklist completed by [signature] 10/23/13
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 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 PT

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: 29-Oct-13

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1310I53

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1310I53-001A	13295-MW-23	10/22/2013 12:40:00PM	Groundwater	TOTAL METALS BY ICP		10/24/2013	10/24/2013
1310I53-001B	13295-MW-23	10/22/2013 12:40:00PM	Groundwater	DISSOLVED METALS BY ICP		10/25/2013	10/25/2013
1310I53-001C	13295-MW-23	10/22/2013 12:40:00PM	Groundwater	Hexavalent Chromium			10/23/2013
1310I53-001D	13295-MW-23	10/22/2013 12:40:00PM	Groundwater	Hexavalent Chromium, Dissolved			10/23/2013
1310I53-002A	13295 MW-4	10/22/2013 2:55:00PM	Groundwater	TCL VOLATILE ORGANICS		10/24/2013	10/24/2013
1310I53-002A	13295 MW-4	10/22/2013 2:55:00PM	Groundwater	TCL VOLATILE ORGANICS		10/24/2013	10/25/2013
1310I53-002B	13295 MW-4	10/22/2013 2:55:00PM	Groundwater	TOTAL METALS BY ICP		10/24/2013	10/24/2013
1310I53-002C	13295 MW-4	10/22/2013 2:55:00PM	Groundwater	DISSOLVED METALS BY ICP		10/25/2013	10/25/2013
1310I53-002D	13295 MW-4	10/22/2013 2:55:00PM	Groundwater	Hexavalent Chromium			10/23/2013
1310I53-002E	13295 MW-4	10/22/2013 2:55:00PM	Groundwater	Hexavalent Chromium, Dissolved			10/23/2013
1310I53-003A	TRIP BLANKS	10/23/2013 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		10/24/2013	10/25/2013

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1310I53

ANALYTICAL QC SUMMARY REPORT

BatchID: **182712**

Sample ID: **MB-182712** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **MBLK** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348353**

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									
Nickel	BRL	0.0200									

Sample ID: **LCS-182712** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **LCS** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348352**

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		104	80	120				
Nickel	1.046	0.0200	1.000		105	80	120				

Sample ID: **1310I54-007BMS** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **MS** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348357**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9595	0.0100	1.000		96.0	75	125				
Nickel	0.9798	0.0200	1.000	0.02562	95.4	75	125				

Sample ID: **1310I54-007BMSD** Client ID: Units: **mg/L** Prep Date: **10/25/2013** Run No: **254711**
SampleType: **MSD** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **182712** Analysis Date: **10/25/2013** Seq No: **5348359**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9726	0.0100	1.000		97.3	75	125	0.9595	1.35	20	
Nickel	0.9912	0.0200	1.000	0.02562	96.6	75	125	0.9798	1.15	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: 1310I53

ANALYTICAL QC SUMMARY REPORT

BatchID: 182804

Sample ID: **MB-182804** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254619**
SampleType: **MBLK** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182804** Analysis Date: **10/24/2013** Seq No: **5346231**

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									
Nickel	BRL	0.0200									

Sample ID: **LCS-182804** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254619**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182804** Analysis Date: **10/24/2013** Seq No: **5346228**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.046	0.0100	1.000		105	80	120				
Nickel	1.034	0.0200	1.000		103	80	120				

Sample ID: **1310I10-001AMS** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254619**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182804** Analysis Date: **10/24/2013** Seq No: **5346236**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.061	0.0100	1.000		106	75	125				
Nickel	1.044	0.0200	1.000		104	75	125				

Sample ID: **1310I10-001AMSD** Client ID: Units: **mg/L** Prep Date: **10/24/2013** Run No: **254619**
SampleType: **MSD** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **182804** Analysis Date: **10/24/2013** Seq No: **5346238**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.050	0.0100	1.000		105	75	125	1.061	1.08	20	
Nickel	1.018	0.0200	1.000		102	75	125	1.044	2.54	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		

Analytical Environmental Services, Inc

Date: 29-Oct-13

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1310I53

ANALYTICAL QC SUMMARY REPORT

BatchID: 182829

Sample ID: **MB-182829** Client ID: Units: **ug/L** Prep Date: **10/24/2013** Run No: **254514**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **182829** Analysis Date: **10/24/2013** Seq No: **5344113**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

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: 1310I53

ANALYTICAL QC SUMMARY REPORT

BatchID: 182829

Sample ID: **MB-182829** Client ID: Units: **ug/L** Prep Date: **10/24/2013** Run No: **254514**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **182829** Analysis Date: **10/24/2013** Seq No: **5344113**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	42.91	0	50.00		85.8	66.2	120				
Surr: Dibromofluoromethane	50.31	0	50.00		101	79.5	121				
Surr: Toluene-d8	48.02	0	50.00		96.0	77	117				

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: 1310I53

ANALYTICAL QC SUMMARY REPORT

BatchID: 182829

Sample ID: **LCS-182829** Client ID: Units: **ug/L** Prep Date: **10/24/2013** Run No: **254514**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **182829** Analysis Date: **10/24/2013** Seq No: **5344115**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	61.89	5.0	50.00		124	63.1	140				
Benzene	52.93	5.0	50.00		106	74.2	129				
Chlorobenzene	55.06	5.0	50.00		110	70	129				
Toluene	54.30	5.0	50.00		109	74.2	129				
Trichloroethene	61.85	5.0	50.00		124	71.2	135				
Surr: 4-Bromofluorobenzene	52.42	0	50.00		105	66.2	120				
Surr: Dibromofluoromethane	52.07	0	50.00		104	79.5	121				
Surr: Toluene-d8	48.72	0	50.00		97.4	77	117				

Sample ID: **1310I60-006AMS** Client ID: Units: **ug/L** Prep Date: **10/24/2013** Run No: **254514**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **182829** Analysis Date: **10/24/2013** Seq No: **5345158**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	757.1	50	500.0		151	60.2	159				
Benzene	579.0	50	500.0		116	70.2	138				
Chlorobenzene	570.8	50	500.0		114	70.1	133				
Toluene	594.1	50	500.0		119	70	139				
Trichloroethene	657.2	50	500.0		131	70.1	144				
Surr: 4-Bromofluorobenzene	514.3	0	500.0		103	66.2	120				
Surr: Dibromofluoromethane	540.4	0	500.0		108	79.5	121				
Surr: Toluene-d8	508.3	0	500.0		102	77	117				

Sample ID: **1310I60-006AMSD** Client ID: Units: **ug/L** Prep Date: **10/24/2013** Run No: **254514**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **182829** Analysis Date: **10/24/2013** Seq No: **5345159**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	703.1	50	500.0		141	60.2	159	757.1	7.40	19.2	
Benzene	563.2	50	500.0		113	70.2	138	579.0	2.77	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		

Analytical Environmental Services, Inc

Date: 29-Oct-13

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1310I53

ANALYTICAL QC SUMMARY REPORT

BatchID: 182829

Sample ID: **1310I60-006AMSD** Client ID: Units: **ug/L** Prep Date: **10/24/2013** Run No: **254514**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **182829** Analysis Date: **10/24/2013** Seq No: **5345159**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	561.0	50	500.0		112	70.1	133	570.8	1.73	20	
Toluene	585.9	50	500.0		117	70	139	594.1	1.39	20	
Trichloroethene	651.2	50	500.0		130	70.1	144	657.2	0.917	20	
Surr: 4-Bromofluorobenzene	517.4	0	500.0		103	66.2	120	514.3	0	0	
Surr: Dibromofluoromethane	546.7	0	500.0		109	79.5	121	540.4	0	0	
Surr: Toluene-d8	514.7	0	500.0		103	77	117	508.3	0	0	

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: 1310I53

ANALYTICAL QC SUMMARY REPORT

BatchID: **R254500**

Sample ID: **MB-R254500** Client ID: Units: **mg/L** Prep Date: Run No: **254500**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254500** Analysis Date: **10/23/2013** Seq No: **5343698**

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-R254500** Client ID: Units: **mg/L** Prep Date: Run No: **254500**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254500** Analysis Date: **10/23/2013** Seq No: **5343699**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4665	0.0100	0.5000		93.3	90	110				

Sample ID: **1310I53-001CMS** Client ID: **13295-MW-23** Units: **mg/L** Prep Date: Run No: **254500**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254500** Analysis Date: **10/23/2013** Seq No: **5343703**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4745	0.0100	0.5000	0.003000	94.3	85	115				

Sample ID: **1310I53-001CMSD** Client ID: **13295-MW-23** Units: **mg/L** Prep Date: Run No: **254500**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R254500** Analysis Date: **10/23/2013** Seq No: **5343704**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4912	0.0100	0.5000	0.003000	97.6	85	115	0.4745	3.46	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: 1310I53

ANALYTICAL QC SUMMARY REPORT

BatchID: **R254503**

Sample ID: **MB-R254503** Client ID: Units: **mg/L** Prep Date: Run No: **254503**
SampleType: **MBLK** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254503** Analysis Date: **10/23/2013** Seq No: **5343761**

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-R254503** Client ID: Units: **mg/L** Prep Date: Run No: **254503**
SampleType: **LCS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254503** Analysis Date: **10/23/2013** Seq No: **5343762**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4665	0.0100	0.5000		93.3	90	110				

Sample ID: **1310I53-001DMS** Client ID: **13295-MW-23** Units: **mg/L** Prep Date: Run No: **254503**
SampleType: **MS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254503** Analysis Date: **10/23/2013** Seq No: **5343766**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4838	0.0100	0.5000		96.8	85	115				

Sample ID: **1310I53-001DMSD** Client ID: **13295-MW-23** Units: **mg/L** Prep Date: Run No: **254503**
SampleType: **MSD** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R254503** Analysis Date: **10/23/2013** Seq No: **5343768**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4980	0.0100	0.5000		99.6	85	115	0.4838	2.89	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		

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

January 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: 1401392

Analytical Environmental Services, Inc. received 3 samples on 1/8/2014 2:55:00 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

3785 PRESIDENTIAL PARKWAY • ATLANTA, GEORGIA 30340 • TEL: (770) 457-8177 • FAX: (770)457-8188

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: 1401392

Date: 1-7-14 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Dr Ste 400 Atlanta GA 30328

PHONE:

FAX:

SAMPLED BY: Brian Steele

SIGNATURE:

ANALYSIS REQUESTED: VOCs; Total Cr; Dissolved Cr; Hex/Tri Cr; Dissolved Hex Tri Cr

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)	VOCs	Total Cr	Dissolved Cr	Hex/Tri Cr	Dissolved Hex Tri Cr	REMARKS	No # of Containers
							PRESERVATION (See codes)						
							HCl	HNO3	NA	NA	NA		
1	14007-MW-4	1-7-14	1300	X		GW	X						2
2	14007-MW-11	1-7-14	1540	X		GW		X	X	X	X	Short Hold time	3
3	Trip Blank	—	—	X		W	X						2
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	1-7-13 1800	1:	1/8/14
2:		2:	14:55
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS: Short hold time for dissolved Cr, + Hex Cr. Lab to filter.

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER

PROJECT INFORMATION
PROJECT NAME: MacGregor Golf
PROJECT #: 143327
SITE ADDRESS: Albany GA
SEND REPORT TO: SJones@brwncald.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers: 7

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 SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC AES WILL PROCEED AS STANDARD TAT.
SAMPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT 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: 1401392

Case Narrative

Hexavalent Chromium Analysis by Method 7196_W and 7196_W_D:

Please note the Hexavalent Chromium value is reported as greater than Total Chromium value for sample 1401392-002C. The values are within the expected reproducibility limits for the test methods used and the results are suspected to be due to differences between the sample aliquots used for analysis. The data indicates that all Chromium present is in the Hexavalent oxidation state.

Analytical Environmental Services, Inc **Date:** 10-Jan-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14007-MW-4
Project Name:	MacGregor Golf	**Collection Date:**	1/7/2014 1:00:00 PM
Lab ID:	1401392-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,1,2-Trichloroethane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,1-Dichloroethane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,1-Dichloroethene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,2-Dibromoethane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,2-Dichlorobenzene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,2-Dichloroethane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,2-Dichloropropane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,3-Dichlorobenzene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
1,4-Dichlorobenzene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
2-Butanone	BRL	50		ug/L	185714	1	01/09/2014 13:28	AK
2-Hexanone	BRL	10		ug/L	185714	1	01/09/2014 13:28	AK
4-Methyl-2-pentanone	BRL	10		ug/L	185714	1	01/09/2014 13:28	AK
Acetone	BRL	50		ug/L	185714	1	01/09/2014 13:28	AK
Benzene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Bromodichloromethane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Bromoform	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Bromomethane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Carbon disulfide	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Carbon tetrachloride	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Chlorobenzene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Chloroethane	BRL	10		ug/L	185714	1	01/09/2014 13:28	AK
Chloroform	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Chloromethane	BRL	10		ug/L	185714	1	01/09/2014 13:28	AK
cis-1,2-Dichloroethene	290	50		ug/L	185714	10	01/10/2014 09:45	AK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Cyclohexane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Dibromochloromethane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Dichlorodifluoromethane	BRL	10		ug/L	185714	1	01/09/2014 13:28	AK
Ethylbenzene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Freon-113	BRL	10		ug/L	185714	1	01/09/2014 13:28	AK
Isopropylbenzene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
m,p-Xylene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Methyl acetate	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Methyl tert-butyl ether	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Methylcyclohexane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Methylene chloride	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
o-Xylene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK

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-Jan-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14007-MW-4
Project Name:	MacGregor Golf	**Collection Date:**	1/7/2014 1:00:00 PM
Lab ID:	1401392-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Tetrachloroethene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Toluene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Trichloroethene	97	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Trichlorofluoromethane	BRL	5.0		ug/L	185714	1	01/09/2014 13:28	AK
Vinyl chloride	11	2.0		ug/L	185714	1	01/09/2014 13:28	AK
Surr: 4-Bromofluorobenzene	90.2	66.2-120		%REC	185714	10	01/10/2014 09:45	AK
Surr: 4-Bromofluorobenzene	92.3	66.2-120		%REC	185714	1	01/09/2014 13:28	AK
Surr: Dibromofluoromethane	99.1	79.5-121		%REC	185714	1	01/09/2014 13:28	AK
Surr: Dibromofluoromethane	107	79.5-121		%REC	185714	10	01/10/2014 09:45	AK
Surr: Toluene-d8	95	77-117		%REC	185714	10	01/10/2014 09:45	AK
Surr: Toluene-d8	92.5	77-117		%REC	185714	1	01/09/2014 13:28	AK

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-Jan-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14007-MW-11
Project Name:	MacGregor Golf	**Collection Date:**	1/7/2014 3:40:00 PM
Lab ID:	1401392-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C					**(SW3005A)**			
Chromium	0.0332	0.0100		mg/L	185704	1	01/08/2014 17:25	TA
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R259271	1	01/08/2014 15:00	KB
Chromium, Hexavalent	0.0335	0.0100		mg/L	R259271	1	01/08/2014 15:00	KB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R259273	1	01/08/2014 15:00	KB
Chromium, Hexavalent	0.0351	0.0100		mg/L	R259273	1	01/08/2014 15:00	KB
METALS, TOTAL SW6010C					**(SW3010A)**			
Chromium	0.0319	0.0100		mg/L	185676	1	01/09/2014 13:17	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:** 10-Jan-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	TRIP BLANK
Project Name:	MacGregor Golf	**Collection Date:**	1/8/2014
Lab ID:	1401392-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,1,2-Trichloroethane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,1-Dichloroethane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,1-Dichloroethene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,2-Dibromoethane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,2-Dichlorobenzene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,2-Dichloroethane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,2-Dichloropropane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,3-Dichlorobenzene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
1,4-Dichlorobenzene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
2-Butanone	BRL	50		ug/L	185714	1	01/09/2014 10:38	AK
2-Hexanone	BRL	10		ug/L	185714	1	01/09/2014 10:38	AK
4-Methyl-2-pentanone	BRL	10		ug/L	185714	1	01/09/2014 10:38	AK
Acetone	BRL	50		ug/L	185714	1	01/09/2014 10:38	AK
Benzene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Bromodichloromethane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Bromoform	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Bromomethane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Carbon disulfide	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Carbon tetrachloride	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Chlorobenzene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Chloroethane	BRL	10		ug/L	185714	1	01/09/2014 10:38	AK
Chloroform	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Chloromethane	BRL	10		ug/L	185714	1	01/09/2014 10:38	AK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Cyclohexane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Dibromochloromethane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Dichlorodifluoromethane	BRL	10		ug/L	185714	1	01/09/2014 10:38	AK
Ethylbenzene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Freon-113	BRL	10		ug/L	185714	1	01/09/2014 10:38	AK
Isopropylbenzene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
m,p-Xylene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Methyl acetate	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Methyl tert-butyl ether	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Methylcyclohexane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Methylene chloride	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
o-Xylene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK

Qualifiers:

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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-Jan-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	TRIP BLANK
Project Name:	MacGregor Golf	**Collection Date:**	1/8/2014
Lab ID:	1401392-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Tetrachloroethene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Toluene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Trichloroethene	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Trichlorofluoromethane	BRL	5.0		ug/L	185714	1	01/09/2014 10:38	AK
Vinyl chloride	BRL	2.0		ug/L	185714	1	01/09/2014 10:38	AK
Surr: 4-Bromofluorobenzene	92.4	66.2-120		%REC	185714	1	01/09/2014 10:38	AK
Surr: Dibromofluoromethane	99.7	79.5-121		%REC	185714	1	01/09/2014 10:38	AK
Surr: Toluene-d8	93.3	77-117		%REC	185714	1	01/09/2014 10:38	AK

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 + C. Work Order Number 1401392

Checklist completed by PL 1/8/14
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 3.3 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 PT

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-Jan-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1401392

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1401392-001A	14007-MW-4	1/7/2014 1:00:00PM	Groundwater	TCL VOLATILE ORGANICS		01/08/2014	01/09/2014
1401392-001A	14007-MW-4	1/7/2014 1:00:00PM	Groundwater	TCL VOLATILE ORGANICS		01/08/2014	01/10/2014
1401392-002A	14007-MW-11	1/7/2014 3:40:00PM	Groundwater	TOTAL METALS BY ICP		01/09/2014	01/09/2014
1401392-002B	14007-MW-11	1/7/2014 3:40:00PM	Groundwater	DISSOLVED METALS BY ICP		01/08/2014	01/08/2014
1401392-002C	14007-MW-11	1/7/2014 3:40:00PM	Groundwater	Hexavalent Chromium			01/08/2014
1401392-002C	14007-MW-11	1/7/2014 3:40:00PM	Groundwater	Hexavalent Chromium, Dissolved			01/08/2014
1401392-003A	TRIP BLANK	1/8/2014 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		01/08/2014	01/09/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1401392

ANALYTICAL QC SUMMARY REPORT

BatchID: 185676

Sample ID: **MB-185676** Client ID: Units: **mg/L** Prep Date: **01/08/2014** Run No: **259239**
SampleType: **MBLK** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **185676** Analysis Date: **01/08/2014** Seq No: **5449334**

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-185676** Client ID: Units: **mg/L** Prep Date: **01/08/2014** Run No: **259239**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **185676** Analysis Date: **01/08/2014** Seq No: **5449332**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.036	0.0100	1.000		104	80	120				

Sample ID: **1401284-050AMS** Client ID: Units: **mg/L** Prep Date: **01/08/2014** Run No: **259239**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **185676** Analysis Date: **01/08/2014** Seq No: **5449341**

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				

Sample ID: **1401284-050AMSD** Client ID: Units: **mg/L** Prep Date: **01/08/2014** Run No: **259239**
SampleType: **MSD** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **185676** Analysis Date: **01/08/2014** Seq No: **5449344**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.015	0.0100	1.000		101	75	125	1.029	1.43	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: 1401392

ANALYTICAL QC SUMMARY REPORT

BatchID: 185704

Sample ID: **MB-185704** Client ID: Units: **mg/L** Prep Date: **01/08/2014** Run No: **259206**
SampleType: **MBLK** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **185704** Analysis Date: **01/08/2014** Seq No: **5449129**

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-185704** Client ID: Units: **mg/L** Prep Date: **01/08/2014** Run No: **259206**
SampleType: **LCS** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **185704** Analysis Date: **01/08/2014** Seq No: **5449128**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.006	0.0100	1.000		101	80	120				

Sample ID: **1401153-011CMS** Client ID: **MW** Units: **mg/L** Prep Date: **01/08/2014** Run No: **259206**
SampleType: **MS** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **185704** Analysis Date: **01/08/2014** Seq No: **5449131**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	1.066	0.0100	1.000		107	75	125				

Sample ID: **1401153-011CMSD** Client ID: **MW** Units: **mg/L** Prep Date: **01/08/2014** Run No: **259206**
SampleType: **MSD** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **185704** Analysis Date: **01/08/2014** Seq No: **5449133**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9928	0.0100	1.000		99.3	75	125	1.066	7.07	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		

Analytical Environmental Services, Inc

Date: 10-Jan-14

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1401392

ANALYTICAL QC SUMMARY REPORT

BatchID: 185714

Sample ID: **MB-185714** Client ID: Units: **ug/L** Prep Date: **01/08/2014** Run No: **259172**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **185714** Analysis Date: **01/08/2014** Seq No: **5448437**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

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: 1401392

ANALYTICAL QC SUMMARY REPORT

BatchID: 185714

Sample ID: **MB-185714** Client ID: Units: **ug/L** Prep Date: **01/08/2014** Run No: **259172**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **185714** Analysis Date: **01/08/2014** Seq No: **5448437**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	47.06	0	50.00		94.1	66.2	120				
Surr: Dibromofluoromethane	49.40	0	50.00		98.8	79.5	121				
Surr: Toluene-d8	46.36	0	50.00		92.7	77	117				

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: 1401392

ANALYTICAL QC SUMMARY REPORT

BatchID: 185714

Sample ID: **LCS-185714** Client ID: Units: **ug/L** Prep Date: **01/08/2014** Run No: **259172**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **185714** Analysis Date: **01/08/2014** Seq No: **5448439**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	38.06	5.0	50.00		76.1	63.1	140				
Benzene	39.55	5.0	50.00		79.1	74.2	129				
Chlorobenzene	44.17	5.0	50.00		88.3	70	129				
Toluene	41.76	5.0	50.00		83.5	74.2	129				
Trichloroethene	42.06	5.0	50.00		84.1	71.2	135				
Surr: 4-Bromofluorobenzene	50.21	0	50.00		100	66.2	120				
Surr: Dibromofluoromethane	48.16	0	50.00		96.3	79.5	121				
Surr: Toluene-d8	47.75	0	50.00		95.5	77	117				

Sample ID: **1401322-001AMS** Client ID: Units: **ug/L** Prep Date: **01/08/2014** Run No: **259172**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **185714** Analysis Date: **01/08/2014** Seq No: **5448442**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	479.6	50	500.0		95.9	60.2	159				
Benzene	522.9	50	500.0		105	70.2	138				
Chlorobenzene	564.6	50	500.0		113	70.1	133				
Toluene	531.3	50	500.0		106	70	139				
Trichloroethene	514.6	50	500.0		103	70.1	144				
Surr: 4-Bromofluorobenzene	513.1	0	500.0		103	66.2	120				
Surr: Dibromofluoromethane	492.3	0	500.0		98.5	79.5	121				
Surr: Toluene-d8	476.1	0	500.0		95.2	77	117				

Sample ID: **1401322-001AMSD** Client ID: Units: **ug/L** Prep Date: **01/08/2014** Run No: **259172**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **185714** Analysis Date: **01/08/2014** Seq No: **5448443**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	457.1	50	500.0		91.4	60.2	159	479.6	4.80	19.2	
Benzene	477.9	50	500.0		95.6	70.2	138	522.9	8.99	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: 1401392

ANALYTICAL QC SUMMARY REPORT

BatchID: 185714

Sample ID: **1401322-001AMSD** Client ID: Units: **ug/L** Prep Date: **01/08/2014** Run No: **259172**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **185714** Analysis Date: **01/08/2014** Seq No: **5448443**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	549.5	50	500.0		110	70.1	133	564.6	2.71	20	
Toluene	499.6	50	500.0		99.9	70	139	531.3	6.15	20	
Trichloroethene	490.2	50	500.0		98.0	70.1	144	514.6	4.86	20	
Surr: 4-Bromofluorobenzene	523.4	0	500.0		105	66.2	120	513.1	0	0	
Surr: Dibromofluoromethane	486.1	0	500.0		97.2	79.5	121	492.3	0	0	
Surr: Toluene-d8	469.8	0	500.0		94.0	77	117	476.1	0	0	

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: 1401392

ANALYTICAL QC SUMMARY REPORT

BatchID: R259271

Sample ID: **MB-R259271** Client ID: Units: **mg/L** Prep Date: Run No: **259271**
SampleType: **MBLK** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R259271** Analysis Date: **01/08/2014** Seq No: **5449909**

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-R259271** Client ID: Units: **mg/L** Prep Date: Run No: **259271**
SampleType: **LCS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R259271** Analysis Date: **01/08/2014** Seq No: **5449910**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4805	0.0100	0.5000		96.1	90	110				

Sample ID: **1401392-002CMS** Client ID: **14007-MW-11** Units: **mg/L** Prep Date: Run No: **259271**
SampleType: **MS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R259271** Analysis Date: **01/08/2014** Seq No: **5449914**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4800	0.0100	0.5000	0.03350	89.3	85	115				

Sample ID: **1401392-002CMSD** Client ID: **14007-MW-11** Units: **mg/L** Prep Date: Run No: **259271**
SampleType: **MSD** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R259271** Analysis Date: **01/08/2014** Seq No: **5449916**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4826	0.0100	0.5000	0.03350	89.8	85	115	0.4800	0.540	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: 1401392

ANALYTICAL QC SUMMARY REPORT

BatchID: **R259273**

Sample ID: **MB-R259273** Client ID: Units: **mg/L** Prep Date: Run No: **259273**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R259273** Analysis Date: **01/08/2014** Seq No: **5449973**

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-R259273** Client ID: Units: **mg/L** Prep Date: Run No: **259273**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R259273** Analysis Date: **01/08/2014** Seq No: **5449974**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4805	0.0100	0.5000		96.1	90	110				

Sample ID: **1401392-002CMS** Client ID: **14007-MW-11** Units: **mg/L** Prep Date: Run No: **259273**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R259273** Analysis Date: **01/08/2014** Seq No: **5449984**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4847	0.0100	0.5000	0.03510	89.9	85	115				

Sample ID: **1401392-002CMSD** Client ID: **14007-MW-11** Units: **mg/L** Prep Date: Run No: **259273**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R259273** Analysis Date: **01/08/2014** Seq No: **5449986**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4858	0.0100	0.5000	0.03510	90.1	85	115	0.4847	0.227	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		

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

January 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: 1401422

Analytical Environmental Services, Inc. received 4 samples on 1/8/2014 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
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: 1401422

Date: 1-8-14 Page 1 of 1

COMPANY: Brown & Caldwell

ADDRESS: 990 Hammond Dr Ste 400 Atlanta, GA 30328

PHONE:

FAX:

SAMPLED BY: Brian Steele

SIGNATURE:

ANALYSIS REQUESTED: Total Cr; Dissolved Cr; Hex/Tri Cr; Dissolved Hex/Tri Cr

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)	HNO3	NA	NA	NA	REMARKS	No # of Containers
1	14008-MW-26	1-8-14	1045	X		GW	X	X	X	X		3
2	14008-MW-19	↓	1405	X		↓	X	X	X	X		3
3	14008-EB		1100	X			X		X			2
4	14008-Dup		1200	X			X		X			2
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

PRESERVATION (See codes)

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Brian Steele	1-8-14 1800	1: Sam B	1/8/14 18:00
2:		2:	
3:		3:	

PROJECT INFORMATION
PROJECT NAME: Macgregor Golf
PROJECT #: 143327
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

SPECIAL INSTRUCTIONS/COMMENTS: Short hold times

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
(CLIENT) FedEx UPS MAIL COURIER GREYHOUND OTHER

SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC AES WILL PROCEED AS STANDARD TAT.
SAMPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT 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: 1401422

Case Narrative

Hexavalent Chromium Analysis by Method 7196:

Please note the Hexavalent Chromium value is reported as greater than Total Chromium value for sample 1401422-002C. The values are within the expected reproducibility limits for the test methods used and the results are suspected to be due to differences between the sample aliquots used for analysis. The data indicates that all Chromium present is in the Hexavalent oxidation state.

Analytical Environmental Services, Inc **Date:** 13-Jan-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14008-MW-26
Project Name:	MacGregor Golf	**Collection Date:**	1/8/2014 10:45:00 AM
Lab ID:	1401422-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C					**(SW3005A)**			
Chromium	BRL	0.0100		mg/L	185776	1	01/10/2014 12:36	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R259366	1	01/09/2014 09:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R259366	1	01/09/2014 09:15	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R259361	1	01/09/2014 09:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R259361	1	01/09/2014 09:15	AB
METALS, TOTAL SW6010C					**(SW3010A)**			
Chromium	BRL	0.0100		mg/L	185761	1	01/10/2014 16:48	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-Jan-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14008-MW-19
Project Name:	MacGregor Golf	**Collection Date:**	1/8/2014 2:05:00 PM
Lab ID:	1401422-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010C					**(SW3005A)**			
Chromium	0.182	0.0100		mg/L	185776	1	01/10/2014 12:55	JL
Hexavalent Chromium, Dissolved SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R259366	1	01/09/2014 09:15	AB
Chromium, Hexavalent	0.199	0.0100		mg/L	R259366	1	01/09/2014 09:15	AB
Hexavalent Chromium in Water SW7196A								
Chromium as Cr+3	BRL	0.0100		mg/L	R259361	1	01/09/2014 09:15	AB
Chromium, Hexavalent	0.199	0.0100		mg/L	R259361	1	01/09/2014 09:15	AB
METALS, TOTAL SW6010C					**(SW3010A)**			
Chromium	0.196	0.0100		mg/L	185761	1	01/10/2014 17:31	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-Jan-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14008-EB
Project Name:	MacGregor Golf	**Collection Date:**	1/8/2014 11:00:00 AM
Lab ID:	1401422-003	**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	R259361	1	01/09/2014 09:15	AB
Chromium, Hexavalent	BRL	0.0100		mg/L	R259361	1	01/09/2014 09:15	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	BRL	0.0100		mg/L	185761	1	01/10/2014 17:35	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-Jan-14

Client:	BROWN AND CALDWELL	**Client Sample ID:**	14008-DUP
Project Name:	MacGregor Golf	**Collection Date:**	1/8/2014 12:00:00 PM
Lab ID:	1401422-004	**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	R259361	1	01/09/2014 09:15	AB
Chromium, Hexavalent	0.198	0.0100		mg/L	R259361	1	01/09/2014 09:15	AB
METALS, TOTAL SW6010C (SW3010A)								
Chromium	0.204	0.0100		mg/L	185761	1	01/10/2014 17:38	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.

Sample/Cooler Receipt Checklist

Client Brown + Caldwell Work Order Number 1401422

Checklist completed by Jan B 1/8/14
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 SB

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-Jan-14

Client: BROWN AND CALDWELL
Project: MacGregor Golf
Lab Order: 1401422

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1401422-001A	14008-MW-26	1/8/2014 10:45:00AM	Groundwater	TOTAL METALS BY ICP		01/10/2014	01/10/2014
1401422-001B	14008-MW-26	1/8/2014 10:45:00AM	Groundwater	DISSOLVED METALS BY ICP		01/10/2014	01/10/2014
1401422-001C	14008-MW-26	1/8/2014 10:45:00AM	Groundwater	Hexavalent Chromium			01/09/2014
1401422-001C	14008-MW-26	1/8/2014 10:45:00AM	Groundwater	Hexavalent Chromium, Dissolved			01/09/2014
1401422-002A	14008-MW-19	1/8/2014 2:05:00PM	Groundwater	TOTAL METALS BY ICP		01/10/2014	01/10/2014
1401422-002B	14008-MW-19	1/8/2014 2:05:00PM	Groundwater	DISSOLVED METALS BY ICP		01/10/2014	01/10/2014
1401422-002C	14008-MW-19	1/8/2014 2:05:00PM	Groundwater	Hexavalent Chromium			01/09/2014
1401422-002C	14008-MW-19	1/8/2014 2:05:00PM	Groundwater	Hexavalent Chromium, Dissolved			01/09/2014
1401422-003A	14008-EB	1/8/2014 11:00:00AM	Groundwater	TOTAL METALS BY ICP		01/10/2014	01/10/2014
1401422-003B	14008-EB	1/8/2014 11:00:00AM	Groundwater	Hexavalent Chromium			01/09/2014
1401422-004A	14008-DUP	1/8/2014 12:00:00PM	Groundwater	TOTAL METALS BY ICP		01/10/2014	01/10/2014
1401422-004B	14008-DUP	1/8/2014 12:00:00PM	Groundwater	Hexavalent Chromium			01/09/2014

Client: BROWN AND CALDWELL
Project Name: MacGregor Golf
Workorder: 1401422

ANALYTICAL QC SUMMARY REPORT

BatchID: **185761**

Sample ID: **MB-185761** Client ID: Units: **mg/L** Prep Date: **01/10/2014** Run No: **259396**
SampleType: **MBLK** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **185761** Analysis Date: **01/10/2014** Seq No: **5452390**

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-185761** Client ID: Units: **mg/L** Prep Date: **01/10/2014** Run No: **259396**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **185761** Analysis Date: **01/10/2014** Seq No: **5452388**

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	80	120				

Sample ID: **1401422-001AMS** Client ID: **14008-MW-26** Units: **mg/L** Prep Date: **01/10/2014** Run No: **259396**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **185761** Analysis Date: **01/10/2014** Seq No: **5452394**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9707	0.0100	1.000	0.007345	96.3	75	125				

Sample ID: **1401422-001AMSD** Client ID: **14008-MW-26** Units: **mg/L** Prep Date: **01/10/2014** Run No: **259396**
SampleType: **MSD** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **185761** Analysis Date: **01/10/2014** Seq No: **5452395**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9861	0.0100	1.000	0.007345	97.9	75	125	0.9707	1.57	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: 1401422

ANALYTICAL QC SUMMARY REPORT

BatchID: 185776

Sample ID: **MB-185776** Client ID: Units: **mg/L** Prep Date: **01/10/2014** Run No: **259375**
SampleType: **MBLK** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **185776** Analysis Date: **01/10/2014** Seq No: **5452048**

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-185776** Client ID: Units: **mg/L** Prep Date: **01/10/2014** Run No: **259375**
SampleType: **LCS** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **185776** Analysis Date: **01/10/2014** Seq No: **5452046**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.9223	0.0100	1.000		92.2	80	120				

Sample ID: **1401422-001BMS** Client ID: **14008-MW-26** Units: **mg/L** Prep Date: **01/10/2014** Run No: **259375**
SampleType: **MS** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **185776** Analysis Date: **01/10/2014** Seq No: **5452052**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.8719	0.0100	1.000	0.004999	86.7	75	125				

Sample ID: **1401422-001BMSD** Client ID: **14008-MW-26** Units: **mg/L** Prep Date: **01/10/2014** Run No: **259375**
SampleType: **MSD** TestCode: **METALS, DISSOLVED** **SW6010C** BatchID: **185776** Analysis Date: **01/10/2014** Seq No: **5452054**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.8572	0.0100	1.000	0.004999	85.2	75	125	0.8719	1.70	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: 1401422

ANALYTICAL QC SUMMARY REPORT

BatchID: R259361

Sample ID: **MB-R259361** Client ID: Units: **mg/L** Prep Date: Run No: **259361**
SampleType: **MBLK** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R259361** Analysis Date: **01/09/2014** Seq No: **5451790**

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-R259361** Client ID: Units: **mg/L** Prep Date: Run No: **259361**
SampleType: **LCS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R259361** Analysis Date: **01/09/2014** Seq No: **5451791**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4702	0.0100	0.5000		94.0	90	110				

Sample ID: **1401422-001CMS** Client ID: **14008-MW-26** Units: **mg/L** Prep Date: Run No: **259361**
SampleType: **MS** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R259361** Analysis Date: **01/09/2014** Seq No: **5451801**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4381	0.0100	0.5000	0.003000	87.0	85	115				

Sample ID: **1401422-001CMSD** Client ID: **14008-MW-26** Units: **mg/L** Prep Date: Run No: **259361**
SampleType: **MSD** TestCode: **Hexavalent Chromium in Water SW7196A** BatchID: **R259361** Analysis Date: **01/09/2014** Seq No: **5451802**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4502	0.0100	0.5000	0.003000	89.4	85	115	0.4381	2.72	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: 1401422

ANALYTICAL QC SUMMARY REPORT

BatchID: R259366

Sample ID: **MB-R259366** Client ID: Units: **mg/L** Prep Date: Run No: **259366**
SampleType: **MBLK** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R259366** Analysis Date: **01/09/2014** Seq No: **5451817**

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-R259366** Client ID: Units: **mg/L** Prep Date: Run No: **259366**
SampleType: **LCS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R259366** Analysis Date: **01/09/2014** Seq No: **5451818**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4702	0.0100	0.5000		94.0	90	110				

Sample ID: **1401422-001CMS** Client ID: **14008-MW-26** Units: **mg/L** Prep Date: Run No: **259366**
SampleType: **MS** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R259366** Analysis Date: **01/09/2014** Seq No: **5451821**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4534	0.0100	0.5000	0.006100	89.5	85	115				

Sample ID: **1401422-001CMSD** Client ID: **14008-MW-26** Units: **mg/L** Prep Date: Run No: **259366**
SampleType: **MSD** TestCode: **Hexavalent Chromium, Dissolved SW7196A** BatchID: **R259366** Analysis Date: **01/09/2014** Seq No: **5451822**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4471	0.0100	0.5000	0.006100	88.2	85	115	0.4534	1.40	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		

Appendix C: 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