GEORGIA VOLUNTARY REMEDIATION PROGRAM
SEMIANNUAL STATUS REPORT

Date: January 10, 2014

Site Name: Former Oxford Chemical Property, HSRA Sublisted Property of the General Electric International, Inc. Apparatus Service Center Site, 5035 Peachtree Boulevard, Chamblee, DeKalb County, Georgia HSI No. 10072.

Site Address: 5001 Peachtree Boulevard, Chamblee, DeKalb County, Georgia

This electronic copy of the Georgia VRP Semiannual Status Report for the above referenced property is complete, identical to the paper copy, and virus free.

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January 10, 2014

Mr. Jason Metzger
Unit Coordinator – Environmental Engineer
Georgia Environmental Protection Division
Hazardous Sites Response Program/Voluntary Remediation Program
2 Martin Luther King, Jr. Drive, SE
Atlanta, GA 30334

Re: Voluntary Remediation Program Semiannual Status Report, Former Oxford Chemical Property, Sublisted Property for Hazardous Site Inventory (HSI) No. 10072, 5001 Peachtree Boulevard, Chamblee, DeKalb County, Georgia.
Woodard & Curran Project No. 226278

Dear Mr. Metzger:

Enclosed is a Voluntary Remediation Program (VRP) Semiannual Status Report for the Former Oxford Chemical Property, sublisted property for HSI #10072, located at 5001 Peachtree Boulevard, Chamblee, DeKalb County, Georgia. The report addresses the activities conducted at the Site under the VRP for the period April 1, 2013 through January 1, 2014. The VRP Semiannual Status Report is being submitted by Woodard & Curran, Inc. on behalf of Rathon Corp. and The Hillshire Brands Company.

Please contact me with any questions or comments you may have.

Sincerely,

WOODARD & CURRAN INC.

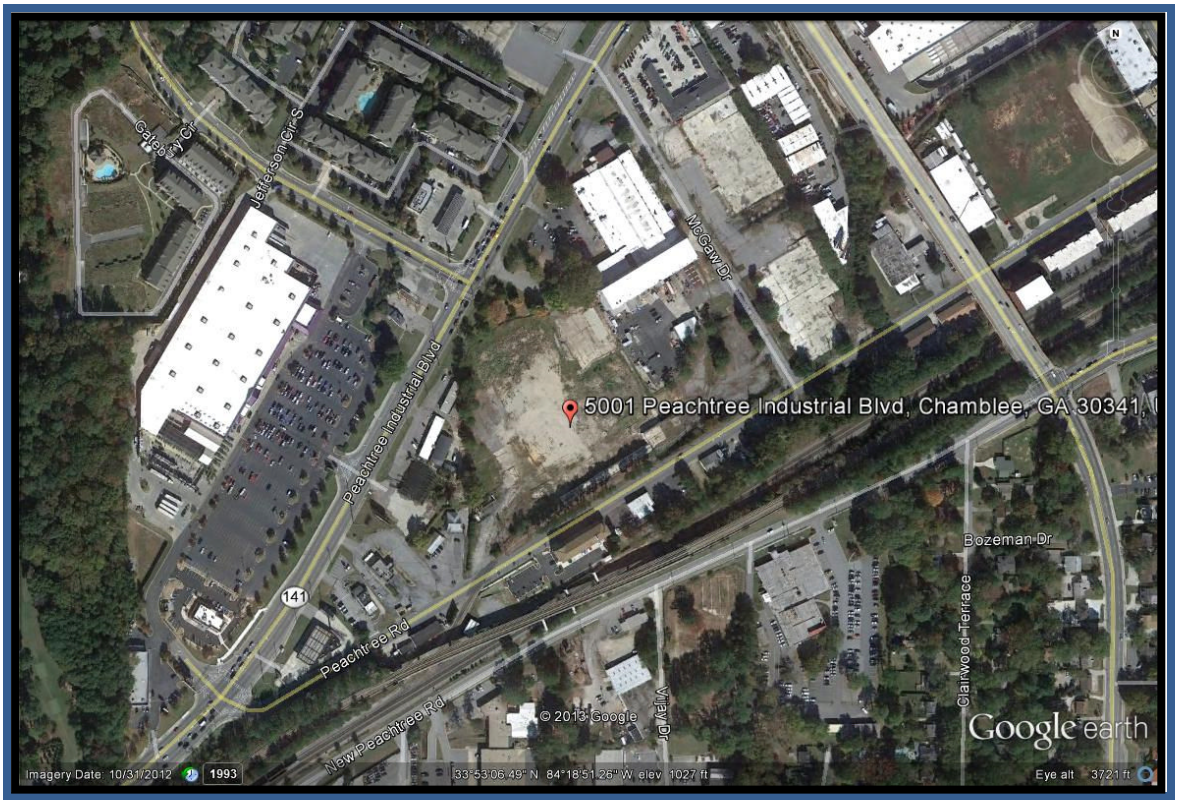
Leonard J. Diprima, Jr., P.G.
Senior Project Manager

Project Number 226278.00

Enclosure(s)
VRP Semiannual Status Report – 1 hard copy, 2 electronic copies (CD)

cc: Mr. Michael Glade, P.E., Rathon Corp.
Kent Magill, Esquire, The Hillshire Brands Company
Ms. Andrea Rimer, Esquire, Troutman Sanders LLP

Voluntary Remediation Program
Semiannual Status Report



Former Oxford Chemical Property
5001 Peachtree Boulevard, Chamblee, DeKalb County, Georgia

HSRA Sublisted Property of the
General Electric International, Inc. Apparatus Service Center Site
5035 Peachtree Boulevard, Chamblee, DeKalb County, Georgia
HSI No. 10072

Prepared For

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January 10, 2014

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Section 1
PE/PG Certification

I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional geologist who is registered with the Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Leonard J. Diprima, Jr. / Georgia PG #949	January 10, 2014
Printed Name and GA PE/PG Number	Date

Signature and Stamp

Section 2
Introduction

Woodard & Curran (W&C) has prepared this Voluntary Remediation Program (VRP) Semiannual Status Report (Status Report) for the Former Oxford Chemical property located at 5001 Peachtree Industrial Boulevard, Chamblee, DeKalb County, Georgia; Tax Parcel No. 18-278-14-002 (Site). The Site was formerly regulated under the Georgia Environmental Protection Division (EPD) Hazardous Site Response Act (HSRA) Program as a sublisted property to the immediately adjacent General Electric International, Inc. Apparatus Service Center site (GE Facility), 5035 Peachtree Industrial Boulevard, Chamblee, Georgia, Hazardous Site Inventory (HSI) No. 10786.

On April 1, 2013, a Voluntary Investigation and Remediation Plan Application (VIRP) was submitted to the EPD HSRA Program for the Site. On July 10, 2013, the EPD approved the VIRP with comments and entered the Site into the VRP. This Status Report has been prepared to present the activities conducted from April 1, 2013 through January 1, 2014 for the Site in accordance with the VRP.

Section 3
Work Performed – March 31, 2013 through January 1, 2014

The activities currently identified to be performed at the Site under the VRP are outlined in the following documents:

- VIRP dated March 31, 2013; and
- EPD VIRP approval letter dated July 10, 2013;

The activities that have been performed from March 31, 2013 through January 1, 2014 are as follows:

- Finalizing Non-Residential Risk Reduction Standards (RRS) for soil and groundwater.
- Completion of soil delineation.
- Completion of a full round of onsite groundwater sampling.
- Pursuit of offsite access to potentially impacted properties for groundwater delineation.
- Installation and sampling of seven monitoring wells on adjacent properties owned by Peachtree Village Partners LLC (PVP).
- Evaluation of soil remediation methods.

Details associated with these activities are presented below.

3.1 Non-Residential Risk Reduction Standards for Soil and Groundwater

Proposed non-residential RRS for soil and groundwater were presented in the March 31, 2013 VIRP. EPD provided comments regarding these RRS in email correspondence to Woodard & Curran on June 5, 2013. Several conference calls were held between the EPD and Woodard & Curran to resolve EPD questions and comments. RRS which addressed the June 5, 2013 EPD comments were submitted to the EPD in correspondence dated August 2, 2013, provided in Appendix A. The RRS submitted August 2, 2013 were approved by the EPD in email correspondence dated September 26, 2013 subject to the following three EPD comments.

1. Table 3 shows the final sub-surface (SB) soil RRS for 1,1-dichloroethene (1,1-DCE), tetrachloroethene (PCE), benzo(b)fluoranthene, and Aroclor 1260 as the Type 4 value based on a DAF of 20. According to Table 2, the final Type 4 RRS are based on a DAF of 1 for these constituents because the maximum concentration detected in groundwater exceeds the groundwater cleanup number. In each of the cases the Type 3 RRS is higher and should be listed as the SB soil RRS on Table 3. The correct Type 3 RRS for subsurface soil is as follows: 1,1-DCE Type 3 SB Soil = 0.7 mg/Kg, PCE Type 3 SB Soil = 0.5 mg/Kg , benzo(b)fluoranthene Type 3 SB Soil = 5.0 mg/Kg, and Aroclor 1260 Type 3 SB Soil =1.55 mg/Kg.

2. As noted in Comment # 3 of EPD's original review memo, the correct Type 3 RRS for surface soil for 1,2,3-trichloropropane should be 4 mg/Kg not 1.10 mg/Kg.

3. In accordance with HSRA Rules, the use of surrogates is prohibited. If a regulated substance does not have a recommended toxicity value, the values provided in the HSRA Rules or the detection limit should be used as the RRS. If any regulated substances are detected on site that do not have

recommended toxicity values, please submit revised RRS calculations prior to implementing remediation.

Each of these comments has been addressed. The final RRS and the associated derivations for the Site are in Appendix A. In addition, the submission of the final RRS addresses Comment #1 of the July 10, 2013 EPD VRP approval letter.

3.2 Soil Delineation

Woodard & Curran has also performed additional soil assessment and delineation activities during the period addressed by this Status Report. The objectives of these activities included the following:

- Additional soil delineation to determine areas exceeding non-residential RRS;
- Additional soil delineation to complete overall delineation to Type 1 RRS;
- Soil sampling to supplement historical verification samples for certain previously excavated areas at the site in order to demonstrate compliance with the non-residential RRS, as requested in Comment #2 of the July 10, 2013 EPD VRP approval letter; and
- Soil sampling to characterize the former locations of the wastewater pre-treatment plant and holding pond, the empty drum storage area located on the southwestern portion of the property, Building "C" / Powder Plant, and the loading / unloading areas of the rail spur lines, as requested in Comment #3 of the July 10, 2013 EPD VRP approval letter.

To achieve these objectives, a total of 55 soil borings were advanced between September 6 and September 30, 2013, including 38 borings for soil delineation, 8 borings for supplemental verification sampling, and 9 borings to characterize additional areas of the site. The locations of these borings, along with the locations of historical borings conducted at the site, are shown on Figure 1.

Borings were advanced using direct-push technology (DPT), with soil cores retained in five-foot long plastic sleeves. The recovered soil was logged and scanned for organic vapors, and between one and four samples were collected from each boring for laboratory analysis. Depth intervals for samples were selected based on data from previous investigations and on observations of the recovered soil. Soil boring logs are provided in Appendix B.

Soil samples were secured in ice-filled coolers and hand delivered to Analytical Environmental Services of Atlanta, Georgia (AES) for analysis. Laboratory work orders, and chain-of-custody documents, which included information on project name and number, sampler(s) signature, project manager's name, sample matrix, sample identification/station ID number, date and time of sample collection, total number of containers per sample station, requested analyses and number of containers per analyses per sample station, preservatives, and any other pertinent comments for the laboratory, were placed within each cooler for delivery. Analytical parameters for the collected samples were selected based on data from previous investigations, and included VOCs (analyzed by Method 8260B), SVOCs (Method 8270D), and pesticides (Method 8081B).

Analytical results for the soil samples collected in September 2013 are provided in Table 1, along with a comparison to the Type 1 (residential) and Type 3/4 (non-residential) RRS.

Based on a review of the 2013 results and historical sampling results, the following summarizes the status of compliance with the objectives of the soil assessment and delineation activities:

- **Delineation to Type 3/4 RRS (Remediation):** Delineation to remediation standards is complete with the following exceptions:

    - North of WCB-50 and WCB-81,
    - North and south of WCB-58,
    - South and east of WCV-71,
    - South and east of WCV-73, and
    - North and south of WCV-77.

    The approximate horizontal limits of soils exceeding the Type 3/4 RRS are provided on Figure 2. In comparison, the delineation limits based on data collected prior to 2013 and previous RRS are shown on Figure 3.

- **Delineation to Type 1 RRS (Delineation):** Boundary delineation to residential Type 1 RRS is complete with the following exceptions:

    - The exceptions listed above for Type 3/4 delineation, and
    - West of WCB-84.

    Additional delineation sampling to address these remaining areas will either be performed prior to soil remediation activities or will be completed by the collection of post-excavation samples.

- **Supplemental Verification Sampling:** A total of 18 samples were collected from nine supplemental verification points. Based on the results, additional remediation will be required to meet non-residential RRS at four of the locations.

- **Additional Site Characterization:** A total of 20 samples were collected from eight borings at previously uncharacterized portions of the site. Constituent concentrations were below Type 1 RRS for all 20 samples. As such, further assessment of these areas is not warranted.

3.3 Soil Remediation Plan

Based upon the information acquired during the delineation of soil to RRS, the following remediation plan has been developed to bring the Site into compliance with non-residential RRS. The remediation method will be excavation and offsite disposal. Rathon Corporation and The Hillshire Brands Company anticipates beginning the soil remediation at the end of the first quarter 2014 or the beginning of the second quarter 2014; therefore, an expedited EPD review of the proposed plan for remediation presented below is requested.

3.3.1 Delineation of Soils Requiring Remediation

Based on a comparison of the current soil analytical data to the final RRS calculated for the site, additional remediation of soil is needed in order to meet non-residential RRS at the Site. In determining the extent of soils requiring remediation, is has been assumed the boundary of soils above the Type 3/4 RRS requiring removal would be vertically and horizontally extended to the nearest sample location with concentrations below the corresponding RRS. The vertical limit of excavation would be no deeper than the seasonal high groundwater elevation, as determined by observations during soil boring advancement, by water level measurements at nearby groundwater monitoring wells, and/or by the

encountering of groundwater during excavation activities. Accordingly, soil samples with concentrations above RRS but which were collected from below the water table will not be subject to removal.

Areas requiring soil remediation include the following:

- **Wastewater Treatment Facility Area –** Three separate areas adjacent to the previous excavation of this area in 2008 have been identified for removal to preliminary depths of between 9 and 12 feet. This includes soils underneath a portion of the area previously excavated to a depth of 9 feet. Constituents above the RRS in this area include 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, and two pesticides (4,4'-DDD and 4,4'-DDT). Approximately 1,000 cubic yards of soils are presently designated for removal from this area, not including sidewall slope cutbacks along the perimeter of the excavation. The horizontal extent of soils removed in this area may be expanded, based on the results of additional delineation and/or post-excavation sampling to be performed.

- **Former Pump Room Area –** The area surrounding the 2008 excavation in this area has been identified for removal to preliminary depths of between 7 and 12 feet. Constituents above the RRS in this area include 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, cis-1,2-dichloroethene, tetrachloroethene, toluene, trichloroethene, and naphthalene. Approximately 3,100 cubic yards of soils are presently designated for removal from this area, not including sidewall slope cutbacks. The horizontal extent of soils removed in this area may be expanded, based on the results of additional delineation and/or post-excavation sampling to be performed.

- **Wastewater Sewer Area –** Based on both the additional delineation sampling and the supplemental verification sampling, four areas around and within the 2008 excavation in this area have been identified for removal to preliminary depths of between 5 and 10 feet. Constituents above the RRS in this area include 1,1-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene, and trichloroethene. Approximately 650 cubic yards of soils are presently designated for removal from this area, not including sidewall slope cutbacks. The horizontal extent of soils removed in this area may be expanded, based on the results of additional delineation and/or post-excavation sampling to be performed.

- **Former East Tank Farm Area –** Three separate areas have been identified for removal in this area to preliminary depths of between 5 and 10 feet. Constituents above the RRS in this area include 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,1,1-trichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene, toluene, trichloroethene, vinyl chloride. Dieldrin was also detected in one sample (B-36) collected in 2007 at a concentration which is above the most recent Type 3/4 RRS, requiring a limited removal at that boring location as well. Approximately 1,500 cubic yards of soils are presently designated for removal from this area, not including sidewall slope cutbacks. The horizontal extent of soils removed in this area may be expanded, based on the results of additional delineation and/or post-excavation sampling to be performed.

Excavated areas will be backfilled with clean fill imported from off-site, and mulched and seeded with an appropriate permanent grass seed mix.

3.3.2 Soil Handling and Disposal Process

Soil concentrations were compared to TCLP limits using the 20X rule to provide a preliminary determination as to whether excavated soils could require handling as a characteristic hazardous waste. As shown on Figure 2, soils which could potentially be classified as hazardous waste were identified in five locations due to concentrations of tetrachloroethene, trichloroethene, and/or 1,4-dichlorobenzene. Four of these five areas are relatively limited in extent (less than 150 cubic yards each). For these four areas (and soils within ten feet horizontally of these areas), excavated soils will be stockpiled on polyethylene sheeting (separate stockpiles for each area), covered, and subject to composite sampling for disposal characterization. Upon receipt of the characterization sample data, the stockpiled soil will be loaded for appropriate off-site disposal as a hazardous or non-hazardous waste.

The fifth area of potentially hazardous soils, at the Former East Tank Farm Area, comprises approximately 500 cubic yards. These soils will either be removed and stockpiled on site (stockpiles not larger than 200 cubic yards) for subsequent characterization sampling, or will be subject to in-place stabilization in order to remove the potential hazardous characteristic prior to removal. In either case, the soils will then be loaded for appropriate off-site disposal.

Data for the remaining soils identified for removal indicate that these soils can be disposed of as a non-hazardous waste without further characterization. As such, these soils will be direct loaded into trucks for transportation and appropriate off-site disposal.

3.3.3 Other Considerations

The preliminary limits of excavation will be clearly marked in the field prior to commencing excavation, and final excavation limits and depths will be surveyed prior to backfilling.

As noted above, it is currently anticipated that additional delineation sampling will be performed in the limited areas where the extent of soils has not been completely delineated, with the intent being to reduce or eliminate the need for post-excavation sampling. This in turn will allow for the immediate backfilling of excavated areas once it has been confirmed that the intended limits of excavation (both horizontally and vertically) have been reached.

During soil excavation and loading, dust suppression methods (i.e., water trucks) will be utilized within the excavation and along haul roads as needed. Silt fencing and other appropriate sedimentation and erosion control devises will be used to control and filter storm water in accordance with the EPD Erosion and Sediment Control Manual.

3.4 Groundwater Delineation

During this period Woodard & Curran began the delineation of groundwater impacts related to releases associated with historical Oxford Chemical operations and the portion of the groundwater plume associated with release from the adjacent General Electric (GE) facility that has migrated onto the eastern portion of the former Oxford Chemical property. To accomplish this objective, a complete round of groundwater samples was collected from onsite wells, letters requesting access to downgradient property owners were sent, and monitoring wells were installed and sampled on the

immediately adjacent, downgradient Peachtree Village Partners properties to the west. These efforts are summarized below.

3.4.1 Onsite Groundwater Sampling Event

To initiate the groundwater assessment under the VRP, a complete round of groundwater samples was collected from the existing onsite wells. Prior to this event, the most recent full round of onsite groundwater sampling was conducted in January 2011. The January 2011 groundwater data and recent groundwater monitoring data collected under the HSRA Corrective Action Plan previously in place for the GE release, was used to determine the analyte list for each well to be sampled. The sampling plan established for this event is presented in Table 2. Onsite well locations are shown on Figure 5. The onsite groundwater sampling event was conducted from September 17, 2013 to September 27, 2013. During this event 47 wells were scheduled for sampling. Forty-five (45) wells were sampled. Two wells, BH-9 and BH-18, were not sampled due to reasons described below.

Prior to conducting sampling, a full round of water table measurements was collected from all the existing monitoring wells on site. Prior to collecting measurements, each monitoring well was opened and allowed to equilibrate. An interface probe calibrated to 0.01 feet was used for water level measurements and to check for the presence or absence of LNAPL. At each well location, the depth to the water table was measured from the well top of casing and then sounded to determine the height of the water column and to determine if the well was obstructed. The interface probe was cleaned with isopropyl alcohol and rinsed with deionized water between monitoring wells. Water level measurements and LNAPL measurements collected September 16, 2013 are presented in Table 3, and a potentiometric surface map for this measurement event is shown as Figure 6. Four wells; MW-3, BH-9, BH-15 and BH-18 were not sampled due to the presence of LNAPL. BH-9 and BH-18 had been scheduled for sampling during this event. The LNAPL identified in BH-9, BH-15 and BH-18 was previously identified as the product originating from the GE release. The LNAPL in MW-3, which was identified as a mixture of PAA, HSB, PAMYL (amyl acetate), ISOBUT (isobutyl acetate) and at least one other hydrocarbon distillate (ESC, October 10, 1991), has been intermittently detected. Water table elevations were at higher elevations than normal due to the heavy precipitation experienced during the summer of 2013. This may have led to the appearance of residual LNAPL in some wells not seen since 2004.

Sampling was conducted using the low-flow/low-stress sampling method in general accordance with current USEPA protocols and the May 30, 2008 EPD Groundwater Sampling Guideline Memorandum. Monitoring well MW-12, a deep bedrock well onsite, was sampled using a mini-bladder pump and the low-flow/low-volume sampling method. Field measurements of pH, conductivity, dissolved oxygen, oxidation-reduction potential and temperature were collected every five minutes until all parameters stabilized within approximately 10 percent for three consecutive readings. Upon stabilization of the field parameters, samples were collected for the constituents specified in Table 2. Groundwater sampling forms for all sampling events are in Appendix C.

Groundwater samples were secured in ice-filled coolers and hand delivered to Analytical Environmental Services of Atlanta, Georgia (AES) for analysis. Laboratory work orders, and chain-of-custody documents, which included information on project name and number, sampler(s) signature, project manager's name, sample matrix, sample identification/station ID number, date and time of sample collection, total number of containers per sample station, requested analyses and number of containers per analyses per sample station, preservatives, and any other pertinent comments for the laboratory,

were placed within each cooler for delivery. VOC samples were analyzed by Method 8260B, SVOCs by Method 8270D, pesticides by Method 8081B and PCBs by Method 8082A.

Due to the need to establish additional control for groundwater delineation in the interior of the Site, 4 additional monitoring wells were installed on September 30, 2013 and sampled October 2, 2013, MW-13 through MW-16 (see Figure 5). These monitoring wells were placed to obtain information where there was a gap in well coverage between the eastern and western portions of the Site. The monitoring wells were sampled for VOCs and SVOCs. Boring logs and monitoring well construction logs for these monitoring wells are in Appendix B. Groundwater sampling forms for all sampling events are in Appendix C. These monitoring wells were sampled per the protocols described above.

3.4.2 Offsite Groundwater Sampling

In November 2013, access to the properties adjacent and immediately downgradient to the west of the Site was obtained for purposes of additional groundwater delineation. Five monitoring wells were initially installed, MW-17 through MW-21 (see Figure 5) on November 11-12, 2013. The monitoring wells were sampled for VOCs, SVOCs and pesticides based upon the constituents present on the western boundary of the former Oxford Chemical property. Upon receipt of the laboratory data for these wells, it was determined that delineation to Type 1 RRS had not been achieved and permission was obtained from PVP to install two additional monitoring wells to the west. Monitoring wells MW-25 and MW-26 (see Figure 5) were installed in December 2013. The monitoring wells were sampled for VOCs and SVOCs based upon the constituents identified in MW-17 through MW-21. Boring logs and monitoring well construction logs for these monitoring wells are in Appendix B. Groundwater sampling forms for all sampling events are in Appendix C. These monitoring wells were sampled per the protocols described in Section 3.4.1 above.

Water table measurements were collected from the PVP monitoring wells on November 14, 2013 and December 18, 2013 and from several of the wells on the Site adjacent to the PVP properties. December 18, 2013 water level measurements are presented in Table 4. A potentiometric surface map for the PVP properties, tying into the wells on the west boundary of the Site is shown as Figure 7. Based upon Figures 6 and 7, groundwater is flowing across the Site from the southeast to the west-northwest as it flows offsite. Additional groundwater delineation will be conducted in these directions as offsite access from property owners is obtained.

3.4.3 Groundwater Analytical Results

Figures 8 through 17 present the distribution of a representative number of constituents in groundwater from the groundwater sampling events conducted in 2013. The constituents presented are:

- Toluene (Figure 8)
- Naphthalene (Figure 9)
- 1,2,4-trichlorobenzene (Figure 10)
- 1,4-dichlorobenzene (Figure 11)
- Tetrachloroethene (PCE) (Figure 12)
- Trichloroethene (TCE) (Figure 13)
- Cis-1,2-dichloroethene (Figure 14)

- Vinyl chloride (Figure 15)
- 1,1,1-trichloroethane (Figure 16)
- 1,1-dichloroethene (Figure 17)

Table 5 presents the 2013 groundwater data collected and historical groundwater data collected since 2011, compared to non-residential RRS and to Type 1 RRS VRP delineation standards. Laboratory data reports are not included, but can be provided to the EPD upon request and will be provided in the VRP CSR.

Based upon the groundwater data collected in 2013:

- All constituents have been delineated to non-residential RRS and to Type 1 RRS VRP delineation standards on the former Oxford Chemical property.
- The groundwater plumes from the GE release that have migrated onto the Site, and those from the historical releases associated with operations at the former Oxford Chemical facility are clearly distinguishable and not co-mingled, as stated in the VRP Application. The plume originating from the GE release is assumed to be the responsibility of GE to address.
- Groundwater constituents above Type 1 RRS and non-residential RRS are migrating offsite to the west-northwest.

Groundwater constituents from the Site will be delineated offsite to the west-northwest as access to properties is obtained, until all site-specific constituents of interest (identified in the VIRP) have been delineated to non-residential RRS and to Type 1 RRS VRP delineation standards. Based on the results of sampling conducted on properties owned by PVP, an application will be made to enter the impacted PVP property into the VRP as part of the Former Oxford Chemicals VRP Site.

LNAPL associated with the GE release continues to be detected in some wells on the Site along the GE property boundary. The LNAPL measured from the GE release on the former Oxford Chemical property during this reporting period were above the regulatory threshold of 1/8-inch.

LNAPL associated with a release from historical operations at the former Oxford Chemical facility have been intermittently detected in MW-3 on the western side of the Site. The LNAPL measured in MW-3 during this reporting period was slightly above the regulatory threshold of 1/8-inch.

3.5 Off Site Access for Groundwater Delineation

On October 7, 2013, Woodard & Curran sent Request for Access letters to the owners of PVP (Tax Parcel Nos. 18-278-14-004, 18-278-14-005, 18-278-14-006, 18-278-14-007 and 18-278-14-008), Lowe's Home Centers, Inc. (Lowes; Tax Parcel No. 18-300-02-003) and Southern Holding Company LLC (Former FINA/Buddy's Fuel Station; Tax Parcel No. 18-300-02-001). See Figure 18. Access was requested for the purposes of installing and sampling new or existing monitoring wells to delineate impacts originating from the former Oxford Chemical property. Access was granted by PVP and work has been conducted as described in Section 3.4.2 above. Southern Holding Company has indicated an answer regarding access will be provided by January 15, 2014. Lowe's, at this time, has denied access to Tax Parcel No. 18-300-02-003 for the requested scope of sampling. Woodard & Curran will examine the possibility of obtaining access to the right-of-way along Peachtree Industrial Boulevard in front of the Lowe's property to continue groundwater delineation efforts in this direction. If necessary to achieve the VRP objectives

for groundwater delineation and corrective action, Lowe's will be approached again to obtain access to Tax Parcel No. 18-300-02-003.

3.6 Conceptual Site Model

Based upon the data and other information acquired for the Former Oxford Chemical VRP Site during this period, no changes to the conceptual site model provided in the VIRP are proposed.

Section 4
Work to be Performed

The primary tasks anticipated to be completed during the next six months for the period ending June 1, 2014 for the VRP are presented below.

Anticipated Tasks January 2, 2014 through June 1, 2014:

- Soil remediation to non-residential RRS of the areas identified in Figure 2. Upon completing the soil remediation, a Certification of Compliance to non-residential RRS will be submitted to the EPD for approval in either the subsequent VRP Semiannual Status Report or as part of a separate submittal. Rathon Corporation and The Hillshire Brands Company anticipates beginning the soil remediation at the end of the first quarter 2014 or the beginning of the second quarter 2014; therefore, an expedited EPD review of the proposed plan for remediation presented in Section 3.3 is requested.

- Continued delineation of groundwater on offsite, downgradient properties until delineation to Type 1 RRS has been achieved. Access to additional downgradient properties will be required, as stated in Section 3.5 above.

- If groundwater delineation is achieved during the next six month period, groundwater modeling will be conducted to determine the point of compliance for groundwater, the current state of the plumes relative to equilibrium, and to begin to establish a preliminary groundwater monitoring period for VRP compliance.

- Forms will be completed and submitted to the EPD to enter the affected portion of the PVP property into the VRP as part of the Former Oxford Chemical VRP Site.

The tasks required to complete the VIRP are presented on Figure 19, a revised estimated schedule. This schedule will be revised with the submittal of each VRP Semiannual Status Report, as required.

Section 5
Professional Services Hours This Period

A total of approximately 1,040.4 professional service hours have been completed by Woodard & Curran in the 9 month period from April 1, 2013 through December 31, 2013. Of these total hours, 231.75 hours were utilized by the professional geologist overseeing the VRP project. The approximate distribution of hours per month utilized for implementation of the VRP during this period is presented in Table 6.

Tables

Table 1
Soil Analytical Results - September 2013

W&C 9/2013 Soil Samples						Wastewater Sewer Area																						Former Pump Room Area											
Location	Type 1	Non-Residential RRS				WCB-45	WCB-45	WCB-46	WCB-46	WCV-71	WCV-71	WCV-72	WCV-72	WCV-73	WCV-73	WCV-74	WCV-74	WCV-75	WCV-75	WCV-76	WCV-76	WCV-77	WCV-77	WCV-78	WCV-78	WCV-79	WCV-79	WCB-47	WCB-47	WCB-47	WCB-47	WCB-48	WCB-48	WCB-48	WCB-49	WCB-49	WCB-49	WCB-B15	WCB-B15	WCB-B15	WCB-B15
Depth (feet bgs)	RRS	SS Soil (0-2')		SB Soil (>2')		2-4'	4-6'	2-4'	4-6'	2-4'	6-8'	2-4'	6-8'	2-4'	6-8'	2-4'	6-7'	2-4'	6-8'	2-4'	6-8'	2-4'	6-8'	2-4'	6-8'	2-4'	6-8'	0-2'	4-6'	8-10'	12-14'	4-6'	8-10'	12-14'	4-6'	8-10'	12-14'	0-2'	4-6'	8-10'	12-13'
Constituent	Date Sampled	(ug/kg)	RRS	RRS Type	RRS	RRS Type	9/11/13	9/11/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/6/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13
Volatiles-ug/kg																																							
1,1,1,2-Tetrachloroethane	7,000	7,000	Type 3	7,000	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	3.8 U	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
1,1,1-Trichloroethane	20,000	253,000	Type 4	253,000	Type 4	5.8	3.5 U	3.4 U	3.6 U	27	6.8	29	76	91	4.4 U	3.5 U	4.6 U	3.5 U	7.5	7000	28000	360 U	3.7 U	21	17	3.7 U	9.3	3.5 U	4800	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
1,1,2,2-Tetrachloroethane	130	130	Type 3	130	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	3.8 U	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
1,1,2-Trichloroethane	500	500	Type 3	500	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	3.8 U	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
1,1-Dichloroethane	400,000	400,000	Type 3	400,000	Type 3	7.3	3.5 U	3.4 U	3.6 U	7.9	5.1	12	41	4.9 U	4.4 U	3.5 U	9.9	3.5 U	4.2 U	1700	730	360 U	3.7 U	3.9	3.6	3.7 U	4.1 U	19	2100 U	2300 U	400 U	150 U	5.9	2100 U	4.5	3.8 U	5	310 U	1600 U	2000 U	4300 U
1,1-Dichloroethene	700	700	Type 3	700	Type 3	3.5	3.5 U	3.4 U	3.6 U	5.8	5.8	27	39	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	380	810	360 U	3.7 U	6.8	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
1,2,3-Trichloropropane	498	1,190	Type 3	4,000	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	3.8 U	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
1,2,4-Trichlorobenzene	10,800	10,800	Type 3	10,800	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	26	8.3	4.8	1000	3700	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	19	73000	33000	44000	2100	7.4	26000	3.2 U	6.7	3.8 U	1700	64000	41000	50000
1,2-Dibromo-3-Chloropropane	20	20	Type 3	20	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	3.8 U	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
1,2-Dichlorobenzene	60,000	60,000	Type 3	60,000	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	18	4.9 U	4.4 U	3.5 U	10	3.5 U	4.2 U	20000	1500	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	65	420000	12000	64000	990	13	5000	3.2 U	5.8	29	22000	44000	110000	130000
1,2-Dichloroethane	500	500	Type 3	500	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	16	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	4.3	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
1,2-Dichloropropane	500	500	Type 3	500	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	3.8 U	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
1,3-Dichlorobenzene	60,000	60,000	Type 3	60,000	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	11	450	3.5 U	4.6 U	3.5 U	4.2 U	2300	3000	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	12	30000	2300 U	6400	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	2800	1700	7200	6900
1,4-Dichlorobenzene	7,500	7,500	Type 3	7,500	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	11	100	3.5 U	4.6 U	3.5 U	4.2 U	2600	3200	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	29	79000	3300	11000	150 U	3.4 U	2100 U	3.2 U	3.8 U	4.6	5700	4100	19000	19000
2-Butanone	200,000	200,000	Type 3	200,000	Type 3	33 U	35 U	34 U	36 U	28 U	30 U	34 U	37 U	49 U	50	35 U	46 U	35 U	42 U	3600 U	38 U	3600 U	37 U	32 U	36 U	37 U	41 U	35 U	21000 U	23000 U	4000 U	1500 U	34 U	21000 U	32 U	38 U	92	3100 U	16000 U	20000 U	43000 U
4-Methyl-2-pentanone	200,000	200,000	Type 3	200,000	Type 3	6.7 U	7.0 U	6.7 U	7.1 U	5.7 U	6 U	6.9 U	7.4 U	9.8 U	8.8 U	7.1 U	9.1 U	6.9 U	8.4 U	720 U	7.7 U	710 U	7.4 U	6.5 U	7.3 U	7.4 U	8.1 U	7 U	4200 U	4600 U	800 U	300 U	6.8 U	4100 U	6.3 U	7.6 U	7.6 U	620 U	3200 U	4100 U	8600 U
Acetone	400,000	400,000	Type 3	400,000	Type 3	67 U	70 U	67 U	71 U	96	60 U	80	74 U	98 U	440	71 U	91 U	69 U	84 U	7200 U	270	7100 U	130	65 U	73 U	74 U	81 U	70 U	42000 U	46000 U	8000 U	3000 U	68 U	41000 U	63 U	76 U	460	6200 U	32000 U	41000 U	86000 U
Benzene	500	500	Type 3	500	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	3.8 U	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
Bromoform	10,000	10,000	Type 3	10,000	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	3.8 U	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
Carbon disulfide	400,000	400,000	Type 3	400,000	Type 3	6.7 U	7.0 U	6.7 U	7.1 U	5.7 U	6 U	6.9 U	7.4 U	9.8 U	8.8 U	7.1 U	9.1 U	6.9 U	8.4 U	720 U	7.7 U	710 U	7.4 U	6.5 U	7.3 U	7.4 U	8.1 U	7 U	4200 U	4600 U	800 U	300 U	6.8 U	4100 U	6.3 U	7.6 U	7.6 U	620 U	3200 U	4100 U	8600 U
Chlorobenzene	10,000	10,000	Type 3	10,000	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	4.9	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	45	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	1600	1600 U	2000 U	4300 U
Chloroethane	170	497,000	Type 4	497,000	Type 4	6.7 U	7.0 U	6.7 U	7.1 U	5.7 U	6 U	6.9 U	7.4 U	9.8 U	8.8 U	7.1 U	9.1 U	6.9 U	8.4 U	720 U	7.7 U	710 U	7.4 U	6.5 U	7.3 U	7.4 U	8.1 U	7 U	4200 U	4600 U	800 U	300 U	6.8 U	4100 U	6.3 U	7.6 U	7.6 U	620 U	3200 U	4100 U	8600 U
cis-1,2-Dichloroethene	7,000	7,000	Type 3	7,000	Type 3	12	7.4	3.4 U	3.6 U	8.9	200	11	21	21	380	15	38	3.5 U	4.2 U	13000	2300	360 U	6	4.7	8.6	3.7 U	4.1 U	53	8300	6100	1700	150 U	69	2100 U	6.2	15	88	310 U	1600 U	2000 U	4300 U
Cyclohexane	20,000	1,093,000	Type 4	1,093,000	Type 4	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	3.8 U	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
Dichlorodifluoromethane	23,300	30,800	Type 4	100,000	Type 3	6.7 U	7.0 U	6.7 U	7.1 U	5.7 U	6 U	6.9 U	7.4 U	9.8 U	8.8 U	7.1 U	9.1 U	6.9 U	8.4 U	720 U	7.7 U	710 U	7.4 U	6.5 U	7.3 U	7.4 U	8.1 U	7 U	4200 U	4600 U	800 U	300 U	6.8 U	4100 U	6.3 U	7.6 U	7.6 U	620 U	3200 U	4100 U	8600 U
Ethylbenzene	70,000	70,000	Type 3	70,000	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	13	3.5 U	4.6 U	3.5 U	4.2 U	360 U	78	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	6200	2300 U	400 U	540	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	6200	5300	4300 U
Isopropylbenzene	21,900	85,500	Type 4	85,500	Type 4	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.7	3.5 U	4.6 U	3.5 U	4.2 U	360 U	24	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	3200	2300 U	560	240	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	3100	3400	4300 U
Methylene chloride	500	2,800	Type 4	2,800	Type 4	13 U	14 U	13 U	14 U	11 U	12 U	14 U	60	20 U	18 U	14 U	18 U	14 U	17 U	1400 U	600	1400 U	15 U	13 U	15 U	15 U	16 U	14 U	8500 U	9200 U	1600 U	590 U	14 U	8200 U	13 U	15 U	15 U	1200 U	6300 U	8100 U	17000 U
Styrene	14,000	135,000	Type 3	135,000	Type 4	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.4 U	3.5 U	4.6 U	3.5 U	4.2 U	360 U	3.8 U	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
Tetrachloroethene (PCE)	500	500	Type 3	500	Type 3	18	4.5	7.3	3.6 U	10000	3600	220	350	1400	12	11	19	4.3	6.7	26000	110000	21000	21	26	11	3.9	6.5	210	100000	32000	5100	1500	59	22000	6.7	14	66	310 U	2000	2200	6600
Toluene	100,000	100,000	Type 3	100,000	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	3.3	3 U	3.4 U	4.2	4.9 U	4.8	3.5 U	4.6 U	3.5 U	4.2 U	360 U	68	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	6.7	180000	52000	65000	11000	3500	2100 U	3.2 U	19	3.8 U	8300	1700000	580000	190000
trans-1,2-Dichloroethene	10,000	10,000	Type 3	10,000	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	3.7 U	4.9 U	4.5	3.5 U	4.6 U	3.5 U	4.2 U	360 U	9.7	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	4.9	2100 U	2300 U	400 U	150 U	3.4 U	2100 U	3.2 U	3.8 U	3.8 U	310 U	1600 U	2000 U	4300 U
Trichloroethene (TCE)	500	500	Type 3	500	Type 3	13	4.3	4.3	3.6 U	220	81	67	170	89	100	4.8	10	23	87	25000	12000	360 U	3.7 U	11	4.6	3.7 U	4.3	84	23000	4000	510	310	24	2100 U	8.7	8.6	25	310 U	1600 U	2300	4300 U
Vinyl Chloride	200	200	Type 3	200	Type 3	6.7 U	7.0 U	6.7 U	7.1 U	5.7 U	12	6.9 U	7.4 U	9.8 U	8.8 U	7.1 U	9.1 U	6.9 U	8.4 U	720 U	7.7 U	710 U	7.4 U	6.5 U	7.3 U	7.4 U	8.1 U	7 U	4200 U	4600 U	800 U	300 U	6.8 U	4100 U	6.3 U	7.6 U	7.6 U	620 U	3200 U	4100 U	8600 U
Xylene (total)	1,000,000	1,000,000	Type 3	1,000,000	Type 3	3.3 U	3.5 U	3.4 U	3.6 U	2.8 U	3 U	3.4 U	8.4	4.9 U	63	3.5 U	4.6 U	3.5 U	4.2 U	2300	370	360 U	3.7 U	3.2 U	3.6 U	3.7 U	4.1 U	3.5 U	57000	7700	5600	1900	12	2100 U	3.2 U	3.8 U	3.8 U	3000	34000	41000	30000
Semivolatiles- ug/kg																																							
2,4,5-Trichlorophenol	400,000	767,000	Type 4	767,000	Type 4																										2000 U	2200 U	2200 U	2000 U	2200 U	2300 U	1900 U	19000 U	22000 U	22000 U
2,4,6-Trichlorophenol	3,000	4,560	Type 4	4,560	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
2,4-Dichlorophenol	2,000	7,260	Type 4	7,260	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
2,4-Dimethylphenol	70,000	70,000	Type 3	70,000	Type 3																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
2,4-Dinitrophenol	7,000	7,000	Type 3	7,000	Type 3																										2000 U	2200 U	2200 U	2000 U	2200 U	2300 U	1900 U	19000 U	22000 U	22000 U
2-Methylphenol	3,800	42,100	Type 4	42,100	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
4-Methylphenol	3,800	55,600	Type 4	55,600	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Acenaphthene	300,000	1,258,000	Type 4	1,258,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Acenaphthylene	130,000	130,000	Type 3	100,000,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Anthracene	500,000	20,187,000	Type 4	20,187,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Benzo(a)anthracene	5,000	10,100	Type 4	10,100	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Benzo(a)pyrene	1,640	4,700	Type 4	4,700	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Benzo(b)fluoranthene	5,000	5,000	Type 3	5,000	Type 3																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Benzo(g,h,i)perylene	500,000	500,000	Type 3	100,000,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Benzo(k)fluoranthene	5,000	49,600	Type 4	49,600	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
bis(2-Chloroisopropyl)ether	171,000	171,000	Type 3	171,000	Type 3																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
bis(2-Ethylllhexyl)phthalate	50,000	326,000	Type 4	326,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Chrysene	5,000	152,000	Type 4	152,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Dibenz(a,h)anthracene	2,050	7,840	Type 4	22,900	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Di-n-butylphthalate	400,000	514,000	Type 4	514,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Di-n-octyl phthalate	70,000	20,440,000	Type 4	100,000,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Fluoranthene	500,000	9,084,000	Type 4	9,084,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Fluorene	360,000	1,514,000	Type 4	1,514,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	430	8200	18000	9600
Indeno(1,2,3-cd)pyrene	5,000	78,400	Type 4	111,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Naphthalene	100,000	100,000	Type 3	100,000	Type 3																										420	430 U	1500	390 U	420 U	460 U	700	37000	140000	69000
N-Nitrosodiphenylamine	6,460	8,880	Type 4	8,880	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Pentachlorophenol (PCP)	3,300	3,300	Type 3	3,300	Type 3																										2000 U	2200 U	2200 U	2000 U	2200 U	2300 U	1900 U	19000 U	22000 U	22000 U
Phenanthrene	110,000	110,000	Type 3	100,000,000	Type 4																										390 U	430 U	1400	390 U	420 U	460 U	370 U	3800 U	5100	4300 U
Phenol	400,000	400,000	Type 3	400,000	Type 3																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Pyrene	500,000	6,677,000	Type 4	6,677,000	Type 4																										390 U	430 U	430 U	390 U	420 U	460 U	370 U	3800 U	4200 U	4300 U
Pesticides - mg/kg																																							
4,4' -DDD	0.660	12.9	Type 4	12.9	Type 4																																		
4,4' -DDE	0.660	9.15	Type 4	9.15	Type 4																																		
4,4' -DDT	0.660	13.1	Type 4	13.1	Type 4																																		
Aldrin	0.660	0.66	Type 3	0.66	Type 3																																		
alpha-BHC	0.660	0.66	Type 3	0.66	Type 3																																		
beta-BHC	0.660	0.66	Type 3	0.66	Type 3																																		
Chlordane	9.20	9.2	Type 3	9.2	Type 3																																		
delta-BHC	25.0	25.0	Type 3	100,000	Type 4																																		
Dieldrin	0.660	0.66	Type 3	0.66	Type 3																																		
Endosulfan I	10.0	10	Type 3	10	Type 3																																		
Endosulfan II	10.0	10	Type 3	10	Type 3																																		
Endosulfan sulfate	1.65	1.65	Type 3	100,000	Type 4																																		
Endrin	10.0	24.8	Type 4	24.8	Type 4																																		
Endrin aldehyde	10.0	10	Type 3	100,000	Type 3																																		
Endrin ketone	10.0	10	Type 3	100,000	Type 4																																		
gamma-BHC (Lindane)	0.660	0.66	Type 3	0.66	Type 3																																		
gamma-Chlordane	9.20	9.2	Type 3	9.2	Type 3																																		
Heptachlor epoxide	1.64	1.65	Type 3	1.65	Type 3																																		
Methoxychlor	10.0	552	Type 4	552	Type 4																																		

Table 1
Soil Analytical Results - September 2013

W&C 9/2013 Soil Samples						Former Pump Room Area																														Former East Tank Farm Area									
Location	Type 1	Non-Residential RRS				WCB-50	WCB-50	WCB-50	WCB-50	WCB-51	WCB-51	WCB-51	WCB-52	WCB-52	WCB-52	WCB-53	WCB-53	WCB-53	WCB-54	WCB-54	WCB-54	WCB-8	WCB-8	WCB-8	WCB-55	WCB-55	WCB-81	WCB-82	WCB-83	WCB-83	WCB-83	WCB-11	WCB-11	WCB-11	WCB-34	WCB-34	WCB-35	WCB-35	WCB-36	WCB-36	WCB-38	WCB-38
Depth (feet bgs)	RRS	SS Soil (0-2')		SB Soil (>2')		0-2'	4-6'	8-10'	12-13'	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'	4-6'	8-10'	8-10'	8-10'	0-2'	4-6'	8-10'	0-2'	3-5'	5-7'	0-2'	3-5'	0-2'	3-5'	0-2'	3-5'	0-2'	3-5'
Constituent	Date Sampled	(ug/kg)	RRS	RRS Type	RRS	RRS Type	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/9/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13	9/11/13
Volatiles-ug/kg																																													
1,1,1,2-Tetrachloroethane	7,000	7,000	Type 3	7,000	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
1,1,1-Trichloroethane	20,000	253,000	Type 4	253,000	Type 4	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
1,1,2,2-Tetrachloroethane	130	130	Type 3	130	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
1,1,2-Trichloroethane	500	500	Type 3	500	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
1,1-Dichloroethane	400,000	400,000	Type 3	400,000	Type 3	13	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	19	39	390	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
1,1-Dichloroethene	700	700	Type 3	700	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
1,2,3-Trichloropropane	498	1,190	Type 3	4,000	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
1,2,4-Trichlorobenzene	10,800	10,800	Type 3	10,800	Type 3	3.4 U	7600	54000	7500	2.9 U	2.8 U	36000	2.7 U	3.2 U	4	3.7 U	4 U	16000	3.1 U	10000	6500	3.9 U	6	72	5.8	12	28000	4.1 U	3.7 U	3.6 U	4.1 U	7	3.5	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	52000	6500
1,2-Dibromo-3-Chloropropane	20	20	Type 3	20	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
1,2-Dichlorobenzene	60,000	60,000	Type 3	60,000	Type 3	4.4	4900	31000	2800	2.9 U	2.8 U	13000	2.7 U	3.2 U	3.6 U	3.7 U	4 U	740	11	240000	330000	4.6	5.1	67	4.4 U	6.2	9800	4.1 U	4.9	3.6 U	4.1 U	100	6400	5.2	3.5 U	5.4	3.6 U	3.0 U	3.6 U	4.0 U	670000	89000
1,2-Dichloroethane	500	500	Type 3	500	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
1,2-Dichloropropane	500	500	Type 3	500	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
1,3-Dichlorobenzene	60,000	60,000	Type 3	60,000	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	1700	3.1 U	16000	19000	3.9 U	4.4 U	5.5	4.4 U	4.3 U	200	4.1 U	3.7 U	3.6 U	4.1 U	17	56	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	70000	7900
1,4-Dichlorobenzene	7,500	7,500	Type 3	7,500	Type 3	3.4 U	1200 U	2600	240	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	2400	19	44000	50000	3.9 U	4.4 U	12	4.4 U	4.3 U	380	4.1 U	3.7 U	3.6 U	4.1 U	23	79	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	99000	12000
2-Butanone	200,000	200,000	Type 3	200,000	Type 3	34 U	12000 U	20000 U	1900 U	29 U	28 U	37000 U	27 U	32 U	36 U	37 U	40 U	3000 U	31 U	24000 U	4100 U	39 U	44 U	38 U	44 U	43 U	1900 U	41 U	37 U	36 U	41 U	36 U	31 U	31 U	35 U	28 U	36 U	30 U	36 U	40 U	19000 U	1500 U
4-Methyl-2-pentanone	200,000	200,000	Type 3	200,000	Type 3	6.8 U	2500 U	4000 U	390 U	5.7 U	5.5 U	7400 U	5.3 U	6.4 U	7.2 U	7.5 U	8.1 U	590 U	6.2 U	4800 U	820 U	7.9 U	8.7 U	7.5 U	8.7 U	8.6 U	380 U	8.2 U	7.4 U	7.2 U	8.2 U	7.3 U	6.2 U	6.2 U	6.9 U	5.6 U	7.2 U	6.1 U	7.2 U	8.0 U	3900 U	310 U
Acetone	400,000	400,000	Type 3	400,000	Type 3	68 U	25000 U	40000 U	3900 U	58	55 U	74000 U	53 U	68	72 U	75 U	81 U	5900 U	62 U	48000 U	8200 U	79 U	87 U	470	120	86 U	3800 U	82 U	74 U	72 U	82 U	73 U	62 U	62 U	69 U	56 U	72 U	61 U	120	80 U	39000 U	3100 U
Benzene	500	500	Type 3	500	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
Bromoform	10,000	10,000	Type 3	10,000	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
Carbon disulfide	400,000	400,000	Type 3	400,000	Type 3	6.8 U	2500 U	4000 U	390 U	5.7 U	5.5 U	7400 U	5.3 U	6.4 U	7.2 U	7.5 U	8.1 U	590 U	6.2 U	4800 U	820 U	7.9 U	8.7 U	7.5 U	8.7 U	8.6 U	380 U	8.2 U	7.4 U	7.2 U	8.2 U	7.3 U	6.2 U	6.2 U	6.9 U	5.6 U	7.2 U	6.1 U	7.2 U	8.0 U	3900 U	310 U
Chlorobenzene	10,000	10,000	Type 3	10,000	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	76	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	10	1200	4.2	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	2100
Chloroethane	170	497,000	Type 4	497,000	Type 4	6.8 U	2500 U	4000 U	390 U	5.7 U	5.5 U	7400 U	5.3 U	6.4 U	7.2 U	7.5 U	8.1 U	590 U	6.2 U	4800 U	820 U	7.9 U	8.7 U	7.5 U	8.7 U	8.6 U	380 U	8.2 U	7.4 U	7.2 U	8.2 U	7.3 U	6.2 U	6.2 U	6.9 U	5.6 U	7.2 U	6.1 U	7.2 U	8.0 U	3900 U	310 U
cis-1,2-Dichloroethene	7,000	7,000	Type 3	7,000	Type 3	250	5900	2000 U	190 U	2.9 U	2.8 U	3700 U	3.6	3.2 U	3.6 U	170	1400	8700	3.1 U	2400 U	410 U	67	12	25	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	39	3500	81	1500	530	12	8.5	3.6 U	4.0 U	8500	4500
Cyclohexane	20,000	1,093,000	Type 4	1,093,000	Type 4	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
Dichlorodifluoromethane	23,300	30,800	Type 4	100,000	Type 3	6.8 U	2500 U	4000 U	390 U	5.7 U	5.5 U	7400 U	5.3 U	6.4 U	7.2 U	7.5 U	8.1 U	590 U	6.2 U	4800 U	820 U	7.9 U	8.7 U	7.5 U	8.7 U	8.6 U	380 U	8.2 U	7.4 U	7.2 U	8.2 U	7.3 U	6.2 U	6.2 U	6.9 U	5.6 U	7.2 U	6.1 U	7.2 U	8.0 U	3900 U	310 U
Ethylbenzene	70,000	70,000	Type 3	70,000	Type 3	3.4 U	1200	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	620	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	3800	320
Isopropylbenzene	21,900	85,500	Type 4	85,500	Type 4	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	490	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
Methylene chloride	500	2,800	Type 4	2,800	Type 4	14 U	4900 U	7900 U	780 U	11 U	11 U	15000 U	11 U	13 U	14 U	15 U	16 U	1200 U	12 U	9600 U	1600 U	16 U	17 U	15 U	17 U	17 U	760 U	16 U	15 U	14 U	16 U	15 U	12 U	12 U	14 U	11 U	14 U	12 U	14 U	16 U	7700 U	610 U
Styrene	14,000	135,000	Type 4	135,000	Type 4	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	3.7 U	4 U	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
Tetrachloroethene (PCE)	500	500	Type 3	500	Type 3	17	1200 U	2000 U	190 U	5.2	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	100	4 U	600	3.4	2400 U	410 U	40	4.4 U	6.6	33	4.3 U	880	4.1 U	8.5	22	4.1 U	2400	3200	330	3.5 U	9.5	47	36	14	16	2600	300
Toluene	100,000	100,000	Type 3	100,000	Type 3	14	21000	120000	3300	2.9 U	2.8 U	55000	2.7 U	3.2 U	3.6 U	3.7 U	4 U	600	3.1 U	2400 U	5400	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	700	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.1 U	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
trans-1,2-Dichloroethene	10,000	10,000	Type 3	10,000	Type 3	3.4 U	1200 U	2000 U	190 U	2.9 U	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	4.4	4.9	300 U	3.1 U	2400 U	410 U	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	24	3.1 U	6.9	17	3.6 U	3.0 U	3.6 U	4.0 U	1900 U	150 U
Trichloroethene (TCE)	500	500	Type 3	500	Type 3	5.8	1200 U	2000 U	190 U	4.1	2.8 U	3700 U	2.7 U	3.2 U	3.6 U	31	7.1	300 U	3.1 U	2400 U	410 U	29	4.4 U	6	9.7	4.3 U	190 U	4.1 U	3.7 U	3.6 U	4.1 U	29	61	13	3.5 U	2.8 U	5.5	23	3.6 U	4.0 U	1900 U	150 U
Vinyl Chloride	200	200	Type 3	200	Type 3	9.2	2500 U	4000 U	390 U	5.7 U	5.5 U	7400 U	5.3 U	6.4 U	7.2 U	17	39	590 U	6.2 U	4800 U	820 U	7.9 U	8.7 U	7.5 U	8.7 U	8.6 U	380 U	8.2 U	7.4 U	7.2 U	8.2 U	7.3 U	14	6.2 U	6.9 U	5.6 U	7.2 U	6.1 U	7.2 U	8.0 U	3900 U	310 U
Xylene (total)	1,000,000	1,000,000	Type 3	1,000,000	Type 3	3.4 U	9200	14000	370	2.9 U	2.8 U	10000	2.7 U	3.2 U	3.6 U	3.7 U	4 U	1400	3.1 U	2400 U	4200	3.9 U	4.4 U	3.8 U	4.4 U	4.3 U	4500	4.1 U	3.7 U	3.6 U	4.1 U	3.6 U	3.5	3.1 U	3.5 U	2.8 U	3.6 U	3.0 U	3.6 U	4.0 U	19000	1200
Semivolatiles- ug/kg																																												
2,4,5-Trichlorophenol	400,000	767,000	Type 4	767,000	Type 4		20000 U	22000 U	2300 U											21000 U	2200 U																						
2,4,6-Trichlorophenol	3,000	4,560	Type 4	4,560	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
2,4-Dichlorophenol	2,000	7,260	Type 4	7,260	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
2,4-Dimethylphenol	70,000	70,000	Type 3	70,000	Type 3		3800 U	4200 U	440 U											4200 U	420 U																						
2,4-Dinitrophenol	7,000	7,000	Type 3	7,000	Type 3		20000 U	22000 U	2300 U											21000 U	2200 U																						
2-Methylphenol	3,800	42,100	Type 4	42,100	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
4-Methylphenol	3,800	55,600	Type 4	55,600	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Acenaphthene	300,000	1,258,000	Type 4	1,258,000	Type 4		3800 U	4200 U	440 U											6300	8200																						
Acenaphthylene	130,000	130,000	Type 3	100,000,000	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Anthracene	500,000	20,187,000	Type 4	20,187,000	Type 4		3800 U	4200 U	440 U											4200 U	1500																						
Benzo(a)anthracene	5,000	10,100	Type 4	10,100	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Benzo(a)pyrene	1,640	4,700	Type 4	4,700	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Benzo(b)fluoranthene	5,000	5,000	Type 3	5,000	Type 3		3800 U	4200 U	440 U											4200 U	420 U																						
Benzo(g,h,i)perylene	500,000	500,000	Type 3	100,000,000	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Benzo(k)fluoranthene	5,000	49,600	Type 4	49,600	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
bis(2-Chloroisopropyl)ether	171,000	171,000	Type 3	171,000	Type 3		3800 U	4200 U	440 U											4200 U	420 U																						
bis(2-Ethylllhexyl)phthalate	50,000	326,000	Type 4	326,000	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Chrysene	5,000	152,000	Type 4	152,000	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Dibenz(a,h)anthracene	2,050	7,840	Type 4	22,900	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Di-n-butylphthalate	400,000	514,000	Type 4	514,000	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Di-n-octyl phthalate	70,000	20,440,000	Type 4	100,000,000	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Fluoranthene	500,000	9,084,000	Type 4	9,084,000	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Fluorene	360,000	1,514,000	Type 4	1,514,000	Type 4		3800 U	6400	440 U											4700	420 U																						
Indeno(1,2,3-cd)pyrene	5,000	78,400	Type 4	111,000	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Naphthalene	100,000	100,000	Type 3	100,000	Type 3		7800	40000	440 U											39000	680000																						
N-Nitrosodiphenylamine	6,460	8,880	Type 4	8,880	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Pentachlorophenol (PCP)	3,300	3,300	Type 3	3,300	Type 3		20000 U	22000 U	2300 U											21000 U	2200 U																						
Phenanthrene	110,000	110,000	Type 3	100,000,000	Type 4		3800 U	4200 U	440 U											4200 U	3400																						
Phenol	400,000	400,000	Type 3	400,000	Type 3		3800 U	4200 U	440 U											4200 U	420 U																						
Pyrene	500,000	6,677,000	Type 4	6,677,000	Type 4		3800 U	4200 U	440 U											4200 U	420 U																						
Pesticides - mg/kg																																													
4,4' -DDD	0.660	12.9	Type 4	12.9	Type 4																																							
4,4' -DDE	0.660	9.15	Type 4	9.15	Type 4																																							
4,4' -DDT	0.660	13.1	Type 4	13.1	Type 4																																							
Aldrin	0.660	0.66	Type 3	0.66	Type 3																																							
alpha-BHC	0.660	0.66	Type 3	0.66	Type 3																																							
beta-BHC	0.660	0.66	Type 3	0.66	Type 3																																							
Chlordane	9.20	9.2	Type 3	9.2	Type 3																																							
delta-BHC	25.0	25.0	Type 3	100,000	Type 4																																							
Dieldrin	0.660	0.66	Type 3	0.66	Type 3																																							
Endosulfan I	10.0	10	Type 3	10	Type 3																																							
Endosulfan II	10.0	10	Type 3	10	Type 3																																							
Endosulfan sulfate	1.65	1.65	Type 3	100,000	Type 4																																							
Endrin	10.0	24.8	Type 4	24.8	Type 4																																							
Endrin aldehyde	10.0	10	Type 3	100,000	Type 3																																							
Endrin ketone	10.0	10	Type 3	100,000	Type 4																																							
gamma-BHC (Lindane)	0.660	0.66	Type 3	0.66	Type 3																																							
gamma-Chlordane	9.20	9.2	Type 3	9.2	Type 3																																							
Heptachlor epoxide	1.64	1.65	Type 3	1.65	Type 3																																							
Methoxychlor	10.0	552	Type 4	552	Type 4																																							

Table 1
Soil Analytical Results - September 2013

| W&C 9/2013 Soil Samples | | | | | | Former East Tank Farm Area | | | | | |

Table 1
Soil Analytical Results - September 2013

| | W&C 9/2013 Soil Samples | | | | | | Wastewater Treatment Facility Area | | | | | | | | | | | | Additional Investigation Areas | | | | | | | | | | | |

Table 2
2013 Groundwater Sampling Plan
Former Oxford Chemical VRP Site

Well No.	VOCs	SVOCs	Pest.	PCBs	Summary of 2011/2012 Data
East/Sublisted Area					
BH-12	X				VOCs detected in most wells. Pesticides and PCBs detected in only one well (BH7) out of 10. No samples for SVOCs.
BH-24	X	X			
BH-23	X				
EW-C8	X				
BH-22	X				
EW-C6	X				
EW-C7	X				
BH-13	X	X			
BH-21	X				
BH-20	X				
MW-12	X				
BH-19	X				
BH-17	X				
BH-11	X	X			
BH-14	X				
BH-10	X				
BH-6	X				
BH-9	X				
BH-18	X				
BH-7	X		X	X	
MW-A	X				
North/PIB Area					
MW-7	X	X	X		VOCs detected in most wells. Limited SVOC/PCB (1 well) and Pesticide (2 wells) data, but all ND.
EW-A6	X				
EW-A7	X				
EW-A8	X				
EW-A9	X				
EW-A10	X				
MW-11	X				
MW-9	X	X	X		
PZ-1	X				
PZ-2	X	X	X		
MW-1	X				
West Perimeter Area					
EW-A4	X	X	X		VOCs detected in most wells. SVOCs and Pesticides detected in ~ half the wells. No PCB data.
EW-A3	X	X	X		
EW-A2	X	X	X		
EW-A1	X	X	X		
MW-5	X	X	X		
EW-D5	X		X		
EW-D9	X	X	X		
EW-D7	X	X	X		
MW-6	X	X	X		
EW-D3	X		X		
EW-B4	X		X		
EW-B5	X		X		
EW-B3	X	X	X		
EW-B6	X		X		
Upgradient					
MW-2	X				ND VOCs, no other data.
Site Interior					
MW-13	X	X			Based upon detected constituents to the east and west.
MW-14	X	X			
MW-15	X	X			
MW-16	X	X			
Peachtree Village Partners Property - Downgradient West					
MW-17	X	X	X		Based upon constituents detected along the western former Oxford Chimical property line.
MW-18	X	X	X		
MW-19	X	X	X		
MW-20	X	X	X		
MW-21	X	X	X		
MW-24	X	X			Based upon detections of constituents in MW-17 through MW-21.
MW-25	X	X			

Table 3
Water Table Measurements - September 16, 2013
Former Oxford Chemical VRP Site

Well I.D.	Top of Casing Elevation (feet)	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	Product Thickness (feet)	Water Colum Height (feet)	Water Table Elevation (feet)
EW-D9	1023.65		10.00	29.45		19.45	1013.65
EW-D7	1023.72		8.10	30.35		22.25	1015.62
EW-D8	1022.91		8.57	27.70		19.13	1014.34
MW-6	1025.71		11.75	28.90		17.15	1013.96
EW-D3	1024.23		6.30	29.70		23.40	1017.93
EW-D5	1026.77		12.60	24.00		11.40	1014.17
EW-D6	1026.4		12.75	29.50		16.75	1013.65
MW-5	1028.96		15.64	29.70		14.06	1013.32
EW-A1	1026.81		15.00	29.40		14.40	1011.81
EW-B4	1023.81		11.72	26.80		15.08	1012.09
MW-3	1027.22	13.05	13.10		0.05	-13.10	1014.17
EW-A2	1023.41		13.60	28.90		15.30	1010.81
EW-B3	1024.83		12.10	25.30		13.20	1012.73
EW-B5	1024.2		13.20	28.35		15.15	1011.00
EW-A3	1022.95		13.25	24.70		11.45	1009.70
EW-B6	1024.23		14.20	28.73		14.53	1010.03
EW-A4	1022.89		13.80	29.15		15.35	1009.09
EW-A5	1022.86		14.99			-14.99	1007.87
EW-A6	1022.12		15.22	29.25		14.03	1006.90
MW-7	1016.61		10.26	23.68		13.42	1006.35
EW-A7	1020.69		13.90	29.80		15.90	1007.06
MW-11	1018.15		11.25	28.96		17.71	1006.90
EW-A8	1021.7		13.70	29.15		15.45	1008.00
EW-A9	1021.91		13.68	29.40		15.72	1008.23
MW-9	1017.84		10.60	15.59		4.99	1007.24
EW-A10	1021.67		12.45	24.63		12.18	1009.22
PZ-2	1019.55		11.60	19.00		7.40	1007.95
PZ-1	1020.31		11.35	19.30		7.95	1008.96
MW-1	1022.88		9.96	17.10		7.14	1012.92
BH-12	1022.27		11.35	15.10		3.75	1010.92
BH-24	1021.06		9.52	21.00		11.48	1011.54
EW-C9	1021.23		9.80	28.50		18.70	1011.43
BH-23	1021.17		8.68	14.72		6.04	1012.49
EW-C8	1021.63		8.10	28.46		20.36	1013.53
BH-22	1025.53		11.15	21.00		9.85	1014.38
EW-C6	1021.99		5.82	13.68		7.86	1016.17
EW-C7	1022.21		3.85	28.05		24.20	1018.36
BH-13	1021.98		3.70	14.72		11.02	1018.28
BH-21	1021.71		6.10	21.00		14.90	1015.61
BH-20	1021.7		7.58	19.21		11.63	1014.12
BH-19	1021.27		8.85	16.81		7.96	1012.42
MW-12	1021.51		10.60	63.15		52.55	1010.91
BH-15	1021.48	8.62	8.70	24.77	0.08	16.07	1012.78
RW-19	1021.63		7.45	27.60		20.15	1014.18
BH-11	1021.39		8.15	13.73		5.58	1013.24
BH-14	1021.63		6.60	17.08		10.48	1011.54
BH-10	1021.8		5.60	13.41		7.81	1016.20
BH-6	1021.7		6.55	11.76		11.76	1015.15
BH-9	1021.92	8.15	9.12	14.65	0.97	5.53	1012.80
BH-7	1020.85		8.90	13.74		4.84	1011.95
MW-A	1023.18		11.41	32.00		20.59	1011.77
BH-18	1020.92	8.78	8.81	18.79	0.03	9.98	1012.11
BH-8	1021.1		9.80	14.15		4.35	1011.30
BH-17	1021.06		9.80	19.18		9.38	1011.26
BH-16	1020.89		8.68	14.28		5.60	1012.21
MW-2	1031.72		11.85	26.29		14.44	1019.87
MW-23	1032.21		12.60	59.90		47.30	1019.61
MW-24	1032.38		12.38	30.12		17.74	1020.00
MW-13	1025.27		14.62	25.11		10.49	1010.65
MW-14	1025.29		15.41	25.70		10.29	1009.88
MW-15	1026.49		12.98	25.38		12.40	1013.51
MW-16	1025.07		6.05	20.34		14.29	1019.65

Table 4
Water Table Measurements - December 18, 2013
Former Oxford Chemical VRP Site

Well I.D.	Top of Casing Elevation (feet)	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	Product Thickness (feet)	Water Colum Height (feet)	Water Table Elevation (feet)
EW-D9	1023.65		10.18	29.45		19.27	1013.47
EW-D7	1023.72		7.65	30.35		22.70	1016.07
MW-6	1025.71		11.08	28.90		17.82	1014.63
EW-D5	1026.77		12.75	24.00		11.25	1014.02
MW-5	1028.96		15.80	29.70		13.90	1013.16
MW-3	1027.22	13.95	13.99		0.04		1013.23
EW-A1	1026.81		15.64	29.40		13.76	1011.17
EW-A2	1023.41		12.85	28.90		16.05	1010.56
EW-A3	1022.95		12.90	24.70		11.80	1010.05
EW-A4	1022.89		13.40	29.15		15.75	1009.49
MW-17	1019.03		8.81	21.31		12.50	1010.22
MW-18	1019.2		10.57	24.40		13.83	1008.63
MW-19	1011.41		8.30	18.95		10.65	1003.11
MW-20	1011.59		6.12	14.80		8.68	1005.47
MW-21	1018.82		10.18	19.20		9.02	1008.64
MW-25	1015.04		10.12	Not Measured			1004.92
MW-26	1009.8		9.89	Not Measured			999.91

Table 5
Summary of Constituents Detected in Groundwater Since 2011
Former Oxford Chemicals VRP Site

Volatile Organic Compounds (ug/l)	RRS (ug/l)		BH-6					BH-7					BH-9	BH-10	
	Type 1	Type 3/4	2/2/11	6/16/11	2/22/12	8/15/12	9/27/13	2/2/11	6/16/11	2/22/12	8/15/12	9/27/13	2/1/11	2/1/11	9/27/13
1,1,1-Trichloroethane	200	36,100	15	8.4	5 U	dry	5 U	**33000**	**44000**	**30,000**	dry	**32000**	**810**	**480**	190
1,1-Dichloroethane	4,000	4,000	16	10	5 U	dry	5 U	1700	2700	2000	dry	1800	72	16	22
1,1-Dichloroethene	7	1,300	5 U	5 U	5 U	dry	5 U	**2100**	**2700**	**1300**	dry	**2100**	**29**	**12**	6.8
1,2,4-Trichlorobenzene	70	70	5 U	5 U	5 U	dry	5 U	**610** E	**1100** E	250 U	dry	**230**	5 U	5 U	5 U
1,2-Dichlorobenzene	600	1,470	5 U	5 U	5 U	dry	5 U	38	47	250 U	dry	41	5 U	5 U	5 U
1,2-Dichloroethane	5	56	5 U	5 U	5 U	dry	5 U	5 U	5 U	250 U	dry	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	600	600	5 U	5 U	5 U	dry	5 U	6.2	8.5	250 U	dry	7.9	5 U	5 U	5 U
1,4-Dichlorobenzene	75	75	5 U	5 U	5 U	dry	5 U	64	75	250 U	dry	66	5 U	5 U	5 U
2-Butanone	2,000	25,600	50 U	50 U	50 U	dry	50 U	50 U	50 U	2500 U	dry	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone	2,000	6,240	10 U	10 U	10 U	dry	10 U	10 U	10 U	250 U	dry	10 U	10 U	10 U	10 U
Acetone	4,000	68,700	50 U	50 U	50 U	dry	50 U	50 U	50 U	2500 U	dry	50 U	50 U	50 U	50 U
Benzene	5	20	5 U	5 U	5 U	dry	5 U	5 U	5 U	250 U	dry	5 U	5 U	5 U	5 U
Chlorobenzene	100	361	5 U	5 U	5 U	dry	5 U	14	15	250 U	dry	30	5 U	5 U	5 U
Chloroethane	DL	87,600	10 U	10 U	10 U	dry	10 U	**170**	**100**	500 U	dry	**110**	10 U	10 U	10 U
cis-1,2-Dichloroethene	70	200	5 U	5 U	5 U	dry	5 U	**280** E	**570** E	**510**	dry	**280**	7.9	5 U	5 U
Ethylbenzene	700	700	5 U	5 U	5 U	dry	5 U	11	15	250 U	dry	9.3	5 U	5 U	5 U
Isopropylbenzene	DL	2,610	5 U	5 U	5 U	dry	5 U	5 U	5 U	250 U	dry	5 U	5 U	5 U	5 U
m,p-Xylene	1,000	10,000	5 U	5 U	10 U	dry	NA	24	40	500 U	dry	NA	5 U	5 U	NA
Methyl acetate			5 U	5 U	5 U	dry	5 U	5 U	5 U	250 U	dry	5 U	5 U	5 U	5 U
Methylcyclohexane			5 U	5 U	5 U	dry	5 U	5 U	5 U	250 U	dry	5 U	5 U	5 U	5 U
Methylene chloride	5	550	5 U	5 U	5 U	dry	5 U	5 U	5 U	250 U	dry	5 U	5 U	5 U	5 U
o-Xylene	1,000	10,000	5 U	5 U	5 U	dry	NA	16	25	250 U	dry	NA	5 U	5 U	NA
Styrene	100	6,130	5 U	5 U	5 U	dry	5 U	5 U	5 U	250 U	dry	5 U	5 U	5 U	5 U
Tetrachloroethene	5	220	5 U	5 U	5 U	dry	5 U	**6800**	**12000**	**5400**	dry	**8100**	**5.4**	5 U	5 U
Toluene	1,000	6,890	5 U	5 U	5 U	dry	5 U	18	21	250 U	dry	29	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	420	5 U	5 U	5 U	dry	5 U	5 U	5 U	250 U	dry	8.1	5 U	5 U	5 U
Trichloroethene	5	13	5 U	5 U	5 U	dry	5 U	**1000**	**1500**	**4100**	dry	**2300**	5 U	5 U	5 U
Vinyl chloride	2	3.7	2 U	2 U	2 U	dry	2 U	**8.9**	**4.9**	100 U	dry	**7.7**	**2.9**	2 U	2 U
Xylenes, total	1,000	10,000	NA	NA	NA	dry	5 U	NA	NA	NA	dry	74	NA	NA	5 U

All concentrations are in units of micrograms per liter (ug/l).
Only compounds detected in one or more monitoring wells are shown.
U = Compound not detected above method quantitation limit.
NA - Sample not analyzed for compound
14 - Constituent detected above Type 1 RRS
19 - Constituent detected above Type 3/4 RRS

Table 5

Summary of Constituents Detected in Groundwater Since 2011

Former Oxford Chemicals VRP Site

Volatile Organic Compounds (ug/l)	RRS (ug/l)		BH-11					BH-12		BH-13		BH-14		BH-17				
	Type 1	Type 3/4	2/2/11	6/16/11	2/22/12	8/15/12	9/26/13	2/3/11	9/24/13	2/3/11	9/24/13	2/3/11	9/27/13	2/2/11	6/15/11	2/17/12	8/15/12	9/26/13
1,1,1-Trichloroethane	200	36,100	5 U	5 U	8.2	dry	5 U	5 U	5 U	5 U	5 U	13	7.5	5 U	**390**	**620**	**850**	5 U
1,1-Dichloroethane	4,000	4,000	120	120	180	dry	9	5 U	5 U	5 U	5 U	49	33	6.6	420	570	440	6.8
1,1-Dichloroethene	7	1,300	**7.8**	**15**	6.6	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**140**	**230**	**240**	5 U
1,2,4-Trichlorobenzene	70	70	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.6	8.3	5 U
1,2-Dichlorobenzene	600	1,470	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	56	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	600	600	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	75	75	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	2,000	25,600	50 U	50 U	50 U	dry	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone	2,000	6,240	10 U	10 U	10 U	dry	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	4,000	68,700	50 U	50 U	50 U	dry	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	5	20	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	361	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6.7	8.7	10	5 U
Chloroethane	DL	87,600	10 U	10 U	10 U	dry	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**120**	**190**	**130**	10 U
cis-1,2-Dichloroethene	70	200	50	52	29	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**320**	**500**	**380**	5 U
Ethylbenzene	700	700	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	DL	2,610	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
m,p-Xylene	1,000	10,000	5 U	5 U	10 U	dry	NA	5 U	NA	5 U	NA	5 U	NA	5 U	5 U	10 U	10 U	NA
Methyl acetate			5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane			5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	550	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-Xylene	1,000	10,000	5 U	5 U	5 U	dry	NA	5 U	NA	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	NA
Styrene	100	6,130	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	220	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**13**	**19**	**19**	5 U
Toluene	1,000	6,890	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	420	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	9.6	13	10	5 U
Trichloroethene	5	13	5 U	5 U	5 U	dry	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**5.2**	5 U
Vinyl chloride	2	3.7	**2.4**	**3.4**	2 U	dry	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**11**	**22**	**19**	**2.1**
Xylenes, total	1,000	10,000	NA	NA	NA	dry	5 U	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA	5 U

Table 5
Summary of Constituents Detected in Groundwater Since 2011
Former Oxford Chemicals VRP Site

Volatile Organic Compounds (ug/l)	RRS (ug/l)		BH-18	BH-19					BH-20				
	Type 1	Type 3/4	2/1/11	2/3/11	6/14/11	2/16/12	8/14/12	9/26/13	2/2/11	6/13/11	2/16/12	8/14/12	9/26/13
1,1,1-Trichloroethane	200	36,100	**1600**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	4,000	4,000	990	19	22	12	5.6	12	34	20	17	11	5 U
1,1-Dichloroethene	7	1,300	**360**	5 U	5 U	5 U	5 U	5 U	**16**	**9.9**	**7.2**	5 U	5 U
1,2,4-Trichlorobenzene	70	70	39	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	600	1,470	5 U	5.4	6.4	5 U	5 U	9.3	12	14	8.1	5 U	7.1
1,2-Dichloroethane	5	56	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	600	600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	75	75	12	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	2,000	25,600	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone	2,000	6,240	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	4,000	68,700	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	5	20	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	361	19	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	DL	87,600	**550**	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	70	200	**410**	**180**	**110**	**88**	38	**160**	**840**	**600**	**340**	**210**	**96**
Ethylbenzene	700	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	DL	2,610	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
m,p-Xylene	1,000	10,000	5 U	5 U	5 U	10 U	10 U	NA	5 U	5 U	10 U	10 U	NA
Methyl acetate			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	550	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-Xylene	1,000	10,000	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	NA
Styrene	100	6,130	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	220	**28**	**36**	**53**	**27**	**20**	**28**	**20**	**20**	**7.8**	**5.1**	5 U
Toluene	1,000	6,890	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	420	5 U	7.8	11	5 U	5 U	5.8	15	11	8.4	5 U	5 U
Trichloroethene	5	13	**28**	**90**	**77**	**44**	**27**	**34**	**120**	**84**	**49**	**33**	**11**
Vinyl chloride	2	3.7	**20**	**19**	**13**	**12**	**7.4**	**20**	**23**	**18**	**16**	**9.8**	**8**
Xylenes, total	1,000	10,000	NA	NA	NA	NA	NA	5 U	NA	NA	NA	NA	5 U

Table 5
Summary of Constituents Detected in Groundwater Since 2011
Former Oxford Chemicals VRP Site

Volatile Organic Compounds (ug/l)	RRS (ug/l)		BH-21					BH-22		BH-23		BH-24				
	Type 1	Type 3/4	2/2/11	6/13/11	2/16/12	8/15/12	9/25/13	1/31/11	9/25/13	1/31/11	9/24/13	2/2/11	6/14/11	2/16/12	8/14/12	9/24/13
1,1,1-Trichloroethane	200	36,100	5 U	5 U	5 U	5 U	5 U	**220**	38	37	79	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	4,000	4,000	10	7.6	10	7.1	5 U	600	910	250	360	49	54	31	22	34
1,1-Dichloroethene	7	1,300	5 U	5 U	5 U	6	5 U	**440**	**510**	**150**	**290**	**15**	**21**	**7.1**	5.6	**16**
1,2,4-Trichlorobenzene	70	70	5 U	5 U	5 U	5 U	5 U	11	18	5 U	18	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	600	1,470	5 U	5 U	5 U	5 U	5 U	**3200**	**7,600**	350	170	15	16	9.4	7.6	15
1,2-Dichloroethane	5	56	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	600	600	5 U	5 U	5 U	5 U	5 U	80	130	5 U	11	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	75	75	5 U	5 U	5 U	5 U	5 U	**310**	**890**	20	23	5 U	5.1	5 U	5 U	6
2-Butanone	2,000	25,600	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone	2,000	6,240	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	4,000	68,700	50 U	50 U	5 U	5 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	5	20	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	361	5 U	5 U	5 U	5 U	5 U	19	41	**260**	**470**	28	16	8.9	12	100
Chloroethane	DL	87,600	10 U	10 U	5 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	70	200	**160**	**120**	**92**	58	5.8	**14000**	**69,000**	**8700**	**14,000**	**1100**	**1100**	**540**	**310**	**910**
Ethylbenzene	700	700	5 U	5 U	5 U	5 U	5 U	7.1	31	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	DL	2,610	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
m,p-Xylene	1,000	10,000	5 U	5 U	5 U	5 U	NA	26	NA	5 U	NA	5 U	5 U	10 U	5 U	NA
Methyl acetate			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	550	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-Xylene	1,000	10,000	5 U	5 U	5 U	5 U	NA	20	NA	5 U	NA	5 U	5 U	5 U	5 U	NA
Styrene	100	6,130	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	220	**9.8**	**14**	**17**	**14**	5 U	**64**	5 U	**200**	**510**	**170**	**270**	**78**	**83**	**150**
Toluene	1,000	6,890	5 U	5 U	5 U	5 U	5 U	34	230	5 U	7.5	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	420	5.4	5.1	5 U	5 U	5 U	**140**	**310**	91	**150**	21	28	11	8.5	12
Trichloroethene	5	13	**24**	**21**	**48**	**48**	5 U	**510**	5 U	**230**	**280**	**210**	**220**	**90**	**100**	**130**
Vinyl chloride	2	3.7	**3.9**	**5.7**	**5.2**	**4.3**	2 U	**340**	**2,200**	**170**	**300**	**46**	**41**	**19**	**18**	**17**
Xylene, total	1,000	10,000	NA	NA	NA	NA	5 U	NA	120	NA	15	NA	NA	NA	NA	5 U

All concentrations are in units of micrograms per liter (ug/l).
Only compounds detected in one or more monitoring wells are shown.
U = Compound not detected above method quantitation limit.
NA - Sample not analyzed for compound
14 - Constituent detected above Type 1 RRS
19 - Constituent detected above Type 3/4 RRS

Table 5

Summary of Constituents Detected in Groundwater Since 2011

Former Oxford Chemicals VRP Site

Volatile Organic Compounds (ug/l)	RRS (ug/l)		MW-A		MW-1					MW-2		MW-5		MW-6	
	Type 1	Type 3/4	2/1/11	9/27/13	2/2/11	6/13/11	2/16/12	8/14/12	9/24/13	1/31/11	9/26/13	1/27/11	9/18/13	1/27/11	9/17/13
1,1,1-Trichloroethane	200	36,100	**600**	**490**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	4,000	4,000	47	52	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	1,300	**120**	**87**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	70	18	42	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**190**	33	5 U	5 U
1,2-Dichlorobenzene	600	1,470	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	90	530	5 U	5 U
1,2-Dichloroethane	5	56	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	600	600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.4	30	5 U	5 U
1,4-Dichlorobenzene	75	75	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**98**	**87**	5 U	5 U
2-Butanone	2,000	25,600	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone	2,000	6,240	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	31	10 U	10 U
Acetone	4,000	68,700	50 U	50 U	50 U	64	650	50 U	50 U	50 U	50 U	50 U	610	50 U	50 U
Benzene	5	20	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	361	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.4	26	5 U	5 U
Chloroethane	DL	87,600	**19**	**50**	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	70	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	46	31	5 U	5 U
Ethylbenzene	700	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	7.7	5 U	5 U
Isopropylbenzene	DL	2,610	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**15**	5 U	5 U
m,p-Xylene	1,000	10,000	5 U	NA	5 U	5 U	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA
Methyl acetate			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	550	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-Xylene	1,000	10,000	5 U	NA	5 U	5 U	5 U	5 U	NA	5 U	NA	5 U	NA	5 U	NA
Styrene	100	6,130	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	220	**16**	**25**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**14**	**5.1**	5 U	5 U
Toluene	1,000	6,890	5 U	5 U	5 U	640	**1,400**	140	6.5	5 U	5 U	5 U	680	12	5 U
trans-1,2-Dichloroethene	100	420	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	13	5 U	**6.9**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**7.4**	**24**	5 U	5 U
Vinyl chloride	2	3.7	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**14**	**8.3**	2 U	2 U
Xylene, total	1,000	10,000	NA	5 U	NA	NA	NA	NA	5 U	NA	5 U	NA	99	NA	5 U

Table 5
Summary of Constituents Detected in Groundwater Since 2011
Former Oxford Chemicals VRP Site

Volatile Organic Compounds (ug/l)	RRS (ug/l)		MW-7		MW-9		MW-11		MW-12				
	Type 1	Type 3/4	1/28/11	9/20/13	1/28/11	9/23/13	1/28/11	9/23/13	2/7/2011	6/10/11	2/17/12	8/13/12	9/17/13
1,1,1-Trichloroethane	200	36,100	5 U	5 U	5 U	5 U	5 U	14	5 U	5.0 U	5 U	5 U	5 U
1,1-Dichloroethane	4,000	4,000	5 U	5 U	46	280	26	12	18	18	25	16	13
1,1-Dichloroethene	7	1,300	5 U	5 U	**29**	**290**	**23**	**19**	**30**	**52**	**130**	**47**	**58**
1,2,4-Trichlorobenzene	70	70	5 U	5 U	5 U	29	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
1,2-Dichlorobenzene	600	1,470	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
1,2-Dichloroethane	5	56	5 U	5 U	5 U	5 U	5 U	5 U	**12**	**11**	**12**	**9.3**	**6.4**
1,3-Dichlorobenzene	600	600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
1,4-Dichlorobenzene	75	75	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5 U	5 U	13 U
2-Butanone	2,000	25,600	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50.0 U	50 U	50 U	50 U
4-Methyl-2-pentanone	2,000	6,240	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10.0 U	10 U	10 U	10 U
Acetone	4,000	68,700	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50.0 U	50 U	50 U	50 U
Benzene	5	20	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
Chlorobenzene	100	361	5 U	5 U	5 U	8.7	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
Chloroethane	DL	87,600	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10.0 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	70	200	9	12	13	**170**	56	**90**	**190**	**430**	**270**	**280**	**190**
Ethylbenzene	700	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
Isopropylbenzene	DL	2,610	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
m,p-Xylene	1,000	10,000	10 U	NA	10 U	NA	10 U	NA	5 U	5.0 U	10 U	10 U	NA
Methyl acetate			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
Methylcyclohexane			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
Methylene chloride	5	550	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
o-Xylene	1,000	10,000	5 U	NA	5 U	NA	5 U	NA	5 U	5.0 U	5 U	5 U	NA
Styrene	100	6,130	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
Tetrachloroethene	5	220	5 U	**6.5**	**8.8**	**200**	**85**	**580**	5 U	5.0 U	**5.6**	5 U	5 U
Toluene	1,000	6,890	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	420	5 U	5 U	5 U	5 U	5 U	5 U	12	12	6.7	6.8	5 U
Trichloroethene	5	13	**49**	**70**	**17**	**270**	**39**	**59**	**260**	**110**	**610**	**300**	**240**
Vinyl chloride	2	3.7	2 U	2 U	2 U	2 U	2 U	2 U	**60**	**180**	**79**	**120**	**68**
Xylene, total	1,000	10,000	NA	5 U	NA	5 U	NA	5 U	NA	NA	NA	NA	5 U

Table 5

Summary of Constituents Detected in Groundwater Since 2011

Former Oxford Chemicals VRP Site

Volatile Organic Compounds (ug/l)	RRS (ug/l) Type 1	RRS (ug/l) Type 3/4	MW-13 10/2/13	MW-14 10/2/13	MW-15 10/2/13	MW-16 10/2/13	MW-17 11/13/13	MW-18 11/13/13	MW-19 11/13/13	MW-20 11/13/13	MW-21 11/13/13	PZ-1 9/24/13	PZ-2 9/24/13
1,1,1-Trichloroethane	200	36,100	63	5.4	**560**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	4,000	4,000	59	7.4	180	5 U	5 U	49	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	1,300	**62**	5 U	**110**	5 U	5 U	**24**	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	70	5 U	5 U	5 U	5 U	5.3	5 U	**260**	**870**	**330**	5 U	5 U
1,2-Dichlorobenzene	600	1,470	5 U	5 U	52	5 U	33	5 U	**790**	**970**	200	5 U	5 U
1,2-Dichloroethane	5	56	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	600	600	19	5 U	6.1	5 U	5 U	5 U	46	48	10	5 U	5 U
1,4-Dichlorobenzene	75	75	8.2	5 U	12	5 U	6.9	5 U	**390**	**85**	19	5 U	5 U
2-Butanone	2,000	25,600	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone	2,000	6,240	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	4,000	68,700	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	5	20	5 U	5 U	**8.8**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	361	5 U	5 U	5 U	5 U	5 U	5 U	**520**	23	5 U	5 U	5 U
Chloroethane	DL	87,600	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	70	200	**2700**	**170**	**1200**	5 U	**240**	5 U	5.6	14	5 U	5 U	5 U
Ethylbenzene	700	700	5 U	5 U	40	5 U	5 U	5 U	7.6	34	5 U	5 U	5 U
Isopropylbenzene	DL	2,610	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**13**	5 U	5 U	5 U
m,p-Xylene	1,000	10,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	550	5 U	5 U	30	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-Xylene	1,000	10,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	100	6,130	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	220	**440**	**25**	**1400**	5 U	5 U	**17**	5 U	5 U	**22**	5 U	5 U
Toluene	1,000	6,890	5 U	5 U	16	5 U	46	5 U	5 U	49	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	420	20	5 U	13	5 U	5 U	20	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	13	**550**	**41**	**7400**	5 U	**13**	**9.2**	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	2	3.7	**31**	2 U	**6.2**	2 U	2 U	**73**	2 U	2 U	2 U	2 U	2 U
Xylene, total	1,000	10,000	5 U	5 U	260	5 U	5 U	6.8	29	84	5	5 U	5 U

Table 5

Summary of Constituents Detected in Groundwater Since 2011

Former Oxford Chemicals VRP Site

Volatile Organic Compounds (ug/l)	RRS (ug/l)		EW-A1		EW-A2		EW-A3		EW-A4		EW-A6		EW-A7		EW-A8	
	Type 1	Type 3/4	1/26/11	9/18/13	1/26/11	9/18/13	1/26/11	9/19/13	1/26/11	9/20/13	1/26/11	9/20/13	1/26/11	9/20/13	1/26/13	9/20/13
1,1,1-Trichloroethane	200	36,100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6.6
1,1-Dichloroethane	4,000	4,000	6.4	5 U	5 U	5 U	5 U	5 U	12	14	5 U	5 U	34	17	26	18
1,1-Dichloroethene	7	1,300	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**27**	**8.4**	**16**	6
1,2,4-Trichlorobenzene	70	70	**89**	45	**290**	**470**	6.3	**89**	66	**100**	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	600	1,470	550	**870**	**860**	**970**	5 U	49	33	190	5 U	5 U	12	5 U	32	5 U
1,2-Dichloroethane	5	56	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	600	600	39	150	28	31	5 U	32	5 U	6	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	75	75	**240**	**710**	**83**	**87**	5 U	52	5 U	15	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	2,000	25,600	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone	2,000	6,240	96	12	180	16	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	4,000	68,700	50 U	50 U	1,300	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	5	20	**7.4**	**6.6**	**9.9**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	361	79	**690**	28	14	5 U	**380**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	DL	87,600	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	70	200	**180**	**170**	10	5 U	5 U	5 U	20	28	22	36	**420**	**200**	**480**	**220**
Ethylbenzene	700	700	21	43	25	13	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	DL	2,610	5 U	**5.7**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
m,p-Xylene	1,000	10,000	81	NA	93	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
Methyl acetate			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	550	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-Xylene	1,000	10,000	58	NA	87	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA
Styrene	100	6,130	16	32	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	220	5 U	5 U	**7.3**	5 U	5 U	5 U	5 U	**21**	**8**	**11**	**100**	**77**	**45**	**60**
Toluene	1,000	6,890	**8,300**	**15000**	580	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	420	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	13	5 U	5 U	5 U	5 U	5 U	5 U	**9.1**	**17**	**28**	**31**	**60**	**40**	**48**	**23**
Vinyl chloride	2	3.7	2 U	**19**	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**4.8**	2 U
Xylene, total	1,000	10,000	NA	260	NA	110	NA	5 U	NA	14	NA	5 U	NA	5 U	NA	5 U

All concentrations are in units of micrograms per liter (ug/l).

Only compounds detected in one or more monitoring wells are shown.

U = Compound not detected above method quantitation limit.

NA - Sample not analyzed for compound

14 - Constituent detected above Type 1 RRS

19 - Constituent detected above Type 3/4 RRS

Table 5
Summary of Constituents Detected in Groundwater Since 2011
Former Oxford Chemicals VRP Site

Volatile Organic Compounds (ug/l)	RRS (ug/l)		EW-A9		EW-A10		EW-B3		EW-B4		EW-B5		EW-B6	
	Type 1	Type 3/4	1/26/11	9/23/13	1/26/11	9/24/13	1/27/11	9/19/13	1/27/11	9/19/13	1/27/11	9/19/13	1/27/11	9/20/13
1,1,1-Trichloroethane	200	36,100	19	5 U	25	66	5 U	5 U	5 U	5 U	6.8	5 U	5 U	5 U
1,1-Dichloroethane	4,000	4,000	16	5 U	53	42	5 U	5 U	5 U	5.6	42	21	5 U	6.3
1,1-Dichloroethene	7	1,300	**18**	5 U	**26**	**25**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	70	5 U	5 U	5 U	5 U	5 U	5 U	**210**	51	**550**	80	5 U	5 U
1,2-Dichlorobenzene	600	1,470	61	5 U	46	5 U	5 U	5 U	330	160	390	55	5 U	5 U
1,2-Dichloroethane	5	56	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	600	600	5 U	5 U	5 U	5 U	5 U	5 U	8.5	5.4	7.7	5 U	5 U	5 U
1,4-Dichlorobenzene	75	75	6	5 U	7.2	5 U	5 U	5 U	22	13	19	8.7	5 U	5 U
2-Butanone	2,000	25,600	50 U	50 U	50 U	210	50 U	50 U	98	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone	2,000	6,240	10 U	10 U	10 U	10 U	10 U	10 U	240	67	37	74	10 U	10 U
Acetone	4,000	68,700	50 U	50 U	50 U	50 U	50 U	50 U	**56,000**	50 U	50 U	50 U	50 U	50 U
Benzene	5	20	5 U	5 U	5 U	5 U	5 U	5 U	**18**	**7.7**	5 U	5 U	5 U	5 U
Chlorobenzene	100	361	5 U	5 U	6.3	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	DL	87,600	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	70	200	**240**	50	**1,900**	**2,200**	5 U	5 U	5 U	5 U	**76**	36	5 U	6
Ethylbenzene	700	700	5 U	5 U	5 U	5 U	5 U	5 U	5.6	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	DL	2,610	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
m,p-Xylene	1,000	10,000	10 U	NA	10 U	NA	10 U	NA	22	NA	10 U	NA	10 U	NA
Methyl acetate			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	550	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**6.1**	5 U	5 U	5 U
o-Xylene	1,000	10,000	5 U	NA	5 U	NA	5 U	NA	21	NA	7.2	NA	5 U	NA
Styrene	100	6,130	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	220	**55**	**20**	**140**	**370**	5 U	5 U	5 U	5 U	**7.3**	**8.6**	5 U	5 U
Toluene	1,000	6,890	5 U	5 U	5 U	5 U	5 U	5 U	290	56	5 U	8.1	5 U	5 U
trans-1,2-Dichloroethene	100	420	5 U	5 U	16	11	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	13	**57**	**6.7**	**200**	**130**	5 U	5 U	5 U	5 U	**32**	**15**	5 U	5 U
Vinyl chloride	2	3.7	**3.2**	2 U	**20**	**17**	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylene, total	1,000	10,000	NA	5 U	NA	5 U	NA	5 U	NA	13	NA	5 U	NA	5 U

Table 5

Summary of Constituents Detected in Groundwater Since 2011

Former Oxford Chemicals VRP Site

Volatile Organic Compounds (ug/l)	RRS (ug/l)		EW-C6		EW-C7		EW-C8		EW-D3		EW-D5		EW-D7		EW-D9	
	Type 1	Type 3/4	1/28/11	9/26/13	1/28/11	9/26/13	1/28/11	9/25/13	1/27/11	9/18/13	1/27/11	9/18/13	1/27/11	9/17/13	1/27/11	9/17/13
1,1,1-Trichloroethane	200	36,100	5.1	5.2	5 U	5 U	35	**510**	5 U	5 U	5 U	5 U	12	5 U	5.2	5 U
1,1-Dichloroethane	4,000	4,000	8.1	5 U	5 U	5 U	140	430	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	1,300	5 U	5 U	5 U	5 U	**88**	**350**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	70	5 U	5 U	5 U	5 U	7.4	32	5 U	5 U	43	14	5 U	36	5 U	5 U
1,2-Dichlorobenzene	600	1,470	5 U	5 U	5 U	5 U	**610**	**9400**	5 U	5 U	160	5.7	5 U	28	5 U	5 U
1,2-Dichloroethane	5	56	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	600	600	5 U	5 U	5 U	5 U	23	120	5 U	5 U	26	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	75	75	5 U	5 U	5 U	5 U	71	**1100**	5 U	5 U	49	8.9	5 U	5 U	5 U	5 U
2-Butanone	2,000	25,600	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-pentanone	2,000	6,240	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	4,000	68,700	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	5	20	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	361	5 U	5 U	5 U	5 U	5 U	20	5 U	5 U	25	5.6	5 U	5 U	5 U	5 U
Chloroethane	DL	87,600	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	70	200	**790**	**190**	5 U	5 U	**7000**	**33000**	5 U	5 U	36	7.3	5 U	5 U	5 U	5 U
Ethylbenzene	700	700	5 U	5 U	5 U	5 U	5 U	17	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	DL	2,610	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
m,p-Xylene	1,000	10,000	5 U	NA	5 U	NA	5 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
Methyl acetate			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane			5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	550	5 U	5 U	5 U	5 U	5 U	**6.5**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-Xylene	1,000	10,000	5 U	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA
Styrene	100	6,130	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	220	**430**	**230**	5 U	5 U	**29**	**130**	5 U	5 U	**31**	**9.5**	**110**	**100**	**30**	**16**
Toluene	1,000	6,890	5 U	5 U	5 U	5 U	9.7	140	8.8	5 U	5 U	5 U	23	5	5 U	5 U
trans-1,2-Dichloroethene	100	420	5 U	5 U	5 U	5 U	80	**160**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	13	**200**	**75**	**5.3**	5 U	**120**	**2800**	5 U	5 U	**19**	5 U	**28**	**12**	**7.3**	5 U
Vinyl chloride	2	3.7	**2.4**	2 U	2 U	2 U	**110**	**810**	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylene, total	1,000	10,000	NA	5 U	NA	5 U	NA	74	NA	5 U	NA	5 U	NA	23	NA	5 U

Table 5
Groundwater Analytical Data Since 2011
Former Oxford Chemicals VRP Site

SemiVolatile Organics (ug/L)	RRS (ug/L)		EW-A1		EW-A2		EW-A3		EW-A4	EW-B3		EW-B6	EW-D3	EW-D5	EW-D7		EW-D9		MW-5		MW-6
	Type 1	Type 3/4	2/3/11	9/18/13	2/3/11	9/18/13	2/3/11	9/19/13	9/20/13	2/3/11	9/19/13	2/7/11	2/7/11	2/7/11	2/7/11	9/17/13	2/7/11	9/17/13	2/3/11	9/18/13	9/17/13
2,4-Dimethylphenol	700	2040	10 U	50 U	15	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	10 U
2-Chlorophenol	40	510	29	NA	10 U	NA	10 U	NA	NA	10 U	NA	10 U	10 U	10 U	10 U	NA	10 U	NA	10 U	NA	NA
2-Methylnaphthalene			400	NA	220	NA	81	NA	NA	10 U	NA	10 U	10 U	10 U	10 U	NA	10 U	NA	12	NA	NA
2-Methylphenol	DL	2590	**32**	50 U	**49**	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	10 U
4-Methylphenol	DL	3470	**100**	50 U	**52**	50 U	10 U	10 U	10 U	10 U	**63**	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	10 U
Acenaphthene	2000	6130	10	50 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	10 U
Acetophenone	4000	10200	22	NA	10 U	NA	10 U	NA	NA	10 U	NA	10 U	10 U	10 U	10 U	NA	10 U	NA	10 U	NA	NA
Benzo(b)fluoranthene	0.2	1.4	10 U	50 U	10 U	50 U	**10**	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	10 U
Naphthalene	20	26	**560**	**580**	**550**	**420**	**39**	**25**	17	10 U	10 U	10 U	10 U	10 U	**29**	**330**	10 U	10 U	10 U	50 U	10 U
Pentachlorophenol	1	6.2	25 U	130 U	25 U	130 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	130 U	25 U
Phenol	4000	4000	10 U	50 U	**10**	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	10 U

All concentrations are in units of micrograms per liter (ug/l).
Only compounds detected in one or more monitoring wells are shown.
U = Compound not detected above method quantitation limit.
NA - Sample not analyzed for compound
14 - Constituent detected above Type 1 RRS
19 - Constituent detected above Type 3/4 RRS

Table 5
Groundwater Analytical Data Since 2011
Former Oxford Chemicals VRP Site

SemiVolatile Organics (ug/L)	RRS (ug/L) Type 1	RRS (ug/L) Type 3/4	MW-7 2/3/11	MW-7 9/20/13	MW-9 9/23/13	MW-13 10/2/13	MW-14 10/2/13	MW-15 10/2/13	MW-16 10/2/13	MW-17 11/14/13	MW-18 11/14/13	MW-19 11/14/13	MW-20 11/14/13	MW-21 11/14/13	MW-25 12/18/13	MW-26 12/18/13	PZ-2 9/24/13	BH-24 9/24/13	BH-13 9/25/13	BH-11 9/25/13
2,4-Dimethylphenol	700	2040	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	40	510	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene			10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	DL	2590	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	DL	3470	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthene	2000	6130	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	21	11	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetophenone	4000	10200	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	0.2	1.4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	20	26	10 U	10 U	10 U	10 U	10 U	**100**	10 U	10 U	10 U	**240**	**480**	**110**	10 U	**400**	10 U	10 U	10 U	10 U
Pentachlorophenol	1	6.2	25 U	25 U	25 U	25 U	25 U	**25**	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Phenol	4000	4000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table 5
Groundwater Analytical Data Since 2011
Former Oxford Chemicals VRP Site

	RRS (ug/L)		EW-A1		EW-A2		EW-A3		EW-A4	EW-B3		EW-B4	EW-B5	EW-B6		EW-D3	EW-D5	EW-D7	
Pesticides (ug/L)	Type 1	Type 3/4	2/3/11	9/18/13	2/3/11	9/18/13	2/3/11	9/19/13	9/20/13	2/3/11	9/19/13	9/19/13	9/19/13	2/7/11	9/20/13	2/7/11	2/7/11	2/7/11	9/17/13
4,4´-DDD	0.1	2.7	**1.50**	**3.9**	**0.63**	**0.13**	**0.19**	0.1 U	0.1 U	**0.63**	0.1 U	**0.21**	0.1 U	0.10 U	0.1 U	0.10 U	**1.50**	0.10 U	0.1 U
4,4´-DDE	0.1	1.9	**0.19**	**0.3**	**0.13**	0.1 U	0.10 U	0.1 U	0.1 U	**0.12**	0.1 U	0.1 U	0.1 U	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.1 U
4,4´-DDT	0.1	1.9	0.10 U	0.1 U	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.1	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.1 U
alpha-BHC	0.006	0.1	0.05 U	**0.065**	0.05 U	**0.057**	0.05 U	0.05 U	0.05 U	0.050 U	0.05 U	0.05 U	0.05 U	0.050 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-Chlordane	2.0	2.0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.050 U	0.05 U	0.05 U	0.05 U	0.050 U	0.05 U	0.05 U	0.05 U	0.13	0.05 U
beta-BHC	0.02	0.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.050 U	0.05 U	0.05 U	0.05 U	0.050 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan sulfate	DL	DL	0.10 U	0.1 U	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	**0.15**	**0.69**	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.1 U
gamma-Chlordane	2.0	2.0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.050 U	0.05 U	0.05 U	0.05 U	0.050 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

All concentrations are in units of micrograms per liter (ug/l).
Only compounds detected in one or more monitoring wells are shown.
U = Compound not detected above method quantitation limit.
NA - Sample not analyzed for compound
14 - Constituent detected above Type 1 RRS
19 - Constituent detected above Type 3/4 RRS

Table 5
Groundwater Analytical Data Since 2011
Former Oxford Chemicals VRP Site

	RRS (ug/L)		EW-D9		MW-1			MW-5		MW-6	MW-7		MW-9	MW-12				MW-17
Pesticides (ug/L)	Type 1	Type 3/4	2/7/11	9/17/13	2/2/11	2/16/12	8/14/12	2/3/11	9/18/13	9/17/13	2/3/11	9/20/13	9/23/13	2/7/11	6/10/11	2/17/12	8/13/12	11/14/13
4,4´-DDD	0.1	2.7	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U
4,4´-DDE	0.1	1.9	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U
4,4´-DDT	0.1	1.9	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U
alpha-BHC	0.006	0.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-Chlordane	2.0	2.0	0.20	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.57	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-BHC	0.02	0.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan sulfate	DL	DL	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	NA	0.1 U	0.1 U	0.1 U
gamma-Chlordane	2.0	2.0	0.10	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U

Table 5
Groundwater Analytical Data Since 2011
Former Oxford Chemicals VRP Site

	RRS (ug/L)		MW-18	MW-19	MW-20	MW-21	PZ-2	BH-6		BH-7			BH-11		BH-17			
Pesticides (ug/L)	Type 1	Type 3/4	11/14/13	11/14/13	11/14/13	11/14/13	9/24/13	2/2/11	6/16/11	2/2/11	6/16/11	9/27/13	2/2/11	6/16/11	2/2/11	6/15/11	2/17/12	8/15/12
4,4´-DDD	0.1	2.7	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.1 U
4,4´-DDE	0.1	1.9	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.1 U
4,4´-DDT	0.1	1.9	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.10 U	0.1 U	0.10 U	0.1 U	0.1 U	0.1 U
alpha-BHC	0.006	0.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.050 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-Chlordane	2.0	2.0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.050 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-BHC	0.02	0.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.21**	0.05 U	0.05 U	0.050 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan sulfate	DL	DL	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.10 U	NA	0.10 U	0.10 U	0.1 U	0.10 U	NA	0.10 U	0.1 U	0.1 U	0.1 U
gamma-Chlordane	2.0	2.0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.050 U	NA	0.05 U	NA	0.05 U	0.05 U

Table 5
Groundwater Analytical Data Since 2011
Former Oxford Chemicals VRP Site

	RRS (ug/L)		BH-19				BH-20				BH-21				BH-24			
Pesticides (ug/L)	Type 1	Type 3/4	2/3/11	6/14/11	2/16/12	8/14/12	2/2/11	6/13/11	2/16/12	8/15/12	2/2/11	6/13/11	2/16/12	8/15/12	2/2/11	6/14/11	2/16/12	8/14/12
4,4´-DDD	0.1	2.7	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.1 U
4,4´-DDE	0.1	1.9	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.1 U
4,4´-DDT	0.1	1.9	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.1 U	0.10 U	0.1 U	0.1 U	0.1 U
alpha-BHC	0.006	0.1	0.050 U	0.050 U	0.050 U	0.050 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-Chlordane	2.0	2.0	0.050 U	0.050 U	0.050 U	0.050 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-BHC	0.02	0.4	0.050 U	0.050 U	0.050 U	0.050 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan sulfate	DL	DL	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	NA	0.1 U	0.1 U	0.10 U	0.10 U	0.1 U	0.1 U	0.10 U	NA	0.1 U	0.1 U
gamma-Chlordane	2.0	2.0	0.050 U	NA	0.050 U	0.050 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U

Table 5
Groundwater Analytical Data since 2011
Former Oxford Chemicals VRP Site

	RRS (ug/l)		MW-1	MW-12	BH-6	BH-7			BH-11	BH-17			BH-19				BH-20				BH-21			BH-24
PCBs (ug/l)	Type 1	Type 3/4	2/2/11	2/7/11	2/2/11	2/2/11	6/16/11	9/27/13	2/2/11	2/2/11	2/17/12	8/15/12	2/3/11	6/14/11	2/16/12	8/14/12	2/2/11	6/13/11	2/16/12	8/15/12	2/2/11	2/16/12	8/15/12	2/2/11
Aroclor 1016	0.5	7.2	0.5 U	0.5 U	0.5 U	**5.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Aroclor 1221			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Aroclor 1232			0.5 U	0.5 U	0.5 U	0.5 U	**8.0**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Aroclor 1242			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**7.0**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Aroclor 1248			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Aroclor 1254			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Aroclor 1260	0.5	0.5	0.5 U	0.5 U	0.5 U	**2.1**	**1.4**	**5.0**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

All concentrations are in units of micrograms per liter (ug/l).
U = Compound not detected above method quantitation limit.
14 - Constituent detected above Type 1 RRS
19 - Constituent detected above Type 3/4 RRS

Table 6

Professional Service Hours

April 1, 2013 through December 31, 2013

Company	Month/Year	Project Manager / P.G. hours	Total Hours Worked
Woodard & Curran	April 2013	15.85	40.6
Woodard & Curran	May 2013	12.9	39.55
Woodard & Curran	June 2013	10	55.8
Woodard & Curran	July 2013	10	69.9
Woodard & Curran	August 2013	34.75	93.5
Woodard & Curran	September 2013	48	329
Woodard & Curran	October 2013	49.75	173.8
Woodard & Curran	November 2013	27.05	138.75
Woodard & Curran	December 2013	23.45	99.5
	Total Hours	**231.75**	**1040.40**

Note: The above hours do not include subcontractor hours worked for Woodard & Curran.

Figures

N

PEACHTREE INDUSTRIAL BLVD.

Legend

Soil Boring Location by Year

- 1993
- 1999
- 2002
- 2003
- 2007
- 2008
- 2013

2008 Excavation Depths

- 3 Feet
- 5 Feet
- 7 Feet
- 8 Feet
- 9 Feet
- 10 Feet
- 12 Feet
- 14 Feet

0 25 50 100 Feet

WOODARD &CURRAN

Date: 1/8/2014

FIGURE 1
2013 SOIL BORING LOCATIONS
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-soil01

N

PEACHTREE INDUSTRIAL BLVD.

Legend

Soil Boring Location by Year

- 1993
- 1999
- 2002
- 2003
- 2007
- 2008
- 2013

Soils Above Type 3/4 RRS (2013)
(Highlighted where concentrations exceed 20 X TCLP limit)

2008 Excavation Depths

- 3 Feet
- 5 Feet
- 7 Feet
- 8 Feet
- 9 Feet
- 10 Feet
- 12 Feet
- 14 Feet

0 25 50 100 Feet

FIGURE 2
TYPE 3/4 RRS DELINEATION - 2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

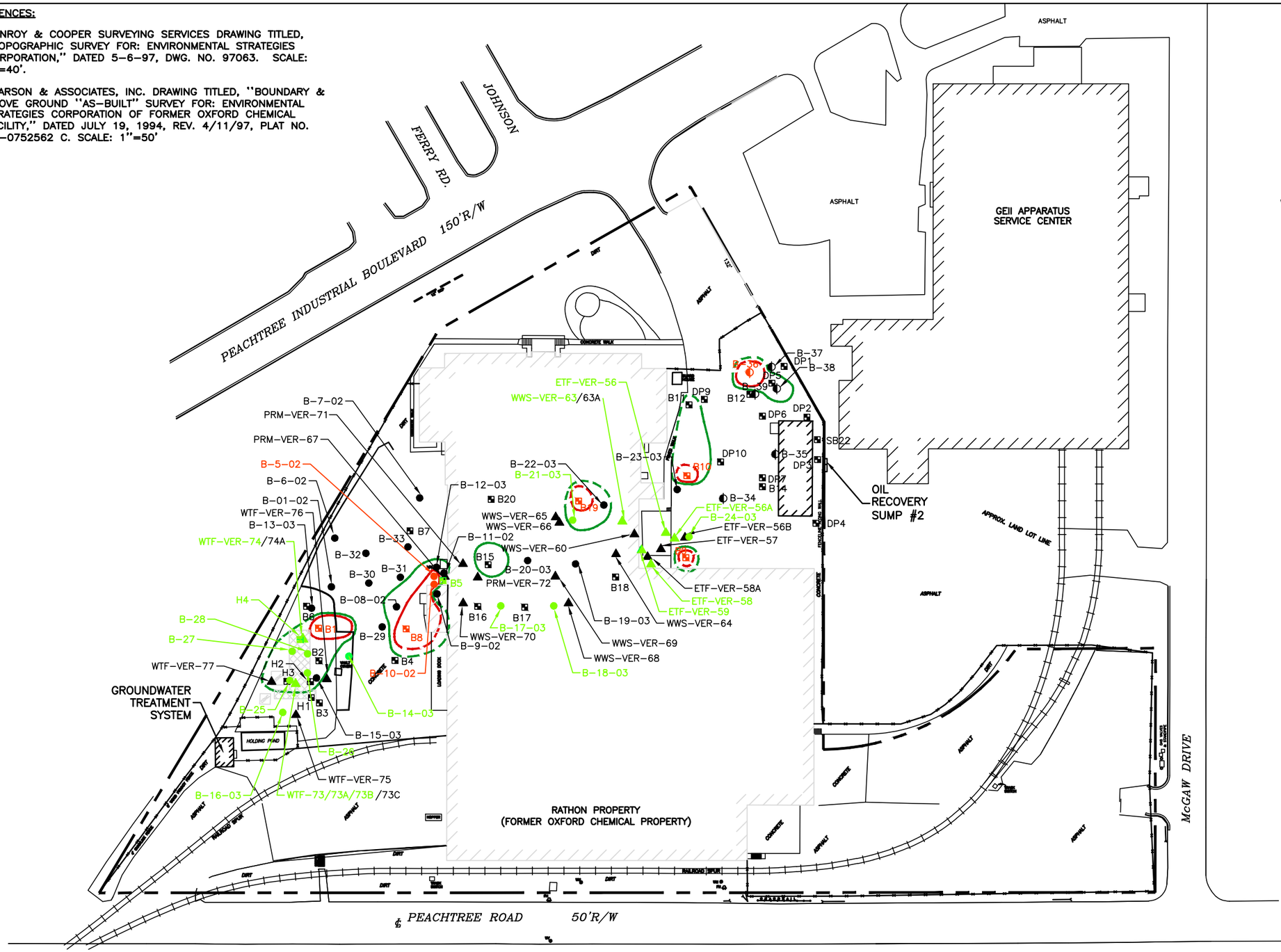
WOODARD &CURRAN

Date: 1/8/2014

rathon-soil02

REFERENCES:

1. CONROY & COOPER SURVEYING SERVICES DRAWING TITLED, "TOPOGRAPHIC SURVEY FOR: ENVIRONMENTAL STRATEGIES CORPORATION," DATED 5-6-97, DWG. NO. 97063. SCALE: 1"=40'.
2. PEARSON & ASSOCIATES, INC. DRAWING TITLED, "BOUNDARY & ABOVE GROUND "AS-BUILT" SURVEY FOR: ENVIRONMENTAL STRATEGIES CORPORATION OF FORMER OXFORD CHEMICAL FACILITY," DATED JULY 19, 1994, REV. 4/11/97, PLAT NO. 94-0752562 C. SCALE: 1"=50'



LEGEND

- PROPERTY LINE
- FENCE LINE
- FORMER BUILDING LIMITS
- DP4 — HISTORIC SAMPLE LOCATION
- WWS-VER-68 — HISTORICAL EXCAVATION VERIFICATION SAMPLE
- B-29 — ESC 2002-2003 SAMPLING LOCATION
- B-34 — WSP SAMPLING LOCATION
- B9 — SOIL SAMPLE RESULT(S) ABOVE BOTH NON-RESIDENTIAL RRS
- H4 — SAMPLE LOCATION PREVIOUSLY EXCAVATED
- DELINEATION STANDARD, GREATER THAN TYPE 1 RRS
- AREA GREATER THAN NON-RESIDENTIAL RRS

0 50 100
SCALE IN FEET

Drawn By: GHA/BRM	Date: 2-26-13
Checked by: LJD	Project No. 226278

WOODARD &CURRAN

FIGURE 3
HISTORICAL SOIL DELINEATION TO RRS
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GA

N

EACHTREE INDUSTRIAL BLVD.

Legend

Soil Boring Location by Year

- 1993
- 1999
- 2002
- 2003
- 2007
- 2008
- 2013

2008 Excavation Depths

- 3 Feet
- 5 Feet
- 7 Feet
- 8 Feet
- 9 Feet
- 10 Feet
- 12 Feet
- 14 Feet

Preliminary Excavation Depth

- 5 Feet
- 7 Feet
- 9 Feet
- 10 Feet
- 12 Feet
- Approx. Edge of Cutback

Former Pump Room Area

Wastewater Sewer Area

Former East Tank Farm Area

Wastewater Treatment Facility Area

0 20 40 80 Feet

WOODARD &CURRAN

Date: 1/8/2014

FIGURE 4
PRELIMINARY EXTENT OF PROPOSED EXCAVATION
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-soil03

N

PEACHTREE INDUSTRIAL BLVD.

MW-1
MW-2
MW-3
MW-5
MW-6
MW-7
MW-9
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17
MW-18
MW-19
MW-20
MW-21
MW-23
MW-24
MW-25
MW-26
PZ-1
PZ-2
MW-A
EB-1
EW-A1
EW-A2
EW-A3
EW-A4
EW-A5
EW-A6
EW-A7
EW-A8
EW-A9
EW-A10
EW-B1
EW-B2
EW-B3
EW-B4
EW-B5
EW-B6
EW-B7
EW-B8
EW-B9
EW-B10
EW-C1
EW-C2
EW-C3
EW-C4
EW-C5
EW-C6
EW-C7
EW-C8
EW-C9
EW-D1
EW-D2
EW-D3
EW-D4
EW-D5
EW-D6
EW-D7
EW-D8
EW-D9
BH-2
BH-5
BH-6
BH-7
BH-9
BH-10
BH-11
BH-12
BH-13
BH-14
BH-15
BH-16
BH-17
BH-18
BH-19
BH-20
BH-21
BH-22
BH-23
BH-24
OW-1
OW-2
OW-2T
OW-3T
OW-4T
OW-5T
OW-6
OW-7
OW-8
OW-10
OW-11
OW-12
OW-13
OW-14
OW-15
OW-16
OW-17
OW-18
OW-1T

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer

0 50 100 200 Feet

WOODARD &CURRAN

Date: 1/8/2014

FIGURE 5
MONITORING WELL LOCATION MAP
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-gw04

PEACHTREE INDUSTRIAL BLVD.

GEII APPARATUS SERVICE CENTER

N

1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019

PZ-1 PZ-2

MW-1 MW-2 MW-3 MW-5 MW-6 MW-7 MW-9 MW-11 MW-12 MW-13 MW-14 MW-15 MW-16 MW-17 MW-18 MW-19 MW-20 MW-21 MW-23 MW-24

EW-A1 EW-A2 EW-A3 EW-A4 EW-A5 EW-A6 EW-A7 EW-A8 EW-A9 EW-A10

EW-B1 EW-B2 EW-B3 EW-B4 EW-B5 EW-B6 EW-B7 EW-B8 EW-B9 EW-B10

EW-C1 EW-C2 EW-C3 EW-C4 EW-C5 EW-C6 EW-C7 EW-C8 EW-C9

EW-D1 EW-D2 EW-D3 EW-D4 EW-D5 EW-D6 EW-D7 EW-D8 EW-D9

BH-2 BH-6 BH-7 BH-8 BH-9 BH-10 BH-11 BH-12 BH-13 BH-14 BH-15 BH-16 BH-17 BH-18 BH-19 BH-20 BH-21 BH-22 BH-23 BH-24

MW-A

OW-1 OW-2 OW-2T OW-3T OW-4T OW-5T OW-6 OW-7 OW-8 OW-10 OW-11 OW-12 OW-13 OW-14 OW-15 OW-16 OW-17 OW-18

EB-1 OW-1T

0 40 80 160 Feet

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer
- Groundwater Elevation Contour - September 2013

WOODARD &CURRAN

Date: 1/8/2014

FIGURE 6
POTENTIOMETRIC SURFACE MAP - 9/2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-gw01

PEACHTREE INDUSTRIAL BLVD.

MW-11
MW-7
MW-13
MW-14
MW-21
MW-20
MW-19
MW-26
MW-17
MW-18
MW-25
MW-3
MW-5
MW-6
MW-16
MW-12

EW-A1 EW-A2 EW-A3 EW-A4 EW-A5 EW-A6 EW-A7 EW-A8 EW-A9 EW-A10
EW-B1 EW-B2 EW-B3 EW-B4 EW-B5 EW-B6 EW-B7 EW-B8 EW-B9 EW-B10
EW-C1 EW-C2 EW-C3 EW-C4 EW-C5 EW-C6 EW-C7 EW-C8 EW-C9
EW-D1 EW-D2 EW-D3 EW-D4 EW-D5 EW-D6 EW-D7 EW-D8 EW-D9

BH-16 BH-19 BH-20 BH-21 BH-22 BH-23 BH-24

1003.11
999.91
1008.64
1010.05
1009.19
1009.47
1010.39
1013.23
1011.11
1013.16
1010.02
1010.22
1008.63
1004.92
1013.07
1013.43
1014.63

1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer
- Groundwater Elevation Contour - December 2013

0 35 70 140 Feet

WOODARD &CURRAN

Date: 1/8/2014

FIGURE 7
POTENTIOMETRIC SURFACE MAP - 12/2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-gw03

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer

Isoconcentration Lines

- Toluene at Detection Limit
- Toluene at Type 1 RRS (1,000 ug/l)
- Toluene at Type 3/4 RRS (6,890 ug/l)
- Groundwater Elevation Contour - December 2013
- Groundwater Elevation Contour - September 2013

Note: At the highlighted wells, LNAPL was detected in September 2013. The LNAPL at MW-3 is of a different nature than that detected at BH-9, BH-15, and BH-18.

PEACHTREE INDUSTRIAL BLVD.

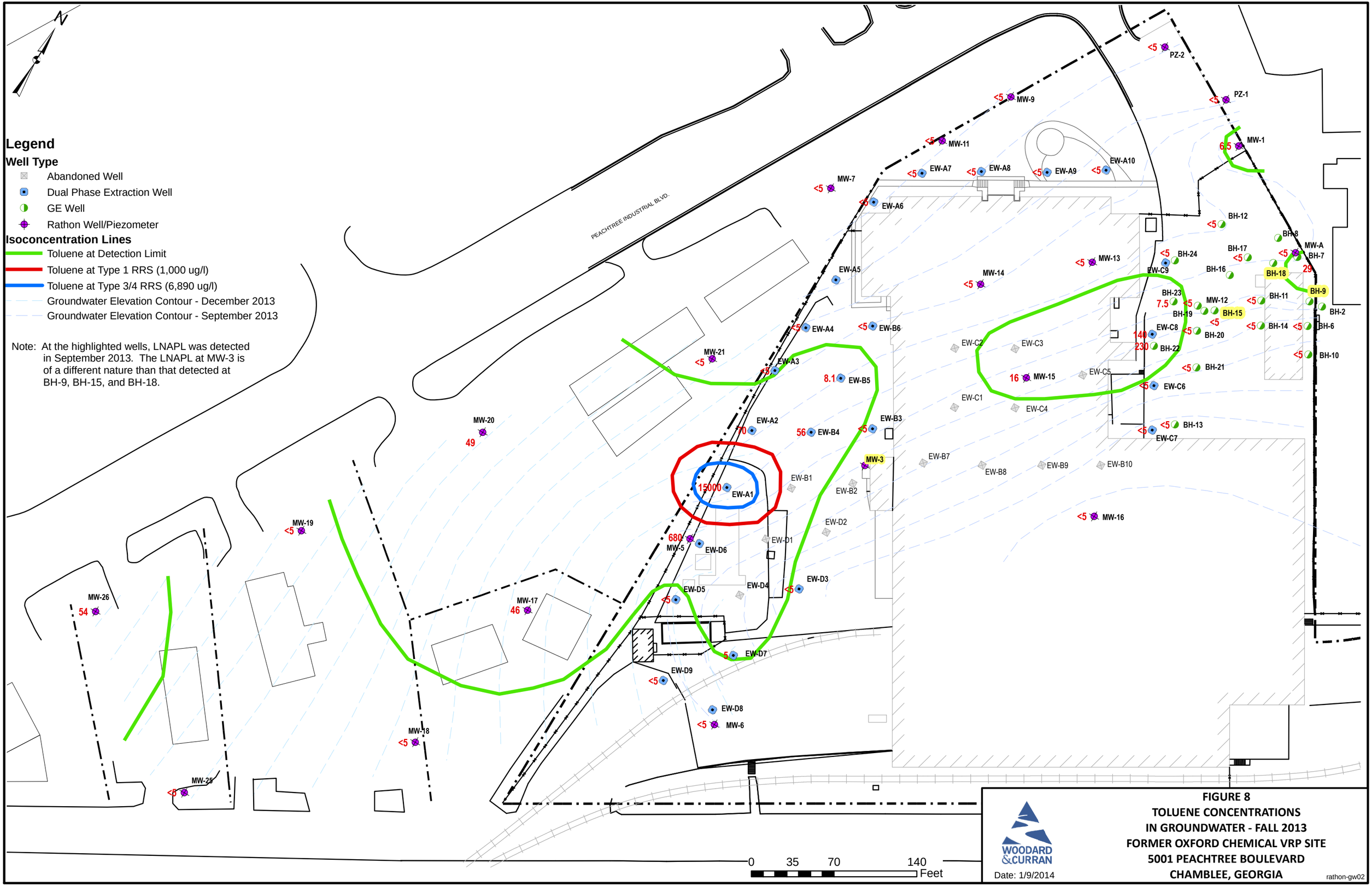


FIGURE 8
TOLUENE CONCENTRATIONS
IN GROUNDWATER - FALL 2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

WOODARD &CURRAN

Date: 1/9/2014

rathon-gw02

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer

Isoconcentration Lines

- Naphthalene at Detection Limit
- Naphthalene at Type 1 RRS (20 ug/l)
- Naphthalene at Type 3/4 RRS (26 ug/l)
- Groundwater Elevation Contour - December 2013
- Groundwater Elevation Contour - September 2013

Note: At the highlighted wells, LNAPL was detected in September 2013. The LNAPL at MW-3 is of a different nature than that detected at BH-9, BH-15, and BH-18.

Naphthalene was also not detected at MW-5 in Feb 2011 (<10 ug/l).

PEACHTREE INDUSTRIAL BLVD.

<10 PZ-2
<10 MW-9
PZ-1
MW-11
MW-1
EW-A7
EW-A8
EW-A9
EW-A10
<10 MW-7
EW-A6
BH-12
BH-8
<10 MW-13
<10 BH-24
BH-17
MW-A
BH-7
EW-A5
<10 MW-14
EW-C9
BH-16
BH-18
BH-23
<10
BH-11
BH-9
MW-12
BH-19
BH-15
BH-2
EW-A4
EW-B6
EW-C8
BH-20
BH-14
BH-6
MW-21
EW-C2
EW-C3
BH-22
BH-10
EW-A3
23
EW-B5
100 MW-15
EW-C5
BH-21
EW-C6
EW-C1
EW-C4
MW-20
480
EW-A2
420
EW-B4
<10
EW-B3
<10 BH-13
EW-C7
MW-3
EW-B7
EW-B1
EW-B8
EW-B9
EW-B10
590
EW-A1
EW-B2
<10 MW-16
MW-19
240
EW-D2
EW-D1
MW-5
<50
EW-D6
MW-26
400
EW-D4
EW-D3
EW-D5
MW-17
<10
330
EW-D7
EW-D9
<10
EW-D8
<10 MW-6
MW-18
<10
MW-25
<10

0 35 70 140 Feet

WOODARD &CURRAN

Date: 1/9/2014

FIGURE 9
NAPHTHALENE CONCENTRATIONS IN GROUNDWATER - FALL 2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-gw02

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer

Isoconcentration Lines

- 1,2,4-TCB at Detection Limit
- 1,2,4-TCB at Type 1 and 3/4 RRS (70 ug/l)
- Groundwater Elevation Contour - December 2013
- Groundwater Elevation Contour - September 2013

Note: At the highlighted wells, LNAPL was detected in September 2013. The LNAPL at MW-3 is of a different nature than that detected at BH-9, BH-15, and BH-18.

PEACHTREE INDUSTRIAL BLVD.

MW-20 870
MW-19 260
MW-26 630
MW-25 <5
MW-18 <5
MW-17 5.3
MW-21 330
MW-5 33
MW-3
MW-6 <5
MW-7 <5
MW-9 29
MW-11 <5
MW-14 <5
MW-13 <5
MW-15 <5
MW-16 <5
MW-1 <5
PZ-1 <5
PZ-2 <5
MW-12
MW-A 42
MW-2 230

EW-A1 45
EW-A2 470
EW-A3 88
EW-A4 300
EW-A5
EW-A6 <5
EW-A7 <5
EW-A8 <5
EW-A9 <5
EW-A10 <5
EW-B1
EW-B2
EW-B3 <5
EW-B4 <5
EW-B5 80
EW-B6 <5
EW-B7
EW-B8
EW-B9
EW-B10
EW-C1
EW-C2
EW-C3
EW-C4
EW-C5
EW-C6 <5
EW-C7 <5
EW-C8 <5
EW-C9 <5
EW-D1
EW-D2
EW-D3 <5
EW-D4
EW-D5 14
EW-D6
EW-D7 36
EW-D8
EW-D9 <5

BH-2
BH-6 <5
BH-7
BH-8
BH-9
BH-10 <5
BH-11
BH-12 <5
BH-13 <5
BH-14 <5
BH-15
BH-16
BH-17 <5
BH-18 230
BH-19
BH-20
BH-21 <5
BH-22 18
BH-23 <5
BH-24 <5

0 35 70 140 Feet

WOODARD &CURRAN

Date: 1/9/2014

FIGURE 10
1,2,4-TRICHLOROBENZENE CONCENTRATIONS IN GROUNDWATER - FALL 2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-gw02

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer

Isoconcentration Lines

- 1,4-DCB at Detection Limit
- 1,4-DCB at Type 1 and 3/4 RRS (75 ug/l)
- Groundwater Elevation Contour - December 2013
- Groundwater Elevation Contour - September 2013

Note: At the highlighted wells, LNAPL was detected in September 2013. The LNAPL at MW-3 is of a different nature than that detected at BH-9, BH-15, and BH-18.

PEACHTREE INDUSTRIAL BLVD.

<5 PZ-2
<5 PZ-1
<5 MW-9
<5 MW-11
<5 MW-1
<5 EW-A7
<5 EW-A8
<5 EW-A9
<5 EW-A10
<5 MW-7
<5 EW-A6
<5 BH-12
BH-8
MW-A
BH-7
<5 BH-17
<5
8.2 MW-13
6 BH-24
EW-C9
BH-16
BH-18
66
EW-A5
MW-14
<5
BH-23
23
<5 MW-12
<5 BH-11
BH-9
BH-2
BH-19
BH-15
<5
15 EW-A4
<5 EW-B6
EW-C8
<5
BH-20
<5 BH-14
<5 BH-6
1100
890 BH-22
EW-C2
EW-C3
MW-21
19
EW-A3
52
8.7 EW-B5
12 MW-15
EW-C5
<5 BH-21
<5 BH-10
<5 EW-C6
EW-C1
EW-C4
MW-20
85
87 EW-A2
13 EW-B4
<5 EW-B3
<5 <5 BH-13
<5 EW-C7
MW-3
EW-B7
EW-B8
EW-B9
EW-B10
EW-B1
EW-B2
710 EW-A1
EW-D2
<5 MW-16
MW-19
390
87
MW-5
EW-D6
EW-D1
EW-D5
EW-D4
<5 EW-D3
MW-26
180
8.9
MW-17
6.9
<5 EW-D7
EW-D9
<5
EW-D8
<5 MW-6
MW-18
<5
MW-25
<5

0 35 70 140 Feet

WOODARD &CURRAN

Date: 1/9/2014

FIGURE 11
1,4-DICHLOROBENZENE CONCENTRATIONS IN GROUNDWATER - FALL 2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-gw02

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer

Isoconcentration Lines

- PCE at Detection Limit/Type 1 RRS (5 ug/l)
- (Dashed where inferred)
- PCE at Type 3/4 RRS (220 ug/l)
- Groundwater Elevation Contour - December 2013
- Groundwater Elevation Contour - September 2013

Note: At the highlighted wells, LNAPL was detected in September 2013. The LNAPL at MW-3 is of a different nature than that detected at BH-9, BH-15, and BH-18.

PEACHTREE INDUSTRIAL BLVD.

MW-20 <5
MW-19 <5
MW-26 13
MW-25 15
MW-21 22
MW-18 17
MW-17 <5
MW-5 5.1
MW-7 6.5
MW-11 580
MW-9 200
MW-3
MW-6 <5
MW-16 <5
MW-1 <5
PZ-1 <5
PZ-2 <5
MW-13 440
MW-14 25
MW-12 28
MW-15 1400
EW-A1 <5
EW-A2 <5
EW-A3 8.6
EW-A4 21
EW-A5
EW-A6 11
EW-A7 77
EW-A8 60
EW-A9 20
EW-A10 370
EW-B1
EW-B2
EW-B3 <5
EW-B4 <5
EW-B5
EW-B6 <5
EW-B7
EW-B8
EW-B9
EW-B10
EW-C1
EW-C2
EW-C3
EW-C4
EW-C5
EW-C6 230
EW-C7
EW-C8 <5
EW-C9 150
EW-D1
EW-D2
EW-D3 <5
EW-D4
EW-D5 9.5
EW-D6
EW-D7 100
EW-D8
EW-D9 16
BH-2
BH-6 <5
BH-7 8100
BH-8
BH-9
BH-10 <5
BH-11
BH-12 <5
BH-13 <5
BH-14 <5
BH-15 <5
BH-16
BH-17 <5
BH-18
BH-19 <5
BH-20 <5
BH-21 <5
BH-22 <5
BH-23 510
BH-24
MW-A 25

0 35 70 140 Feet

WOODARD &CURRAN

Date: 1/9/2014

FIGURE 12
TETRACHLOROETHENE CONCENTRATIONS IN GROUNDWATER - FALL 2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-gw02

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer

Isoconcentration Lines

- TCE at Detection Limit/Type 1 RRS (5 ug/l)
- (Dashed where inferred)
- TCE at Type 3/4 RRS (13 ug/l)
- Groundwater Elevation Contour - December 2013
- Groundwater Elevation Contour - September 2013

Note: At the highlighted wells, LNAPL was detected in September 2013. The LNAPL at MW-3 is of a different nature than that detected at BH-9, BH-15, and BH-18.

PEACHTREE INDUSTRIAL BLVD.

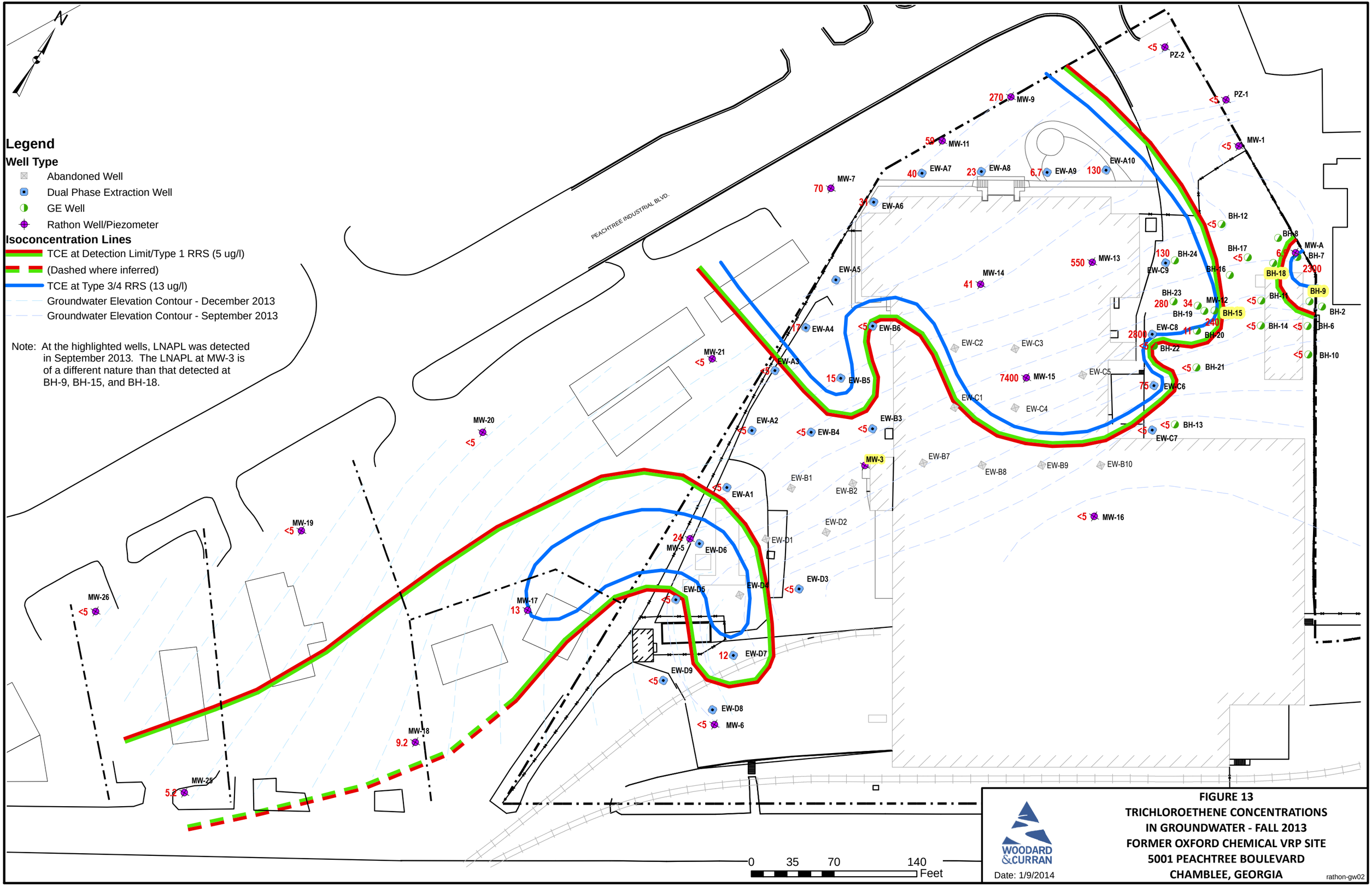


FIGURE 13
TRICHLOROETHENE CONCENTRATIONS IN GROUNDWATER - FALL 2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

WOODARD &CURRAN

Date: 1/9/2014

rathon-gw02

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer

Isoconcentration Lines

- cis-1,2-DCE at Detection Limit
- (Dashed where inferred)
- cis-1,2-DCE at Type 1 RRS (70 ug/l)
- cis-1,2-DCE at Type 3/4 RRS (200 ug/l)
- Groundwater Elevation Contour - December 2013
- Groundwater Elevation Contour - September 2013

Note: At the highlighted wells, LNAPL was detected in September 2013. The LNAPL at MW-3 is of a different nature than that detected at BH-9, BH-15, and BH-18.

PEACHTREE INDUSTRIAL BLVD.

MW-20 14 | MW-21 <5 | MW-19 5.6 | MW-26 <5 | MW-25 58 | MW-18 <5 | MW-17 240 | MW-5 31 | MW-7 12 | MW-11 90 | MW-9 170 | PZ-2 <5 | PZ-1 <5 | MW-1 <5 | MW-3 | MW-14 170 | MW-13 2700 | MW-12 | MW-15 1200 | MW-6 <5 | MW-16 <5

EW-A1 170 | EW-A2 <5 | EW-A3 <5 | EW-A4 28 | EW-A5 | EW-A6 36 | EW-A7 200 | EW-A8 220 | EW-A9 50 | EW-A10 2200

EW-B1 | EW-B2 | EW-B3 <5 | EW-B4 <5 | EW-B5 36 | EW-B6 6 | EW-B7 | EW-B8 | EW-B9 | EW-B10

EW-C1 | EW-C2 | EW-C3 | EW-C4 | EW-C5 | EW-C6 190 | EW-C7 <5 | EW-C8 96 | EW-C9 910

EW-D1 | EW-D2 | EW-D3 <5 | EW-D4 | EW-D5 7.3 | EW-D6 | EW-D7 <5 | EW-D8 | EW-D9 <5

BH-2 | BH-6 <5 | BH-7 5 | BH-8 | BH-9 | BH-10 <5 | BH-11 <5 | BH-12 <5 | BH-13 <5 | BH-14 <5 | BH-15 | BH-16 | BH-17 <5 | BH-18 | BH-19 | BH-20 | BH-21 58 | BH-22 69000 | BH-23 160 | BH-24 | MW-A 290

0 35 70 140 Feet

WOODARD &CURRAN

Date: 1/9/2014

FIGURE 14
cis-1,2-DICHLOROETHENE CONCENTRATIONS IN GROUNDWATER - FALL 2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-gw02

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer

Isoconcentration Lines

- Vinyl Chloride at Detection Limit/Type 1 RRS (2 ug/l)
- Vinyl Chloride at Type 3/4 RRS (3.7 ug/l)
- Groundwater Elevation Contour - December 2013
- Groundwater Elevation Contour - September 2013

Note: At the highlighted wells, LNAPL was detected in September 2013. The LNAPL at MW-3 is of a different nature than that detected at BH-9, BH-15, and BH-18.

PEACHTREE INDUSTRIAL BLVD.

PZ-2 <2
PZ-1 <2
MW-1 <2
MW-9 <2
MW-11 <2
MW-7 <2
EW-A7 <2
EW-A8 <2
EW-A9 <2
EW-A10 17
EW-A6 <2
EW-A5
BH-12 <2
BH-8
BH-17 2.1
MW-A <2
BH-7 7.7
MW-13 31
BH-24 17
EW-C9
BH-16
BH-18
MW-14 <2
BH-23 300
MW-12 20
BH-19
BH-15 68
BH-11 <2
BH-9
BH-2
EW-C8 810
BH-20 8
BH-14 <2
BH-6 <2
EW-A4 <2
EW-B6 <2
EW-C2
EW-C3
BH-22 2200
MW-21 <2
EW-A3 <2
EW-B5 <2
MW-15 6.2
EW-C5
BH-21 <2
BH-10 <2
EW-C6 <2
EW-C1
EW-C4
MW-20 <2
EW-A2 <2
EW-B4 <2
EW-B3 <2
BH-13 <2
EW-C7 <2
MW-3
EW-B7
EW-B8
EW-B9
EW-B10
EW-B1
EW-B2
EW-A1 19
EW-D2
MW-16 <2
MW-19 <2
MW-5 8.3
EW-D6
EW-D1
EW-D5
EW-D4
EW-D3 <2
MW-26 <2
MW-17 <2
EW-D7 <2
EW-D9 <2
EW-D8
MW-6 <2
MW-18 73
MW-25 <2

0 35 70 140 Feet

WOODARD &CURRAN

Date: 1/9/2014

FIGURE 15
VINYL CHLORIDE CONCENTRATIONS IN GROUNDWATER - FALL 2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-gw02

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer

Isoconcentration Lines

- 1,1,1-TCA at Detection Limit
- 1,1,1-TCA at Type 1 RRS (200 ug/l)
- Groundwater Elevation Contour - December 2013
- Groundwater Elevation Contour - September 2013

Note: At the highlighted wells, LNAPL was detected in September 2013. The LNAPL at MW-3 is of a different nature than that detected at BH-9, BH-15, and BH-18.

PEACHTREE INDUSTRIAL BLVD.

MW-1 <5
MW-2 <5
MW-3
MW-4 <5
MW-5 <5
MW-6 <5
MW-7 <5
MW-9 <5
MW-11 14
MW-12 <5
MW-13 63
MW-14 5.4
MW-15 56
MW-16 <5
MW-17 <5
MW-18 <5
MW-19 <5
MW-20 <5
MW-21 <5
MW-25 <5
MW-26 <5
PZ-1 <5
PZ-2 <5
EW-A1 <5
EW-A2 <5
EW-A3 <5
EW-A4 <5
EW-A5
EW-A6 <5
EW-A7 <5
EW-A8 6.6
EW-A9 <5
EW-A10 66
EW-B1
EW-B2
EW-B3 <5
EW-B4 <5
EW-B5 <5
EW-B6 <5
EW-B7
EW-B8
EW-B9
EW-B10
EW-C1
EW-C2
EW-C3
EW-C4
EW-C5
EW-C6 5.2
EW-C7 <5
EW-C8 310
EW-C9 <5
EW-D1
EW-D2
EW-D3 <5
EW-D4
EW-D5 <5
EW-D6 <5
EW-D7 <5
EW-D8 <5
EW-D9 <5
BH-2 7.5
BH-6 <5
BH-7 32000
BH-8 490
BH-9
BH-10 190
BH-11 <5
BH-12 <5
BH-13 <5
BH-14 <5
BH-15 <5
BH-16
BH-17 <5
BH-18
BH-19 79
BH-20 <5
BH-21 <5
BH-22 38
BH-23
BH-24 <5
MW-A

0 35 70 140 Feet

WOODARD &CURRAN

Date: 1/8/2014

FIGURE 16
1,1,1-TRICHLOROETHANE CONCENTRATIONS IN GROUNDWATER - FALL 2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-gw02

Legend

Well Type

- Abandoned Well
- Dual Phase Extraction Well
- GE Well
- Rathon Well/Piezometer

Isoconcentration Lines

- 1,1-DCE at Detection Limit
- 1,1-DCE at Type 1 RRS (7 ug/l)
- 1,1-DCE at Type 3/4 RRS (1,300 ug/l)
- Groundwater Elevation Contour - December 2013
- Groundwater Elevation Contour - September 2013

Note: At the highlighted wells, LNAPL was detected in September 2013. The LNAPL at MW-3 is of a different nature than that detected at BH-9, BH-15, and BH-18.

PEACHTREE INDUSTRIAL BLVD.

MW-26 <5
MW-19 <5
MW-20 <5
MW-21 <5
MW-25 <5
MW-17 <5
MW-18 49
MW-7 <5
MW-5 <5
MW-6 <5
MW-3
MW-16 <5
PZ-2 <5
PZ-1 <5
MW-1 <5
MW-9 290
MW-11 19
MW-13 62
MW-14 <5
MW-12 290
MW-15 110
MW-A 87
BH-7 2100
BH-8
BH-9
BH-2
BH-10 6.8
BH-11 <5
BH-12 <5
BH-13 <5
BH-14 <5
BH-15 58
BH-16
BH-17 <5
BH-18
BH-19
BH-20 510
BH-21 <5
BH-22 350
BH-23
BH-24 16
BH-6 <5
EW-A1 <5
EW-A2 <5
EW-A3 <5
EW-A4 <5
EW-A5
EW-A6 <5
EW-A7 8.4
EW-A8 6
EW-A9 <5
EW-A10 25
EW-B1
EW-B2
EW-B3
EW-B4 <5
EW-B5 <5
EW-B6 <5
EW-B7
EW-B8
EW-B9
EW-B10
EW-C1
EW-C2
EW-C3
EW-C4
EW-C5
EW-C6 <5
EW-C7 <5
EW-C8 <5
EW-C9
EW-D1
EW-D2
EW-D3 <5
EW-D4
EW-D5 <5
EW-D6 <5
EW-D7 <5
EW-D8
EW-D9 <5

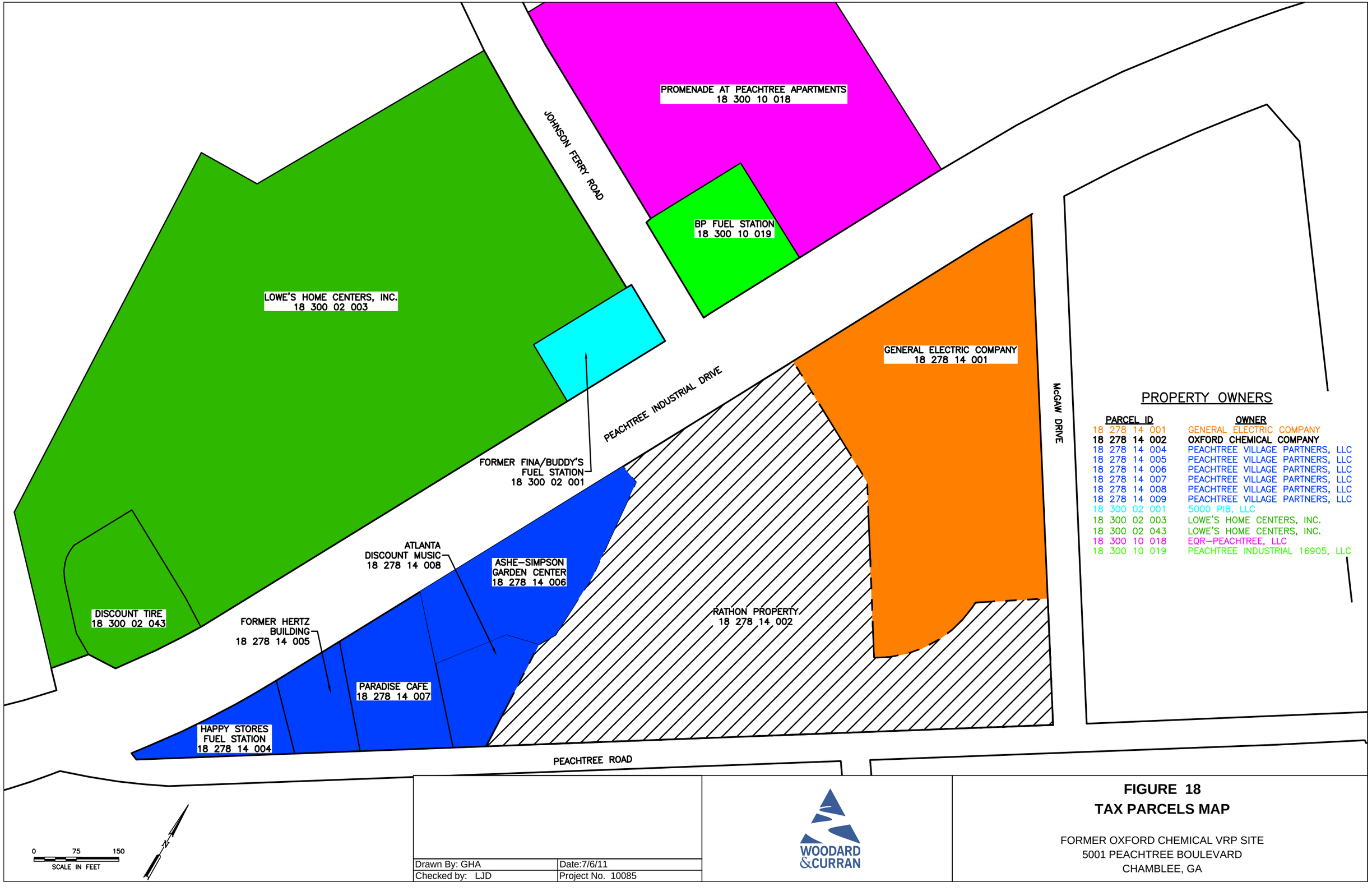
0 35 70 140 Feet

WOODARD &CURRAN

Date: 1/9/2014

FIGURE 17
1,1-DICHLOROETHENE CONCENTRATIONS IN GROUNDWATER - FALL 2013
FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GEORGIA

rathon-gw02



PROPERTY OWNERS

PARCEL ID	OWNER
18 278 14 001	GENERAL ELECTRIC COMPANY
18 278 14 002	OXFORD CHEMICAL COMPANY
18 278 14 004	PEACHTREE VILLAGE PARTNERS, LLC
18 278 14 005	PEACHTREE VILLAGE PARTNERS, LLC
18 278 14 006	PEACHTREE VILLAGE PARTNERS, LLC
18 278 14 007	PEACHTREE VILLAGE PARTNERS, LLC
18 278 14 008	PEACHTREE VILLAGE PARTNERS, LLC
18 278 14 009	PEACHTREE VILLAGE PARTNERS, LLC
18 300 02 001	5000 PIB, LLC
18 300 02 003	LOWE'S HOME CENTERS, INC.
18 300 02 043	LOWE'S HOME CENTERS, INC.
18 300 10 018	EQR-PEACHTREE, LLC
18 300 10 019	PEACHTREE INDUSTRIAL 16905, LLC

Drawn By: GHA	Date:7/6/11
Checked by: LJD	Project No. 10085

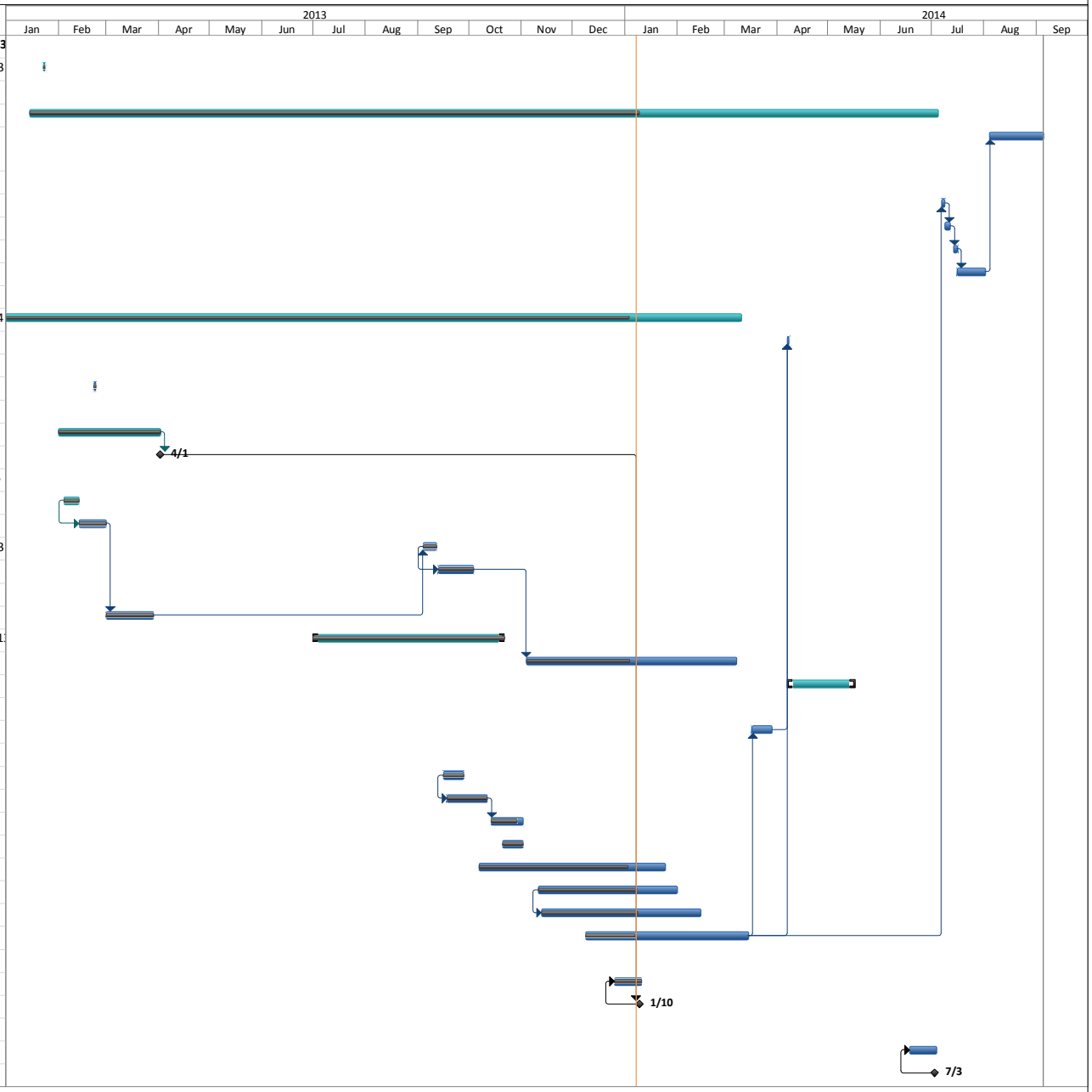
WOODARD &CURRAN

FIGURE 18
TAX PARCELS MAP

FORMER OXFORD CHEMICAL VRP SITE
5001 PEACHTREE BOULEVARD
CHAMBLEE, GA

Figure 19
VRP Schedule

ID	Task Name	Duration	Start	Finish
1	**Groundskeeping**	**261 days**	**Tue 1/1/13**	**Tue 12/31/13**
2	Fence Installation	1 day	Wed 1/23/13	Wed 1/23/13
3	**GW Capture System O&M and Reporting**	**428 days**	**Tue 1/15/13**	**Thu 9/4/14**
4	Monthly Reporting w/o system operating	384 days	Tue 1/15/13	Fri 7/4/14
5	Monthly Sampling & Reporting w/ system operating	24 days	Mon 8/4/14	Thu 9/4/14
6	**GW Capture System Repairs**	**20 days**	**Mon 7/7/14**	**Fri 8/1/14**
7	Recovery Pump Replacements	2 days	Mon 7/7/14	Tue 7/8/14
8	Well Abandonment/Replacement	3 days	Wed 7/9/14	Fri 7/11/14
9	Assess Return Lines	2 days	Mon 7/14/14	Tue 7/15/14
10	Recovery Line Repair/Replacement	13 days	Wed 7/16/14	Fri 8/1/14
11	**Interaction with GE**	**330 days**	**Tue 1/1/13**	**Mon 4/7/14**
12	Monitoring of Activities and Access Agreement	310 days	Tue 1/1/13	Mon 3/10/14
13	Meeting with GE re: Groundwater	1 day	Mon 4/7/14	Mon 4/7/14
14	**EPD Meetings/Interaction**	**1 day**	**Fri 2/22/13**	**Fri 2/22/13**
15	Notify EPD of intent to enter VRP	1 day	Fri 2/22/13	Fri 2/22/13
16	**Submittal of VRP Application**	**42 days**	**Fri 2/1/13**	**Mon 4/1/13**
17	VRP Application Preparation	42 days	Fri 2/1/13	Mon 4/1/13
18	Submittal of VRP Application	0 days	Mon 4/1/13	Mon 4/1/13
19	**Soil Delineation**	**174 days**	**Mon 2/4/13**	**Thu 10/3/13**
20	Fieldwork	7 days	Mon 2/4/13	Tue 2/12/13
21	Laboratory Analysis	12 days	Wed 2/13/13	Thu 2/28/13
22	Additional Soil Delineation Fieldwork	6 days	Wed 9/4/13	Wed 9/11/13
23	Laboratory Analysis	15 days	Fri 9/13/13	Thu 10/3/13
24	**Soil Remediation to Non-Residential RRS Evaluation**	**316 days**	**Fri 3/1/13**	**Fri 5/16/14**
25	Initial Data Evaluation and Plan Preparation	20 days	Fri 3/1/13	Thu 3/28/13
26	Revised Risk Reduction Standards	81 days	Mon 7/1/13	Mon 10/21/13
27	Additional Data Evaluation and Plan Preparation	90 days	Mon 11/4/13	Fri 3/7/14
28	Soil Remediation	30 days	Mon 4/7/14	Fri 5/16/14
29	**Fate and Transport Modeling**	**10 days**	**Mon 3/17/14**	**Fri 3/28/14**
30	Modeling with Delineated GW Data	10 days	Mon 3/17/14	Fri 3/28/14
31	**Shallow GW Delineation**	**130 days**	**Mon 9/16/13**	**Fri 3/14/14**
32	Collection of Property-Wide GW Data	10 days	Mon 9/16/13	Fri 9/27/13
33	Laboratory Analysis	18 days	Wed 9/18/13	Fri 10/11/13
34	GW Data Evaluation	15 days	Mon 10/14/13	Fri 11/1/13
35	Off-Site Delineation Plan Preparation	10 days	Mon 10/21/13	Fri 11/1/13
36	Obtain Offsite Access	80 days	Mon 10/7/13	Fri 1/24/14
37	Conduct Off-Site Delineation of GW	60 days	Mon 11/11/13	Fri 1/31/14
38	Laboratory Analysis	68 days	Wed 11/13/13	Fri 2/14/14
39	GW Data Evaluation	70 days	Mon 12/9/13	Fri 3/14/14
40	**VRP Status Report #1**	**12 days**	**Thu 12/26/13**	**Fri 1/10/14**
41	Preparation	12 days	Thu 12/26/13	Fri 1/10/14
42	Submittal	0 days	Fri 1/10/14	Fri 1/10/14
43	**VRP Status Report #2**	**12 days**	**Wed 6/18/14**	**Thu 7/3/14**
44	Preparation	12 days	Wed 6/18/14	Thu 7/3/14
45	Submittal	0 days	Thu 7/3/14	Thu 7/3/14



Project: Schedule 010814 VRP
Date: Wed 1/8/14

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | Deadline | Progress

Appendix A
Risk Reduction Standard Derivations

Table 1
Summary of Type 3 and Type 4 RRS for Groundwater
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent		Type 3 RRS (mg/L)	Type 4 RRS (mg/L)	RSS to Use
Volatile Organic Compounds				
Acetone	67-64-1	4.0	68.7	Type 4
Benzene	71-43-2	0.005	0.02	Type 4
Bromoform	75-25-2	0.10	0.14	Type 4
2-Butanone	78-93-3	2.0	25.6	Type 4
Carbon Disulfide	75-15-0	4.0	3.83	Type 3
Chlorobenzene	108-90-7	0.10	0.361	Type 4
Chloroethane	75-00-3	DL	87.6	Type 4
Cyclohexane	110-82-7	DL	52.6	Type 4
1,2-Dibromo-3-Chloropropane	96-12-8	0.0002	4.04E-05	Type 3
1,2-Dichlorobenzene	95-50-1	0.60	1.47	Type 4
1,3-Dichlorobenzene	541-73-1	0.60	DL	Type 3
1,4-Dichlorobenzene	106-46-7	0.075	0.021	Type 3
Dichlorodifluoromethane	75-71-8	1.0	0.84	Type 3
1,1-Dichloroethane	75-34-3	4.0	1.17	Type 3
1,2-Dichloroethane	107-06-2	0.005	0.056	Type 4
1,1-Dichloroethene	75-35-4	0.007	1.3	Type 4
cis-1,2-dichloroethene	156-59-2	0.07	0.20	Type 4
trans-1,2-dichloroethene	156-60-5	0.10	0.42	Type 4
1,2-Dichloropropane	78-87-5	0.005	0.019	Type 4
Ethylbenzene	100-41-4	0.70	0.071	Type 3
Isopropylbenzene (cumene)	98-82-8	DL	2.61	Type 4
4-Methyl-2-pentanone	108-10-1	2.0	6.24	Type 4
Methylene chloride	75-09-2	0.005	0.55	Type 4
Styrene	100-42-5	0.10	6.13	Type 4
1,1,1,2-Tetrachloroethane	630-20-6	0.07	0.25	Type 4
1,1,2,2-Tetrachloroethane	79-34-5	0.0002	0.0033	Type 4
Tetrachloroethylene	127-18-4	0.005	0.22	Type 4
Toluene	108-88-3	1.0	6.89	Type 4
1,2,4-Trichlorobenzene	120-82-1	0.07	0.017	Type 3
1,1,1-Trichloroethane	71-55-6	0.20	36.1	Type 4
1,1,2-Trichloroethane	79-00-5	0.005	0.00	Type 3
Trichloroethylene	79-01-6	0.005	0.013	Type 4
1,2,3-Trichloropropane	96-18-4	0.04	9.54E-05	Type 3
Vinyl Chloride	75-01-4	0.002	0.0037	Type 4
Xylenes	1330-20-7	10.0	0.84	Type 3
Semivolatile Organic Compounds				
Acenaphthene	83-32-9	2.0	6.13	Type 4
Acenaphthylene	208-96-8	DL	DL	DL
Acetophenone	98-86-2	4.0	10.2	Type 4
Anthracene	120-12-7	DL	30.7	Type 4
Benzo(a)anthracene	56-55-3	0.0001	0.0014	Type 4
Benzo(a)pyrene	50-32-8	0.0002	0.00014	Type 3
Benzo(b)fluoranthene	205-99-2	0.0002	0.0014	Type 4
Benzo(g,h,i)perylene	191-24-2	DL	DL	DL
Benzo(k)fluoranthene	207-08-9	DL	0.0021	Type 4
bis(2-chloroisopropyl)ether	108-60-1	DL	0.015	Type 4
bis(2-ethylhexyl)phthalate	117-81-7	0.006	0.068	Type 4
2-Chlorophenol	95-57-8	0.04	0.51	Type 4
Chrysene	218-01-9	0.0002	0.021	Type 4
Dibenzo(a,h)anthracene	53-70-3	0.0003	0.00013	Type 3
2,4-Dichlorophenol	120-83-2	0.02	0.31	Type 4
Di-n-butylphthalate	84-74-2	4.0	10.2	Type 4
2,4-Dimethylphenol	105-67-9	0.70	2.04	Type 4
2,4-Dinitrophenol	51-28-5	0.07	0.20	Type 4
Di-n-octylphthalate	117-84-0	0.70	1.022	Type 4
Fluoranthene	206-44-0	1.0	4.09	Type 4
Fluorene	86-73-7	1.0	4.09	Type 4
Indeno(1,2,3-cd)pyrene	193-39-5	0.0004	0.0014	Type 4
2-Methylphenol	95-48-7	DL	2.59	Type 4
4-Methylphenol	106-44-5	DL	3.47	Type 4
Naphthalene	91-20-3	0.02	0.026	Type 4
N-Nitrosodiphenylamine	86-30-6	DL	0.081	Type 4
Pentachlorophenol	87-86-5	0.001	0.0062	Type 4
Phenanthrene	85-01-8	DL	DL	DL
Phenol	108-95-2	4.0	1.66	Type 3
Pyrene	129-00-0	1.0	3.07	Type 4
2,4,5-Trichlorophenol	95-95-4	4.0	10.2	Type 4
2,4,6-Trichlorophenol	88-06-2	0.03	0.061	Type 4
Pesticides / Polychlorinated Biphenyls				
Aroclor 1016	12674-11-2	0.0005	0.0072	Type 4
Aroclor 1260	11096-82-5	0.0005	0.00033	Type 3
Aldrin	309-00-2	2.00E-05	3.86E-05	Type 4
alpha-Endosulfan	95-99-98	0.002	DL	Type 3
alpha-BHC	319-84-6	6.00E-06	0.0001	Type 4
beta-BHC	319-85-7	2.00E-05	0.0004	Type 4
beta-Endosulfan	33213-65-9	0.002	DL	Type 3
Chlordane	12789-03-6	0.002	0.0019	Type 3
delta-BHC	319-86-8	DL	DL	DL
DDD	72-54-8	0.0001	0.0027	Type 4
DDE	72-55-9	0.0001	0.0019	Type 4
DDT	50-29-3	0.0001	0.0019	Type 4
Dieldrin	60-57-1	2.00E-05	4.11E-05	Type 4
Endosulfan sulfate	1031-07-8	DL	DL	DL
Endrin	72-20-8	0.002	0.031	Type 4
Endrin aldehyde	7421-93-4	DL	DL	DL
Endrin ketone	53494-70-5	DL	DL	DL
Heptachlor epoxide	1024-57-3	0.0002	7.26E-05	Type 3
Lindane	58-89-9	0.0002	0.0006	Type 4
Methoxychlor	72-43-5	0.04	0.51	Type 4

Notes:
mg/L = Milligrams per liter
NA = Not available
DL = Analytical detection limit
Blue shaded cells represent the higher of Type 3 or Type 4 RRS for groundwater.

Table 2
Summary of Type 3 and Type 4 RRS for Soil
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent		DAF to Use	Surface Soils (SS)			Subsurface Soils (SB)		
			Type 3 RRS (mg/kg)	Type 4 RRS DAF = 1 (mg/kg)	Type 4 RRS DAF = 20 (mg/kg)	Type 3 RRS (mg/kg)	Type 4 RRS DAF = 1 (mg/kg)	Type 4 RRS DAF = 20 (mg/kg)
Volatile Organic Compounds								
Acetone	67-64-1	20	400	14.1	282	400	14.1	282
Benzene	71-43-2	20	0.50	0.01	0.20	0.50	0.01	0.20
Bromoform	75-25-2	20	10.0	0.037	0.73	10.0	0.037	0.73
2-Butanone	78-93-3	20	200	5.35	107	200	5.35	107
Carbon Disulfide	75-15-0	20	400	1.18	23.7	400	1.18	23.7
Chlorobenzene	108-90-7	20	10.0	0.24	4.90	10.0	0.24	4.90
Chloroethane	75-00-3	20	0.17	25	497	0.17	25	497
Cyclohexane	110-82-7	20	20	55	1,093	20	55	1,093
1,2-Dibromo-3-Chloropropane	96-12-8	20	0.02	8.6E-05	0.0017	0.02	8.6E-05	0.0017
1,2-Dichlorobenzene	95-50-1	1	60.0	1.43	28.6	60.0	1.43	28.6
1,3-Dichlorobenzene	541-73-1	20	60.0	0.86	17.3	60.0	0.86	17.3
1,4-Dichlorobenzene	106-46-7	1	7.50	0.072	1.44	7.50	0.072	1.44
Dichlorodifluoromethane	75-71-8	20	24.5	1.54	30.8	100	1.54	30.8
1,1-Dichloroethane	75-34-3	20	400	1.14	22.7	400	1.14	22.7
1,2-Dichloroethane	107-06-2	20	0.50	0.016	0.32	0.50	0.016	0.32
1,1-Dichloroethene	75-35-4	1	0.70	0.47	9.37	0.70	0.47	9.37
cis-1,2-dichloroethene	156-59-2	1	7.0	0.06	1.20	7.0	0.06	1.20
trans-1,2-dichloroethene	156-60-5	20	10.0	0.12	2.46	10.0	0.12	2.46
1,2-Dichloropropane	78-87-5	20	0.50	0.006	0.12	0.50	0.006	0.12
Ethylbenzene	100-41-4	20	70.0	0.78	15.7	70.0	0.78	15.7
Isopropylbenzene (cumene)	98-82-8	20	21.9	4.27	85.5	21.9	4.27	85.5
4-Methyl-2-pentanone	108-10-1	20	200	1.41	28.1	200	1.41	28.1
Methylene chloride	75-09-2	20	0.50	0.14	2.80	0.50	0.14	2.80
Styrene	100-42-5	20	14	6.76	135	14	6.76	135
1,1,1,2-Tetrachloroethane	630-20-6	20	7.0	0.097	1.94	7.0	0.097	1.94
1,1,2,2-Tetrachloroethane	79-34-5	20	0.13	0.0013	0.026	0.13	0.0013	0.026
Tetrachloroethylene	127-18-4	1	0.50	0.101	2.03	0.50	0.101	2.03
Toluene	108-88-3	1	100	4.77	95.4	100	4.77	95.4
1,2,4-Trichlorobenzene	120-82-1	1	10.8	0.20	4.08	10.8	0.20	4.08
1,1,1-Trichloroethane	71-55-6	20	20	12.6	253	20	12.6	253
1,1,2-Trichloroethane	79-00-5	20	0.50	0.002	0.032	0.50	0.002	0.032
Trichloroethylene	79-01-6	1	0.50	0.005	0.093	0.50	0.005	0.093
1,2,3-Trichloropropane	96-18-4	20	1.19	0.02	0.40	4.0	0.02	0.40
Vinyl Chloride	75-01-4	1	0.20	0.0013	0.026	0.20	0.0013	0.026
Xylenes	1330-20-7	20	1,000	9.85	197	1,000	9.85	197
Semivolatile Organic Compounds								
Acenaphthene	83-32-9	20	300	62.9	1,258	300	62.9	1,258
Acenaphthylene	208-96-8	20	130	DL	DL	130	100,000	100,000
Acetophenone	98-86-2	20	400	3.10	62.1	400	3.10	62.1
Anthracene	120-12-7	20	500	1,009	20,187	500	1,009	20,187
Benzo(a)anthracene	56-55-3	20	5.0	0.50	10.1	5.0	0.50	10.1
Benzo(a)pyrene	50-32-8	20	1.64	0.24	4.7	1.64	0.24	4.7
Benzo(b)fluoranthene	205-99-2	1	5.0	1.70	34.1	5.0	1.70	34.1
Benzo(g,h,i)perylene	191-24-2	20	500	DL	DL	500	100,000	100,000
Benzo(k)fluoranthene	207-08-9	20	5.0	2.48	49.6	5.0	2.48	49.6
bis(2-chloroisopropyl)ether	108-60-1	20	171	0.005	0.10	171	0.005	0.10
bis(2-ethylhexyl)phthalate	117-81-7	20	50	16.3	326	50	16.3	326
2-Chlorophenol	95-57-8	20	4.0	0.42	8.31	4.0	0.42	8.31
Chrysene	218-01-9	20	5.0	7.62	152	5.0	7.62	152
Dibenzo(a,h)anthracene	53-70-3	20	5.0	1.15	7.84	5.0	1.15	22.9
2,4-Dichlorophenol	120-83-2	20	2.0	0.36	7.26	2.0	0.36	7.26
Di-n-butylphthalate	84-74-2	20	400	25.7	514	400	25.7	514
2,4-Dimethylphenol	105-67-9	20	70	2.42	48.4	70	2.42	48.4
2,4-Dinitrophenol	51-28-5	20	7.0	0.23	4.59	7.0	0.23	4.59
Di-n-octylphthalate	117-84-0	20	70	20,440	20,440	70	100,000	100,000
Fluoranthene	206-44-0	20	500	454	9,084	500	454	9,084
Fluorene	86-73-7	20	360	75.7	1,514	360	75.7	1,514
Indeno(1,2,3-cd)pyrene	193-39-5	20	5.0	5.55	78.4	5.0	5.55	111
2-Methylphenol	95-48-7	20	3.80	2.11	42.1	3.80	2.11	42.1
4-Methylphenol	106-44-5	20	3.80	2.78	55.6	3.80	2.78	55.6
Naphthalene	91-20-3	1	100	0.085	1.71	100	0.085	1.71
N-Nitrosodiphenylamine	86-30-6	20	6.46	0.44	8.88	6.46	0.44	8.88
Pentachlorophenol	87-86-5	20	3.3	0.063	1.26	3.3	0.063	1.26
Phenanthrene	85-01-8	20	110	DL	DL	110	100,000	100,000
Phenol	108-95-2	20	400	2.30	46.0	400	2.30	46.0
Pyrene	129-00-0	20	500	334	6,677	500	334	6,677
2,4,5-Trichlorophenol	95-95-4	20	400	38.4	767	400	38.4	767
2,4,6-Trichlorophenol	88-06-2	20	3.0	0.23	4.56	3.0	0.23	4.56
Pesticides / Polychlorinated Biphenyls								
Aroclor 1016	12674-11-2	20	1.55	0.68	13.7	1.55	0.68	13.7
Aroclor 1260	11096-82-5	1	1.55	0.35	7.0	1.55	0.35	7.0
Aldrin	309-00-2	20	0.66	0.0063	0.13	0.66	0.0063	0.13
alpha-Endosulfan	95-99-98	20	10.0	0.027	0.55	10.0	0.027	0.55
alpha-BHC	319-84-6	20	0.66	0.00061	0.012	0.66	0.00061	0.012
beta-BHC	319-85-7	20	0.66	0.0021	0.042	0.66	0.0021	0.042
beta-Endosulfan	33213-65-9	20	10.0	0.027	0.55	10.0	0.027	0.55
Chlordane	12789-03-6	20	9.20	0.14	2.71	9.20	0.14	2.71
delta-BHC	319-86-8	20	25.0	DL	DL	25.0	100,000	100,000
DDD	72-54-8	20	0.66	0.64	12.9	0.66	0.64	12.9
DDE	72-55-9	20	0.66	0.46	9.15	0.66	0.46	9.15
DDT	50-29-3	20	0.66	0.66	13.1	0.66	0.66	13.1
Dieldrin	60-57-1	20	0.66	0.0017	0.033	0.66	0.0017	0.033
Endosulfan sulfate	1031-07-8	20	1.65	DL	DL	1.65	100,000	100,000
Endrin	72-20-8	20	10.0	1.24	24.8	10.0	1.24	24.8
Endrin aldehyde	7421-93-4	20	10.0	DL	DL	10.0	100,000	100,000
Endrin ketone	53494-70-5	20	10.0	DL	DL	10.0	100,000	100,000
Heptachlor epoxide	1024-57-3	20	1.65	0.0041	0.082	1.65	0.0041	0.082
Lindane	58-89-9	20	0.66	0.0035	0.071	0.66	0.0035	0.071
Methoxychlor	72-43-5	20	10.0	27.6	552	10.0	27.6	552

Notes:
mg/kg = Milligrams per kilogram
DAF = Dilution attenuation factor used in the leachate model to derive Type 4 RRS. A DAF value of 1 is used if the maximum concentration detected in groundwater exceeds the applicable standard; otherwise the default value of 20 is used. See Table 3 for DAF selection for each constituent.
SS = Surface soils, located from 0-2' below ground surface
SB = Sub-surface soils, located >2' below ground surface
Green shaded cells indicate that Type 3 RRS is greater than all Type 4 RRS values for the applicable soil depth and should be used for that constituent.
Orange shaded cells indicate that the Type 4 RRS for the appropriate DAF is greater than Type 3 RRS and should be used for that constituent.

Table 3
Selection of Soil RRS Based on Groundwater Analytical Results
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent		Groundwater RRS (mg/L)	Groundwater RRS Type	Max Detected Concentration* (mg/L)	Detected Above RRS?	Leachate Model DAF** (unitless)	SS Soil RRS (mg/kg)	SS Soil RRS Type	SB Soil RRS (mg/kg)	SB Soil RRS Type
Volatile Organic Compounds										
Acetone	67-64-1	68.7	Type 4	56	No	20	400	Type 3	400	Type 3
Benzene	71-43-2	0.02	Type 4	0.018	No	20	0.50	Type 3	0.50	Type 3
Bromoform	75-25-2	0.14	Type 4	--	--	20	10.0	Type 3	10.0	Type 3
2-Butanone	78-93-3	25.6	Type 4	0.098	No	20	200	Type 3	200	Type 3
Carbon Disulfide	75-15-0	4.0	Type 3	--	--	20	400	Type 3	400	Type 3
Chlorobenzene	108-90-7	0.36	Type 4	0.26	No	20	10.0	Type 3	10.0	Type 3
Chloroethane	75-00-3	87.6	Type 4	0.55	No	20	497	Type 4	497	Type 4
Cyclohexane	110-82-7	52.6	Type 4	--	--	20	1,093	Type 4	1,093	Type 4
1,2-Dibromo-3-Chloropropane	96-12-8	0.0002	Type 3	--	--	20	0.02	Type 3	0.02	Type 3
1,2-Dichlorobenzene	95-50-1	1.47	Type 4	3.2	Yes	1	60.0	Type 3	60.0	Type 3
1,3-Dichlorobenzene	541-73-1	0.60	Type 3	0.08	No	20	60.0	Type 3	60.0	Type 3
1,4-Dichlorobenzene	106-46-7	0.075	Type 3	0.31	Yes	1	7.50	Type 3	7.50	Type 3
Dichlorodifluoromethane	75-71-8	1.0	Type 3	--	--	20	30.8	Type 4	100	Type 3
1,1-Dichloroethane	75-34-3	4.0	Type 3	1.7	No	20	400	Type 3	400	Type 3
1,2-Dichloroethane	107-06-2	0.056	Type 4	0.0093	No	20	0.50	Type 3	0.50	Type 3
1,1-Dichloroethene	75-35-4	1.30	Type 4	2.1	Yes	1	0.70	Type 3	0.70	Type 3
cis-1,2-dichloroethene	156-59-2	0.20	Type 4	14	Yes	1	7.0	Type 3	7.0	Type 3
trans-1,2-dichloroethene	156-60-5	0.42	Type 4	0.14	No	20	10.0	Type 3	10.0	Type 3
1,2-Dichloropropane	78-87-5	0.019	Type 4	--	--	20	0.50	Type 3	0.50	Type 3
Ethylbenzene	100-41-4	0.70	Type 3	0.025	No	20	70.0	Type 3	70.0	Type 3
Isopropylbenzene (cumene)	98-82-8	2.61	Type 4	--	--	20	85.5	Type 4	85.5	Type 4
4-Methyl-2-pentanone	108-10-1	6.24	Type 4	0.24	No	20	200	Type 3	200	Type 3
Methylene chloride	75-09-2	0.55	Type 4	0.0061	No	20	2.80	Type 4	2.80	Type 4
Styrene	100-42-5	6.13	Type 4	0.016	No	20	135	Type 4	135	Type 4
1,1,1,2-Tetrachloroethane	630-20-6	0.25	Type 4	--	--	20	7.00	Type 3	7.00	Type 3
1,1,2,2-Tetrachloroethane	79-34-5	0.0033	Type 4	--	--	20	0.13	Type 3	0.13	Type 3
Tetrachloroethylene	127-18-4	0.22	Type 4	6.8	Yes	1	0.50	Type 3	0.50	Type 3
Toluene	108-88-3	6.89	Type 4	8.3	Yes	1	100	Type 3	100	Type 3
1,2,4-Trichlorobenzene	120-82-1	0.07	Type 3	0.61	Yes	1	10.8	Type 3	10.8	Type 3
1,1,1-Trichloroethane	71-55-6	36.1	Type 4	33	No	20	253	Type 4	253	Type 4
1,1,2-Trichloroethane	79-00-5	0.005	Type 3	--	--	20	0.50	Type 3	0.50	Type 3
Trichloroethylene	79-01-6	0.013	Type 4	1	Yes	1	0.50	Type 3	0.50	Type 3
1,2,3-Trichloropropane	96-18-4	0.04	Type 3	--	--	20	1.19	Type 3	4.00	Type 3
Vinyl Chloride	75-01-4	0.0037	Type 4	0.34	Yes	1	0.20	Type 3	0.20	Type 3
Xylenes	1330-20-7	10.0	Type 3	0.18	No	20	1,000	Type 3	1,000	Type 3
Semivolatile Organic Compounds										
Acenaphthene	83-32-9	6.13	Type 4	0.01	No	20	1,258	Type 4	1,258	Type 4
Acenaphthylene	208-96-8	DL	DL	--	--	20	130	Type 3	100,000	Type 4
Acetophenone	98-86-2	10.2	Type 4	0.022	No	20	400	Type 3	400	Type 3
Anthracene	120-12-7	30.7	Type 4	--	--	20	20,187	Type 4	20,187	Type 4
Benzo(a)anthracene	56-55-3	0.0014	Type 4	--	--	20	10.1	Type 4	10.1	Type 4
Benzo(a)pyrene	50-32-8	0.0002	Type 3	--	--	20	4.70	Type 4	4.70	Type 4
Benzo(b)fluoranthene	205-99-2	0.0014	Type 4	0.01	Yes	1	5.0	Type 3	5.0	Type 3
Benzo(g,h,i)perylene	191-24-2	DL	DL	--	--	20	500	Type 3	100,000	Type 4
Benzo(k)fluoranthene	207-08-9	0.0021	Type 4	--	--	20	49.6	Type 4	49.6	Type 4
bis(2-chloroisopropyl)ether	108-60-1	0.015	Type 4	--	--	20	171	Type 3	171	Type 3
bis(2-ethylhexyl)phthalate	117-81-7	0.068	Type 4	--	--	20	326	Type 4	326	Type 4
2-Chlorophenol	95-57-8	0.51	Type 4	0.029	No	20	8.31	Type 4	8.31	Type 4
Chrysene	218-01-9	0.021	Type 4	--	--	20	152	Type 4	152	Type 4
Dibenzo(a,h)anthracene	53-70-3	0.0003	Type 3	--	--	20	7.84	Type 4	22.9	Type 4
2,4-Dichlorophenol	120-83-2	0.31	Type 4	--	--	20	7.26	Type 4	7.26	Type 4
Di-n-butylphthalate	84-74-2	10.2	Type 4	--	--	20	514	Type 4	514	Type 4
2,4-Dimethylphenol	105-67-9	2.04	Type 4	0.015	No	20	70	Type 3	70	Type 3
2,4-Dinitrophenol	51-28-5	0.20	Type 4	--	--	20	7.0	Type 3	7.0	Type 3
Di-n-octylphthalate	117-84-0	1.0	Type 4	--	--	20	20,440	Type 4	100,000	Type 4
Fluoranthene	206-44-0	4.09	Type 4	--	--	20	9,084	Type 4	9,084	Type 4
Fluorene	86-73-7	4.09	Type 4	--	--	20	1,514	Type 4	1,514	Type 4
Indeno(1,2,3-cd)pyrene	193-39-5	0.0014	Type 4	--	--	20	78.4	Type 4	111	Type 4
2-Methylphenol	95-48-7	2.59	Type 4	0.049	No	20	42	Type 4	42	Type 4
4-Methylphenol	106-44-5	3.47	Type 4	0.1	No	20	55.6	Type 4	55.6	Type 4
Naphthalene	91-20-3	0.03	Type 4	0.56	Yes	1	100	Type 3	100	Type 3
N-Nitrosodiphenylamine	86-30-6	0.081	Type 4	--	--	20	8.88	Type 4	8.88	Type 4
Pentachlorophenol	87-86-5	0.0062	Type 4	--	--	20	3.30	Type 3	3.30	Type 3
Phenanthrene	85-01-8	DL	DL	--	--	20	110	Type 3	100,000	Type 4
Phenol	108-95-2	4.0	Type 3	0.01	No	20	400	Type 3	400	Type 3
Pyrene	129-00-0	3.07	Type 4	--	--	20	6,677	Type 4	6,677	Type 4
2,4,5-Trichlorophenol	95-95-4	10.2	Type 4	--	--	20	767	Type 4	767	Type 4
2,4,6-Trichlorophenol	88-06-2	0.061	Type 4	--	--	20	4.56	Type 4	4.56	Type 4
Pesticides / Polychlorinated Biphenyls										
Aroclor 1016	12674-11-2	0.0072	Type 4	0.0057	No	20	13.7	Type 4	13.7	Type 4
Aroclor 1260	11096-82-5	0.0005	Type 3	0.0021	Yes	1	1.55	Type 3	1.55	Type 3
Aldrin	309-00-2	3.9E-05	Type 4	--	--	20	0.66	Type 3	0.66	Type 3
alpha-Endosulfan	95-99-98	0.002	Type 3	--	--	20	10.0	Type 3	10.0	Type 3
alpha-BHC	319-84-6	0.0001	Type 4	--	--	20	0.66	Type 3	0.66	Type 3
beta-BHC	319-85-7	0.00036	Type 4	0.00021	No	20	0.66	Type 3	0.66	Type 3
beta-Endosulfan	33213-65-9	0.002	Type 3	--	--	20	10.0	Type 3	10.0	Type 3
Chlordane	12789-03-6	0.002	Type 3	0.0003	No	20	9.2	Type 3	9.2	Type 3
delta-BHC	319-86-8	DL	DL	--	--	20	25.0	Type 3	100,000	Type 4
DDD	72-54-8	0.0027	Type 4	0.0015	No	20	12.9	Type 4	12.9	Type 4
DDE	72-55-9	0.0019	Type 4	0.00019	No	20	9.15	Type 4	9.15	Type 4
DDT	50-29-3	0.0019	Type 4	--	--	20	13.1	Type 4	13.1	Type 4
Dieldrin	60-57-1	4.1E-05	Type 4	--	--	20	0.66	Type 3	0.66	Type 3
Endosulfan sulfate	1031-07-8	DL	DL	--	--	20	1.65	Type 3	100,000	Type 4
Endrin	72-20-8	0.031	Type 4	--	--	20	24.8	Type 4	24.8	Type 4
Endrin aldehyde	7421-93-4	DL	DL	--	--	20	10.0	Type 3	100,000	Type 4
Endrin ketone	53494-70-5	DL	DL	--	--	20	10.0	Type 3	100,000	Type 4
Heptachlor epoxide	1024-57-3	0.0002	Type 3	--	--	20	1.65	Type 3	1.65	Type 3
Lindane	58-89-9	0.00061	Type 4	--	--	20	0.66	Type 3	0.66	Type 3
Methoxychlor	72-43-5	0.51	Type 4	--	--	20	552	Type 4	552	Type 4

Notes:
mg/L = Milligrams per liter
mg/kg = Milligrams per kilogram
SS = Surface soils, located from 0-2' below ground surface
SB = Sub-surface soils, located >2' below ground surface
* Groundwater samples collected from site wells in 2011 and 2012 were evaluated.
**DAF = Dilution attenuation factor used in the calculation of groundwater levels resulting from soil leachate. A DAF value of 1 is used if the maximum concentration detected in groundwater exceeds the applicable standard; otherwise the default value of 20 is used. See text for discussion.
-- = Not applicable

Table 4
Delineation Standards for Groundwater and Soil
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent		Type 1 GW RRS (mg/L)	Type 1 Soil RRS (mg/kg)
Volatile Organic Compounds			
Acetone	67-64-1	4.00E+00	4.00E+02
Benzene	71-43-2	5.00E-03	5.00E-01
Bromoform	75-25-2	1.00E-01	1.00E+01
2-Butanone	78-93-3	2.00E+00	2.00E+02
Carbon Disulfide	75-15-0	4.00E+00	4.00E+02
Chlorobenzene	108-90-7	1.00E-01	1.00E+01
Chloroethane	75-00-3	DL	1.70E-01
Cyclohexane	110-82-7	DL	2.00E+01
1,2-Dibromo-3-Chloropropane	96-12-8	2.00E-04	2.00E-02
1,2-Dichlorobenzene	95-50-1	6.00E-01	6.00E+01
1,3-Dichlorobenzene	541-73-1	6.00E-01	6.00E+01
1,4-Dichlorobenzene	106-46-7	7.50E-02	7.50E+00
Dichlorodifluoromethane	75-71-8	1.00E+00	2.33E+01
1,1-Dichloroethane	75-34-3	4.00E+00	4.00E+02
1,2-Dichloroethane	107-06-2	5.00E-03	5.00E-01
1,1-Dichloroethene	75-35-4	7.00E-03	7.00E-01
cis-1,2-dichloroethene	156-59-2	7.00E-02	7.00E+00
trans-1,2-dichloroethene	156-60-5	1.00E-01	1.00E+01
1,2-Dichloropropane	78-87-5	5.00E-03	5.00E-01
Ethylbenzene	100-41-4	7.00E-01	7.00E+01
Isopropylbenzene (cumene)	98-82-8	DL	2.19E+01
4-Methyl-2-pentanone	108-10-1	2.00E+00	2.00E+02
Methylene chloride	75-09-2	5.00E-03	5.00E-01
Styrene	100-42-5	1.00E-01	1.40E+01
1,1,1,2-Tetrachloroethane	630-20-6	7.00E-02	7.00E+00
1,1,2,2-Tetrachloroethane	79-34-5	2.00E-04	1.30E-01
Tetrachloroethylene	127-18-4	5.00E-03	5.00E-01
Toluene	108-88-3	1.00E+00	1.00E+02
1,2,4-Trichlorobenzene	120-82-1	7.00E-02	1.08E+01
1,1,1-Trichloroethane	71-55-6	2.00E-01	2.00E+01
1,1,2-Trichloroethane	79-00-5	5.00E-03	5.00E-01
Trichloroethylene	79-01-6	5.00E-03	5.00E-01
1,2,3-Trichloropropane	96-18-4	4.00E-02	4.98E-01
Vinyl Chloride	75-01-4	2.00E-03	2.00E-01
Xylenes	1330-20-7	1.00E+01	1.00E+03
Semivolatile Organic Compounds			
Acenaphthene	83-32-9	2.00E+00	3.00E+02
Acenaphthylene	208-96-8	DL	1.30E+02
Acetophenone	98-86-2	4.00E+00	4.00E+02
Anthracene	120-12-7	DL	5.00E+02
Benzo(a)anthracene	56-55-3	1.00E-04	5.00E+00
Benzo(a)pyrene	50-32-8	2.00E-04	1.64E+00
Benzo(b)fluoranthene	205-99-2	2.00E-04	5.00E+00
Benzo(g,h,i)perylene	191-24-2	DL	5.00E+02
Benzo(k)fluoranthene	207-08-9	DL	5.00E+00
bis(2-chloroisopropyl)ether	108-60-1	DL	1.71E+02
bis(2-ethylhexyl)phthalate	117-81-7	6.00E-03	5.00E+01
2-Chlorophenol	95-57-8	4.00E-02	4.00E+00
Chrysene	218-01-9	2.00E-04	5.00E+00
Dibenzo(a,h)anthracene	53-70-3	3.00E-04	2.05E+00
2,4-Dichlorophenol	120-83-2	2.00E-02	2.00E+00
Di-n-butylphthalate	84-74-2	4.00E+00	4.00E+02
2,4-Dimethylphenol	105-67-9	7.00E-01	7.00E+01
2,4-Dinitrophenol	51-28-5	7.00E-02	7.00E+00
Di-n-octylphthalate	117-84-0	7.00E-01	7.00E+01
Fluoranthene	206-44-0	1.00E+00	5.00E+02
Fluorene	86-73-7	1.00E+00	3.60E+02
Indeno(1,2,3-cd)pyrene	193-39-5	4.00E-04	5.00E+00
2-Methylphenol	95-48-7	DL	3.80E+00
4-Methylphenol	106-44-5	DL	3.80E+00
Naphthalene	91-20-3	2.00E-02	1.00E+02
N-Nitrosodiphenylamine	86-30-6	DL	6.46E+00
Pentachlorophenol	87-86-5	1.00E-03	3.30E+00
Phenanthrene	85-01-8	DL	1.10E+02
Phenol	108-95-2	4.00E+00	4.00E+02
Pyrene	129-00-0	1.00E+00	5.00E+02
2,4,5-Trichlorophenol	95-95-4	4.00E+00	4.00E+02
2,4,6-Trichlorophenol	88-06-2	3.00E-02	3.00E+00
Pesticides / Polychlorinated Biphenyls			
Aroclor 1016	12674-11-2	5.00E-04	1.55E+00
Aroclor 1260	11096-82-5	5.00E-04	1.55E+00
Aldrin	309-00-2	2.00E-05	6.60E-01
alpha-Endosulfan	95-99-98	2.00E-03	1.00E+01
alpha-BHC	319-84-6	6.00E-06	6.60E-01
beta-BHC	319-85-7	2.00E-05	6.60E-01
beta-Endosulfan	33213-65-9	2.00E-03	1.00E+01
Chlordane	12789-03-6	2.00E-03	9.20E+00
delta-BHC	319-86-8	DL	2.50E+01
DDD	72-54-8	1.00E-04	6.60E-01
DDE	72-55-9	1.00E-04	6.60E-01
DDT	50-29-3	1.00E-04	6.60E-01
Dieldrin	60-57-1	2.00E-05	6.60E-01
Endosulfan sulfate	1031-07-8	DL	1.65E+00
Endrin	72-20-8	2.00E-03	1.00E+01
Endrin aldehyde	7421-93-4	DL	1.00E+01
Endrin ketone	53494-70-5	DL	1.00E+01
Heptachlor epoxide	1024-57-3	2.00E-04	1.64E+00
Lindane	58-89-9	2.00E-04	6.60E-01
Methoxychlor	72-43-5	4.00E-02	1.00E+01

Notes:
NA = No value available
DL = Analytical detection limit
mg/L = Milligrams per liter
mg/kg = Milligrams per kilogram
Reference: Georgia EPD, Risk Reduction Standards, 391-3-19-.07.
Available online at: http://www.gaepd.org/Documents/hsraguideCSRRRS.html.

Table A-1
Calculation of Type 3 and Type 4 Risk Reduction Standards (RRS) for Groundwater
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent	Calculated Non-Residential Target Concentrations (mg/L)		Type 3 GW RRS (mg/L)	Type 4 GW RRS (mg/L)	Value Used for Leachate Calculations (mg/L)
	Non-Cancer	Cancer			
Volatile Organic Compounds					
Acetone	6.87E+01	NA	4.00E+00	6.87E+01	6.87E+01
Benzene	1.60E-01	1.96E-02	5.00E-03	1.96E-02	1.96E-02
Bromoform	2.04E+00	1.38E-01	1.00E-01	1.38E-01	1.38E-01
2-Butanone	2.56E+01	NA	2.00E+00	2.56E+01	2.56E+01
Carbon Disulfide	3.83E+00	NA	4.00E+00	3.83E+00	4.00E+00
Chlorobenzene	3.61E-01	NA	1.00E-01	3.61E-01	3.61E-01
Chloroethane	8.76E+01	NA	DL	8.76E+01	8.76E+01
Cyclohexane	5.26E+01	NA	DL	5.26E+01	5.26E+01
1,2-Dibromo-3-Chloropropane	1.61E-03	4.04E-05	2.00E-04	4.04E-05	2.00E-04
1,2-Dichlorobenzene	1.47E+00	NA	6.00E-01	1.47E+00	1.47E+00
1,3-Dichlorobenzene	NA	NA	6.00E-01	DL	6.00E-01
1,4-Dichlorobenzene	3.54E+00	2.14E-02	7.50E-02	2.14E-02	7.50E-02
Dichlorodifluoromethane	8.40E-01	NA	1.00E+00	8.40E-01	1.00E+00
1,1-Dichloroethane	2.04E+01	1.17E+00	4.00E+00	1.17E+00	4.00E+00
1,2-Dichloroethane	5.57E-02	7.26E-02	5.00E-03	5.57E-02	5.57E-02
1,1-Dichloroethene	1.30E+00	NA	7.00E-03	1.30E+00	1.30E+00
cis-1,2-dichloroethene	2.04E-01	NA	7.00E-02	2.04E-01	2.04E-01
trans-1,2-dichloroethene	4.18E-01	NA	1.00E-01	4.18E-01	4.18E-01
1,2-Dichloropropane	3.49E-02	1.87E-02	5.00E-03	1.87E-02	1.87E-02
Ethylbenzene	4.72E+00	7.12E-02	7.00E-01	7.12E-02	7.00E-01
Isopropylbenzene (cumene)	2.61E+00	NA	DL	2.61E+00	2.61E+00
4-Methyl-2-pentanone	6.24E+00	NA	2.00E+00	6.24E+00	6.24E+00
Methylene chloride	5.49E-01	1.35E+00	5.00E-03	5.49E-01	5.49E-01
Styrene	6.13E+00	NA	1.00E-01	6.13E+00	6.13E+00
1,1,1,2-Tetrachloroethane	3.07E+00	2.55E-01	7.00E-02	2.55E-01	2.55E-01
1,1,2,2-Tetrachloroethane	2.04E+00	3.26E-03	2.00E-04	3.26E-03	3.26E-03
Tetrachloroethylene	2.23E-01	5.57E-01	5.00E-03	2.23E-01	2.23E-01
Toluene	6.89E+00	NA	1.00E+00	6.89E+00	6.89E+00
1,2,4-Trichlorobenzene	1.72E-02	9.87E-02	7.00E-02	1.72E-02	7.00E-02
1,1,1-Trichloroethane	3.61E+01	NA	2.00E-01	3.61E+01	3.61E+01
1,1,2-Trichloroethane	1.74E-03	1.17E-01	5.00E-03	1.74E-03	5.00E-03
Trichloroethylene	1.30E-02	3.05E-02	5.00E-03	1.30E-02	1.30E-02
1,2,3-Trichloropropane	2.61E-03	9.54E-05	4.00E-02	9.54E-05	4.00E-02
Vinyl Chloride	2.27E-01	3.71E-03	2.00E-03	3.71E-03	3.71E-03
Xylenes	8.40E-01	NA	1.00E+01	8.40E-01	1.00E+01
Semivolatile Organic Compounds					
Acenaphthene	6.13E+00	NA	2.00E+00	6.13E+00	6.13E+00
Acenaphthylene	NA	NA	DL	DL	DL
Acetophenone	1.02E+01	NA	4.00E+00	1.02E+01	1.02E+01
Anthracene	3.07E+01	NA	DL	3.07E+01	3.07E+01
Benzo(a)anthracene	NA	1.42E-03	1.00E-04	1.42E-03	1.42E-03
Benzo(a)pyrene	NA	1.42E-04	2.00E-04	1.42E-04	2.00E-04
Benzo(b)fluoranthene	NA	1.42E-03	2.00E-04	1.42E-03	1.42E-03
Benzo(g,h,i)perylene	NA	NA	DL	DL	DL
Benzo(k)fluoranthene	NA	2.11E-03	DL	2.11E-03	2.11E-03
bis(2-chloroisopropyl)ether	4.09E+00	1.53E-02	DL	1.53E-02	1.53E-02
bis(2-ethylhexyl)phthalate	2.04E+00	6.81E-02	6.00E-03	6.81E-02	6.81E-02
2-Chlorophenol	5.11E-01	NA	4.00E-02	5.11E-01	5.11E-01
Chrysene	NA	2.11E-02	2.00E-04	2.11E-02	2.11E-02
Dibenzo(a,h)anthracene	NA	1.34E-04	3.00E-04	1.34E-04	3.00E-04
2,4-Dichlorophenol	3.07E-01	NA	2.00E-02	3.07E-01	3.07E-01
Di-n-butylphthalate	1.02E+01	NA	4.00E+00	1.02E+01	1.02E+01
2,4-Dimethylphenol	2.04E+00	NA	7.00E-01	2.04E+00	2.04E+00
2,4-Dinitrophenol	2.04E-01	NA	7.00E-02	2.04E-01	2.04E-01
Di-n-octylphthalate	1.02E+00	NA	7.00E-01	1.02E+00	1.02E+00
Fluoranthene	4.09E+00	NA	1.00E+00	4.09E+00	4.09E+00
Fluorene	4.09E+00	NA	1.00E+00	4.09E+00	4.09E+00
Indeno(1,2,3-cd)pyrene	NA	1.42E-03	4.00E-04	1.42E-03	1.42E-03
2-Methylphenol	2.59E+00	NA	DL	2.59E+00	2.59E+00
4-Methylphenol	3.47E+00	NA	DL	3.47E+00	3.47E+00
Naphthalene	2.59E-02	7.21E-02	2.00E-02	2.59E-02	2.59E-02
N-Nitrosodiphenylamine	NA	8.12E-02	DL	8.12E-02	8.12E-02
Pentachlorophenol	5.11E-01	6.23E-03	1.00E-03	6.23E-03	6.23E-03
Phenanthrene	NA	NA	DL	DL	DL
Phenol	1.66E+00	NA	4.00E+00	1.66E+00	4.00E+00
Pyrene	3.07E+00	NA	1.00E+00	3.07E+00	3.07E+00
2,4,5-Trichlorophenol	1.02E+01	NA	4.00E+00	1.02E+01	1.02E+01
2,4,6-Trichlorophenol	1.12E-01	6.07E-02	3.00E-02	6.07E-02	6.07E-02

Table A-1
Calculation of Type 3 and Type 4 Risk Reduction Standards (RRS) for Groundwater
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent	Calculated Non-Residential Target Concentrations (mg/L)		Type 3 GW RRS (mg/L)	Type 4 GW RRS (mg/L)	Value Used for Leachate Calculations (mg/L)
	Non-Cancer	Cancer			
Pesticides / Polychlorinated Biphenyls					
Aroclor 1016	7.15E-03	9.43E-03	5.00E-04	7.15E-03	7.15E-03
Aroclor 1260	NA	3.31E-04	5.00E-04	3.31E-04	5.00E-04
Aldrin	3.07E-03	3.86E-05	2.00E-05	3.86E-05	3.86E-05
alpha-Endosulfan	NA	NA	2.00E-03	DL	2.00E-03
alpha-BHC	8.18E-01	1.05E-04	6.00E-06	1.05E-04	1.05E-04
beta-BHC	NA	3.58E-04	2.00E-05	3.58E-04	3.58E-04
beta-Endosulfan	NA	NA	2.00E-03	DL	2.00E-03
Chlordane	5.48E-03	1.89E-03	2.00E-03	1.89E-03	2.00E-03
delta-BHC	NA	NA	DL	DL	DL
DDD	NA	2.74E-03	1.00E-04	2.74E-03	2.74E-03
DDE	NA	1.94E-03	1.00E-04	1.94E-03	1.94E-03
DDT	5.11E-02	1.94E-03	1.00E-04	1.94E-03	1.94E-03
Dieldrin	5.11E-03	4.11E-05	2.00E-05	4.11E-05	4.11E-05
Endosulfan sulfate	NA	NA	DL	DL	DL
Endrin	3.07E-02	NA	2.00E-03	3.07E-02	3.07E-02
Endrin aldehyde	NA	NA	DL	DL	DL
Endrin ketone	NA	NA	DL	DL	DL
Heptachlor epoxide	1.33E-03	7.26E-05	2.00E-04	7.26E-05	2.00E-04
Lindane	3.07E-02	6.07E-04	2.00E-04	6.07E-04	6.07E-04
Methoxychlor	5.11E-01	NA	4.00E-02	5.11E-01	5.11E-01

Notes:
NA = No value available
DL = Analytical detection limit
mg/L = Milligrams per liter

References:

1. USEPA Regional Screening Level (RSL) Tables - November, 2012. Available online at http://www.epa.gov/region9/superfund/prg/
2. USEPA Risk Assessment Guidance for Superfund (RAGS): Volume I - Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals). December 1991. EPA/540/R-92/003.

Calculation of Non-Residential Risk-Based Target Concentrations:

Noncarcinogens:

$$C = \frac{HI*BW*AT*365\ days/year}{EF*ED*[(1/RfD_o*IR_w) + (1/RfD_i*K*IR_a*ET)]} \quad \text{(Eq. 1, RAGS Part B*)}$$

Carcinogens:

$$C = \frac{TR*BW*AT*365\ days/year}{EF*ED*[(CSF_o*IR_w)+(CSF_i*K*IR_a*ET)]} \quad \text{(Eq. 2, RAGS Part B*)}$$

* RAGS equations have been modified to account for site-specific exposure times, as captured by the exposure time (ET) term.

where:

HI = Hazard Index (unitless)	1	
BW = Body Weight (kg), adult	70	
AT = Averaging Time (years), adult, carcinogen	70	
AT = Averaging Time (years), adult, noncarcinogen	25	
EF = Exposure Frequency (days/year)	250	
ED = Exposure Duration (years), adult	25	
RfD_o = Oral Reference Dose	Chemical-specific	
IR_w = Water Ingestion Rate (L/day), adult	1	
TR = Target Risk (unitless)	1.00E-05	
TR for Class C carcinogen	1.00E-04	
CSF_o = Oral Cancer Slope Factor	Chemical-specific	
IR_a = Air Inhalation Rate (m^3/day), adult	20	
ET = Exposure Time (unitless)	0.33	[Exposure of 8 hours for a typical workday, out of a 24-hour day]
CF = Conversion Factor (kg/mg)	1.00E-06	
VF = Volatilization Factor (m^3/kg)	Chemical-specific	
K = Volatilization Factor (unitless)	0.5	

Table A-2
Calculation of Type 3 Risk Reduction Standards (RRS) for Soil
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent	A Notification Conc, Soil (mg/kg)	B Type 1 GW Conc x100 (mg/L)	C Leachate Test (mg/kg)	D Appendix III, Table 2 (mg/kg)	E Maximum of A, B, C, D (mg/kg)	F Calculated Non-Residential Target Concentrations (mg/kg) Non-Cancer	G Cancer	H Minimum of E, F, G (mg/kg)	J Type 3 RRS (mg/kg) Surface SS (0-2')	K Sub-Surface SB (>2')
Volatile Organic Compounds										
Acetone	2.74	400	NA	NA	400	2.60E+05	NA	4.00E+02	4.00E+02	4.00E+02
Benzene	0.02	0.5	NA	NA	0.5	1.93E+02	2.32E+01	5.00E-01	5.00E-01	5.00E-01
Bromoform	1	10	NA	NA	10	4.09E+04	3.82E+02	1.00E+01	1.00E+01	1.00E+01
2-Butanone	0.79	200	NA	NA	200	5.46E+04	NA	2.00E+02	2.00E+02	2.00E+02
Carbon Disulfide	DL	400	NA	NA	400	9.04E+02	NA	4.00E+02	4.00E+02	4.00E+02
Chlorobenzene	4.18	10	NA	NA	10	6.17E+02	NA	1.00E+01	1.00E+01	1.00E+01
Chloroethane	0.17	NA	NA	NA	0.17	1.53E+04	NA	1.70E-01	1.70E-01	1.70E-01
Cyclohexane	20	NA	NA	NA	20	6.81E+03	NA	2.00E+01	2.00E+01	2.00E+01
1,2-Dibromo-3-Chloropropane	DL/0.003	0.02	NA	NA	0.02	1.18E+01	2.83E-01	2.00E-02	2.00E-02	2.00E-02
1,2-Dichlorobenzene	25	60	NA	NA	60	4.52E+03	NA	6.00E+01	6.00E+01	6.00E+01
1,3-Dichlorobenzene	2.22	60	NA	NA	60	NA	NA	6.00E+01	6.00E+01	6.00E+01
1,4-Dichlorobenzene	6.84	7.5	NA	NA	7.5	1.48E+04	5.24E+01	7.50E+00	7.50E+00	7.50E+00
Dichlorodifluoromethane	1.49	100	NA	NA	100	2.45E+01	NA	2.45E+01	2.45E+01	1.00E+02
1,1-Dichloroethane	0.03	400	NA	NA	400	4.09E+05	5.38E+02	4.00E+02	4.00E+02	4.00E+02
1,2-Dichloroethane	0.02	0.5	NA	NA	0.5	5.33E+01	8.13E+01	5.00E-01	5.00E-01	5.00E-01
1,1-Dichloroethene	0.36	0.7	NA	NA	0.7	2.52E+02	NA	7.00E-01	7.00E-01	7.00E-01
cis-1,2-dichloroethene	0.53	7	NA	NA	7	4.09E+03	NA	7.00E+00	7.00E+00	7.00E+00
trans-1,2-dichloroethene	0.53	10	NA	NA	10	2.39E+02	NA	1.00E+01	1.00E+01	1.00E+01
1,2-Dichloropropane	0.02	0.5	NA	NA	0.5	2.51E+01	1.74E+01	5.00E-01	5.00E-01	5.00E-01
Ethylbenzene	20	70	NA	NA	70	1.06E+04	1.22E+02	7.00E+01	7.00E+01	7.00E+01
Isopropylbenzene (cumene)	21.9	NA	NA	NA	21.9	4.81E+03	NA	2.19E+01	2.19E+01	2.19E+01
4-Methyl-2-pentanone	3.3	200	NA	NA	200	3.35E+04	NA	2.00E+02	2.00E+02	2.00E+02
Methylene chloride	0.08	0.5	NA	NA	0.5	1.61E+03	6.64E+03	5.00E-01	5.00E-01	5.00E-01
Styrene	14	10	NA	NA	14	1.78E+04	NA	1.40E+01	1.40E+01	1.40E+01
1,1,1,2-Tetrachloroethane	1.03	7	NA	NA	7	6.13E+04	3.84E+02	7.00E+00	7.00E+00	7.00E+00
1,1,2,2-Tetrachloroethane	0.13	0.02	NA	NA	0.13	4.09E+04	1.30E+01	1.30E-01	1.30E-01	1.30E-01
Tetrachloroethylene	0.18	0.5	NA	NA	0.5	1.53E+02	4.10E+02	5.00E-01	5.00E-01	5.00E-01
Toluene	14.4	100	NA	NA	100	3.29E+04	NA	1.00E+02	1.00E+02	1.00E+02
1,2,4-Trichlorobenzene	10.8	7	NA	NA	10.8	1.20E+02	1.97E+03	1.08E+01	1.08E+01	1.08E+01
1,1,1-Trichloroethane	5.44	20	NA	NA	20	1.13E+04	NA	2.00E+01	2.00E+01	2.00E+01
1,1,2-Trichloroethane	0.5	0.5	NA	NA	0.5	2.57E+00	2.20E+02	5.00E-01	5.00E-01	5.00E-01
Trichloroethylene	0.13	0.5	NA	NA	0.5	7.09E+00	2.39E+01	5.00E-01	5.00E-01	5.00E-01
1,2,3-Trichloropropane	0.54	4	NA	NA	4	1.19E+00	1.91E+00	1.19E+00	1.19E+00	4.00E+00
Vinyl Chloride	0.04	0.2	NA	NA	0.2	8.38E+01	5.06E+00	2.00E-01	2.00E-01	2.00E-01
Xylenes	20	1000	NA	NA	1000	1.14E+03	NA	1.00E+03	1.00E+03	1.00E+03
Semivolatile Organic Compounds										
Acenaphthene	300	200	NA	NA	300	1.23E+05	NA	3.00E+02	3.00E+02	3.00E+02
Acenaphthylene	130	NA	NA	NA	130	NA	NA	1.30E+02	1.30E+02	1.30E+02
Acetophenone	DL/0.26	400	NA	NA	400	2.04E+05	NA	4.00E+02	4.00E+02	4.00E+02
Anthracene	500	NA	NA	NA	500	6.13E+05	NA	5.00E+02	5.00E+02	5.00E+02
Benzo(a)anthracene	5	0.01	NA	NA	5	NA	7.84E+01	5.00E+00	5.00E+00	5.00E+00
Benzo(a)pyrene	1.64	0.02	NA	NA	1.64	NA	7.84E+00	1.64E+00	1.64E+00	1.64E+00
Benzo(b)fluoranthene	5	0.02	NA	NA	5	NA	7.84E+01	5.00E+00	5.00E+00	5.00E+00
Benzo(g,h,i)perylene	500	NA	NA	NA	500	NA	NA	5.00E+02	5.00E+02	5.00E+02
Benzo(k)fluoranthene	5	NA	NA	NA	5	NA	7.84E+02	5.00E+00	5.00E+00	5.00E+00
bis(2-chloroisopropyl)ether	171	NA	NA	NA	171	8.18E+04	8.18E+02	1.71E+02	1.71E+02	1.71E+02
bis(2-ethylhexyl)phthalate	50	0.6	NA	NA	50	4.09E+04	4.09E+03	5.00E+01	5.00E+01	5.00E+01
2-Chlorophenol	0.68	4	NA	NA	4	1.02E+04	NA	4.00E+00	4.00E+00	4.00E+00
Chrysene	5	0.02	NA	NA	5	NA	7.84E+03	5.00E+00	5.00E+00	5.00E+00
Dibenzo(a,h)anthracene	5	0.03	NA	NA	5	NA	7.84E+00	5.00E+00	5.00E+00	5.00E+00
2,4-Dichlorophenol	0.96	2	NA	NA	2	6.13E+03	NA	2.00E+00	2.00E+00	2.00E+00
Di-n-butylphthalate	13.7	400	NA	NA	400	2.04E+05	NA	4.00E+02	4.00E+02	4.00E+02
2,4-Dimethylphenol	1.51	70	NA	NA	70	4.09E+04	NA	7.00E+01	7.00E+01	7.00E+01
2,4-Dinitrophenol	3.3	7	NA	NA	7	4.09E+03	NA	7.00E+00	7.00E+00	7.00E+00
Di-n-octylphthalate	50	70	NA	NA	70	2.04E+04	NA	7.00E+01	7.00E+01	7.00E+01
Fluoranthene	500	100	NA	NA	500	8.18E+04	NA	5.00E+02	5.00E+02	5.00E+02
Fluorene	360	100	NA	NA	360	8.18E+04	NA	3.60E+02	3.60E+02	3.60E+02
Indeno(1,2,3-cd)pyrene	5	0.04	NA	NA	5	NA	7.84E+01	5.00E+00	5.00E+00	5.00E+00
2-Methylphenol	3.8	NA	NA	NA	3.8	1.02E+05	NA	3.80E+00	3.80E+00	3.80E+00
4-Methylphenol	3.8	NA	NA	NA	3.8	2.04E+05	NA	3.80E+00	3.80E+00	3.80E+00
Naphthalene	100	2	NA	NA	100	2.79E+02	7.72E+02	1.00E+02	1.00E+02	1.00E+02
N-Nitrosodiphenylamine	6.46	NA	NA	NA	6.46	NA	1.17E+04	6.46E+00	6.46E+00	6.46E+00
Pentachlorophenol	3.3	0.1	NA	NA	3.3	1.02E+04	1.43E+02	3.30E+00	3.30E+00	3.30E+00
Phenanthrene	110	NA	NA	NA	110	NA	NA	1.10E+02	1.10E+02	1.10E+02
Phenol	50	400	NA	NA	400	6.13E+05	NA	4.00E+02	4.00E+02	4.00E+02
Pyrene	500	100	NA	NA	500	6.13E+04	NA	5.00E+02	5.00E+02	5.00E+02
2,4,5-Trichlorophenol	4.56	400	NA	NA	400	2.04E+05	NA	4.00E+02	4.00E+02	4.00E+02
2,4,6-Trichlorophenol	0.66	3	NA	NA	3	2.25E+03	5.20E+03	3.00E+00	3.00E+00	3.00E+00

Table A-2
Calculation of Type 3 Risk Reduction Standards (RRS) for Soil
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent	A Notification Conc, Soil (mg/kg)	B Type 1 GW Conc x100 (mg/L)	C Leachate Test (mg/kg)	D Appendix III, Table 2 (mg/kg)	E Maximum of A, B, C, D (mg/kg)	F Calculated Non-Residential Target Concentrations (mg/kg) Non-Cancer	G Cancer	H Minimum of E, F, G (mg/kg)	J Type 3 RRS (mg/kg) Surface SS (0-2')	K Sub-Surface SB (>2')
Pesticides / Polychlorinated Biphenyls										
Aroclor 1016	1.55	0.05	NA	NA	1.55	1.43E+02	8.18E+02	1.55E+00	1.55E+00	1.55E+00
Aroclor 1260	1.55	0.05	NA	NA	1.55	NA	2.86E+01	1.55E+00	1.55E+00	1.55E+00
Aldrin	0.66	0.002	NA	NA	0.66	6.13E+01	3.37E+00	6.60E-01	6.60E-01	6.60E-01
alpha-Endosulfan	10	0.2	NA	NA	10	NA	NA	1.00E+01	1.00E+01	1.00E+01
alpha-BHC	0.66	0.0006	NA	NA	0.66	1.64E+04	9.08E+00	6.60E-01	6.60E-01	6.60E-01
beta-BHC	0.66	0.002	NA	NA	0.66	NA	3.18E+01	6.60E-01	6.60E-01	6.60E-01
beta-Endosulfan	10	0.2	NA	NA	10	NA	NA	1.00E+01	1.00E+01	1.00E+01
Chlordane	9.2	0.2	NA	NA	9.2	1.02E+03	1.64E+02	9.20E+00	9.20E+00	9.20E+00
delta-BHC	25	NA	NA	NA	25	NA	NA	2.50E+01	2.50E+01	2.50E+01
DDD	0.66	0.01	NA	NA	0.66	NA	2.38E+02	6.60E-01	6.60E-01	6.60E-01
DDE	0.66	0.01	NA	NA	0.66	NA	1.68E+02	6.60E-01	6.60E-01	6.60E-01
DDT	0.66	0.01	NA	NA	0.66	1.02E+03	1.68E+02	6.60E-01	6.60E-01	6.60E-01
Dieldrin	0.66	0.002	NA	NA	0.66	1.02E+02	3.58E+00	6.60E-01	6.60E-01	6.60E-01
Endosulfan sulfate	1.65	NA	NA	NA	1.65	NA	NA	1.65E+00	1.65E+00	1.65E+00
Endrin	10	0.2	NA	NA	10	6.13E+02	NA	1.00E+01	1.00E+01	1.00E+01
Endrin aldehyde	10	NA	NA	NA	10	NA	NA	1.00E+01	1.00E+01	1.00E+01
Endrin ketone	10	NA	NA	NA	10	NA	NA	1.00E+01	1.00E+01	1.00E+01
Heptachlor epoxide	1.65	0.02	NA	NA	1.65	2.66E+01	6.29E+00	1.65E+00	1.65E+00	1.65E+00
Lindane	0.66	0.02	NA	NA	0.66	6.13E+02	5.20E+01	6.60E-01	6.60E-01	6.60E-01
Methoxychlor	10	4	NA	NA	10	1.02E+04	NA	1.00E+01	1.00E+01	1.00E+01

Notes:
NA = No value available
DL = Analytical detection limit
mg/kg = Milligrams per kilogram
L = Liter

References:

1. Georgia EPD, Risk Reduction Standards, 391-3-19-.07. Available online at: http://www.gaepd.org/Documents/hsraguideCSRRRS.html.
   Values presented in columns A through D are obtained from Appendices I and III.
2. USEPA Risk Assessment Guidance for Superfund (RAGS): Volume I - Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals).
   December 1991. EPA/540/R-92/003.

Calculation of Non-Residential Risk-Based Target Concentrations:

Noncarcinogens:

$$C = \frac{HI*BW*AT*\ 365\ days/year}{EF*ED*[(1/RfD_o*CF*IR_s)+(1/RfD_i*IR_a*(1/VF+1/PEF)]} \quad \text{(Eq. 7, RAGS Part B)}$$

Carcinogens:

$$C = \frac{TR*BW*AT*\ 365\ days/year}{EF*ED*[(CSF_o*IR_s*CF)+(CSF_i*IR_a*(1/VF+1/PEF)]} \quad \text{(Eq. 6, RAGS Part B)}$$

where:

HI = Hazard Index (unitless)	1
BW = Body Weight (kg), adult	70
AT = Averaging Time (years), adult, carcinogen	70
AT = Averaging Time (years), adult, noncarcinogen	25
EF = Exposure Frequency (days/year)	250
ED = Exposure Duration (years), adult	25
RfD_o = Oral Reference Dose	Chemical-specific
IR_s = Soil Ingestion Rate (mg/day), adult	50
TR = Target Risk (unitless)	1.00E-05
TR for Class C carcinogen	1.00E-04
CSF_o = Oral Cancer Slope Factor	Chemical-specific
IR_a = Air Inhalation Rate (m^3/day), adult	20
1/PEF = Inv of Particulate Emission Factor (kg/m^3)	2.16E-10
CF = Conversion Factor (kg/mg)	1.00E-06
1/VF = Volatilization Factor (kg/m^3)	Chemical-specific
RfD_i = Inhalation Reference Dose	Chemical-specific
CSF_i = Inhalation Slope Factor	Chemical-specific

Table A-3
Calculation of Type 4 Risk Reduction Standards (RRS) for Soil
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent	Calculated Non-Residential Target Concentrations (mg/kg)		K_{oc}	H'	Leachate		Type 4 RSS (mg/kg)			
							DAF = 1		DAF = 20	
					DAF=1	DAF=20	Surface	Sub-Surface	Surface	Sub-Surface
	Non-Cancer	Cancer	(L/kg)	(unitless)	(mg/kg)	(mg/kg)	SS (0-2')	SB (>2')	SS (0-2')	SB (>2')
Volatile Organic Compounds										
Acetone	6.09E+05	NA	2.364E+00	1.431E-03	1.41E+01	2.82E+02	1.41E+01	1.41E+01	2.82E+02	2.82E+02
Benzene	5.54E+02	6.66E+01	1.458E+02	2.269E-01	1.00E-02	2.01E-01	1.00E-02	1.00E-02	2.01E-01	2.01E-01
Bromoform	4.09E+04	1.04E+03	3.182E+01	2.187E-02	3.67E-02	7.33E-01	3.67E-02	3.67E-02	7.33E-01	7.33E-01
2-Butanone	1.50E+05	NA	4.510E+00	2.326E-03	5.35E+00	1.07E+02	5.35E+00	5.35E+00	1.07E+02	1.07E+02
Carbon Disulfide	2.69E+03	NA	2.173E+01	5.887E-01	1.18E+00	2.37E+01	1.18E+00	1.18E+00	2.37E+01	2.37E+01
Chlorobenzene	1.80E+03	NA	2.339E+02	1.271E-01	2.45E-01	4.90E+00	2.45E-01	2.45E-01	4.90E+00	4.90E+00
Chloroethane	4.59E+04	NA	2.170E+01	4.538E-01	2.49E+01	4.97E+02	2.49E+01	2.49E+01	4.97E+02	4.97E+02
Cyclohexane	2.04E+04	NA	1.458E+02	6.132E+00	5.46E+01	1.09E+03	5.46E+01	5.46E+01	1.09E+03	1.09E+03
1,2-Dibromo-3-Chloropropane	3.35E+01	8.43E-01	1.158E+02	6.010E-03	8.64E-05	1.73E-03	8.64E-05	8.64E-05	1.73E-03	1.73E-03
1,2-Dichlorobenzene	1.29E+04	NA	3.829E+02	7.850E-02	1.43E+00	2.86E+01	1.43E+00	1.43E+00	2.86E+01	2.86E+01
1,3-Dichlorobenzene	NA	NA	6.170E+02	7.790E-02	8.65E-01	1.73E+01	8.65E-01	8.65E-01	1.73E+01	1.73E+01
1,4-Dichlorobenzene	3.68E+04	1.56E+02	3.753E+02	9.853E-02	7.20E-02	1.44E+00	7.20E-02	7.20E-02	1.44E+00	1.44E+00
Dichlorodifluoromethane	7.35E+01	NA	4.389E+01	1.402E+01	1.54E+00	3.08E+01	1.54E+00	1.54E+00	3.08E+01	3.08E+01
1,1-Dichloroethane	4.09E+05	1.60E+03	3.182E+01	2.298E-01	1.14E+00	2.27E+01	1.14E+00	1.14E+00	2.27E+01	2.27E+01
1,2-Dichloroethane	1.59E+02	2.38E+02	3.960E+01	4.824E-02	1.58E-02	3.16E-01	1.58E-02	1.58E-02	3.16E-01	3.16E-01
1,1-Dichloroethene	7.52E+02	NA	3.182E+01	1.067E+00	4.68E-01	9.37E+00	4.68E-01	4.68E-01	9.37E+00	9.37E+00
cis-1,2-dichloroethene	4.09E+03	NA	3.960E+01	1.668E-01	6.01E-02	1.20E+00	6.01E-02	6.01E-02	1.20E+00	1.20E+00
trans-1,2-dichloroethene	7.09E+02	NA	3.960E+01	1.668E-01	1.23E-01	2.46E+00	1.23E-01	1.23E-01	2.46E+00	2.46E+00
1,2-Dichloropropane	7.52E+01	5.10E+01	6.070E+01	1.153E-01	6.22E-03	1.24E-01	6.22E-03	6.22E-03	1.24E-01	1.24E-01
Ethylbenzene	2.87E+04	3.49E+02	4.461E+02	3.222E-01	7.85E-01	1.57E+01	7.85E-01	7.85E-01	1.57E+01	1.57E+01
Isopropylbenzene (cumene)	1.38E+04	NA	6.978E+02	4.702E-01	4.27E+00	8.55E+01	4.27E+00	4.27E+00	8.55E+01	8.55E+01
4-Methyl-2-pentanone	7.13E+04	NA	1.260E+01	5.642E-03	1.41E+00	2.81E+01	1.41E+00	1.41E+00	2.81E+01	2.81E+01
Methylene chloride	3.83E+03	1.36E+04	2.173E+01	1.329E-01	1.40E-01	2.80E+00	1.40E-01	1.40E-01	2.80E+00	2.80E+00
Styrene	4.90E+04	NA	4.461E+02	1.124E-01	6.76E+00	1.35E+02	6.76E+00	6.76E+00	1.35E+02	1.35E+02
1,1,1,2-Tetrachloroethane	6.13E+04	1.11E+03	8.603E+01	1.022E-01	9.71E-02	1.94E+00	9.71E-02	9.71E-02	1.94E+00	1.94E+00
1,1,2,2-Tetrachloroethane	4.09E+04	3.58E+01	9.494E+01	1.500E-02	1.28E-03	2.55E-02	1.28E-03	1.28E-03	2.55E-02	2.55E-02
Tetrachloroethylene	4.47E+02	1.19E+03	9.494E+01	7.236E-01	1.01E-01	2.03E+00	1.01E-01	1.01E-01	2.03E+00	2.03E+00
Toluene	7.04E+04	NA	2.339E+02	2.715E-01	4.77E+00	9.54E+01	4.77E+00	4.77E+00	9.54E+01	9.54E+01
1,2,4-Trichlorobenzene	3.56E+02	1.97E+03	1.356E+03	5.805E-02	2.04E-01	4.08E+00	2.04E-01	2.04E-01	4.08E+00	4.08E+00
1,1,1-Trichloroethane	3.37E+04	NA	4.389E+01	7.032E-01	1.26E+01	2.53E+02	1.26E+01	1.26E+01	2.53E+02	2.53E+02
1,1,2-Trichloroethane	7.72E+00	6.33E+02	6.070E+01	3.369E-02	1.62E-03	3.24E-02	1.62E-03	1.62E-03	3.24E-02	3.24E-02
Trichloroethylene	2.10E+01	6.91E+01	6.070E+01	4.027E-01	4.66E-03	9.33E-02	4.66E-03	4.66E-03	9.33E-02	9.33E-02
1,2,3-Trichloropropane	3.58E+00	1.91E+00	1.158E+02	7.195E-01	1.98E-02	3.97E-01	1.98E-02	1.98E-02	3.97E-01	3.97E-01
Vinyl Chloride	2.45E+02	1.35E+01	2.173E+01	1.137E+00	1.28E-03	2.56E-02	1.28E-03	1.28E-03	2.56E-02	2.56E-02
Xylenes	3.41E+03	NA	3.829E+02	2.118E-01	9.85E+00	1.97E+02	9.85E+00	9.85E+00	1.97E+02	1.97E+02
Semivolatile Organic Compounds										
Acenaphthene	1.23E+05	NA	5.027E+03	7.523E-03	6.29E+01	1.26E+03	6.29E+01	6.29E+01	1.26E+03	1.26E+03
Acenaphthylene	NA	NA	6.918E+03	4.740E-03	NA	NA	DL	1.00E+05	DL	1.00E+05
Acetophenone	2.04E+05	NA	5.185E+01	4.252E-04	3.10E+00	6.21E+01	3.10E+00	3.10E+00	6.21E+01	6.21E+01
Anthracene	6.13E+05	NA	1.636E+04	2.273E-03	1.01E+03	2.02E+04	1.01E+03	1.01E+03	2.02E+04	2.02E+04
Benzo(a)anthracene	NA	7.84E+01	1.769E+05	4.906E-04	5.03E-01	1.01E+01	5.03E-01	5.03E-01	1.01E+01	1.01E+01
Benzo(a)pyrene	NA	7.84E+00	5.874E+05	1.870E-05	2.35E-01	4.70E+00	2.35E-01	2.35E-01	4.70E+00	4.70E+00
Benzo(b)fluoranthene	NA	7.84E+01	5.994E+05	2.690E-05	1.70E+00	3.41E+01	1.70E+00	1.70E+00	3.41E+01	3.41E+01
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	DL	1.00E+05	DL	1.00E+05
Benzo(k)fluoranthene	NA	7.84E+02	5.874E+05	2.390E-05	2.48E+00	4.96E+01	2.48E+00	2.48E+00	4.96E+01	4.96E+01
bis(2-chloroisopropyl)ether	8.18E+04	8.18E+02	6.100E+01	4.600E-03	4.94E-03	9.89E-02	4.94E-03	4.94E-03	9.89E-02	9.89E-02
bis(2-ethylhexyl)phthalate	4.09E+04	4.09E+03	1.196E+05	1.100E-05	1.63E+01	3.26E+02	1.63E+01	1.63E+01	3.26E+02	3.26E+02
2-Chlorophenol	1.02E+04	NA	3.065E+02	4.579E-04	4.15E-01	8.31E+00	4.15E-01	4.15E-01	8.31E+00	8.31E+00
Chrysene	NA	7.84E+03	1.805E+05	2.138E-04	7.62E+00	1.52E+02	7.62E+00	7.62E+00	1.52E+02	1.52E+02
Dibenzo(a,h)anthracene	NA	7.84E+00	1.912E+06	5.765E-06	1.15E+00	2.29E+01	1.15E+00	1.15E+00	7.84E+00	2.29E+01
2,4-Dichlorophenol	6.13E+03	NA	4.918E+02	1.754E-04	3.63E-01	7.26E+00	3.63E-01	3.63E-01	7.26E+00	7.26E+00
Di-n-butylphthalate	2.04E+05	NA	1.157E+03	7.400E-05	2.57E+01	5.14E+02	2.57E+01	2.57E+01	5.14E+02	5.14E+02
2,4-Dimethylphenol	4.09E+04	NA	4.918E+02	3.890E-05	2.42E+00	4.84E+01	2.42E+00	2.42E+00	4.84E+01	4.84E+01
2,4-Dinitrophenol	4.09E+03	NA	4.608E+02	3.516E-06	2.29E-01	4.59E+00	2.29E-01	2.29E-01	4.59E+00	4.59E+00
Di-n-octylphthalate	2.04E+04	NA	8.320E+07	2.740E-03	1.70E+05	3.40E+06	2.04E+04	1.00E+05	2.04E+04	1.00E+05
Fluoranthene	8.18E+04	NA	5.545E+04	3.622E-04	4.54E+02	9.08E+03	4.54E+02	4.54E+02	9.08E+03	9.08E+03
Fluorene	8.18E+04	NA	9.160E+03	3.933E-03	7.57E+01	1.51E+03	7.57E+01	7.57E+01	1.51E+03	1.51E+03
Indeno(1,2,3-cd)pyrene	NA	7.84E+01	1.951E+06	1.420E-05	5.55E+00	1.11E+02	5.55E+00	5.55E+00	7.84E+01	1.11E+02
2-Methylphenol	1.02E+05	NA	3.065E+02	4.910E-05	2.11E+00	4.21E+01	2.11E+00	2.11E+00	4.21E+01	4.21E+01
4-Methylphenol	2.04E+05	NA	3.004E+02	4.090E-05	2.78E+00	5.56E+01	2.78E+00	2.78E+00	5.56E+01	5.56E+01
Naphthalene	8.26E+02	2.32E+03	1.544E+03	1.799E-02	8.54E-02	1.71E+00	8.54E-02	8.54E-02	1.71E+00	1.71E+00
N-Nitrosodiphenylamine	NA	1.17E+04	2.632E+03	4.950E-05	4.44E-01	8.88E+00	4.44E-01	4.44E-01	8.88E+00	8.88E+00
Pentachlorophenol	1.02E+04	1.43E+02	4.959E+03	1.002E-06	6.30E-02	1.26E+00	6.30E-02	6.30E-02	1.26E+00	1.26E+00
Phenanthrene	NA	NA	1.413E+04	5.400E-03	NA	NA	DL	1.00E+05	DL	1.00E+05
Phenol	6.13E+05	NA	1.872E+02	1.360E-05	2.30E+00	4.60E+01	2.30E+00	2.30E+00	4.60E+01	4.60E+01
Pyrene	6.13E+04	NA	5.434E+04	4.865E-04	3.34E+02	6.68E+03	3.34E+02	3.34E+02	6.68E+03	6.68E+03
2,4,5-Trichlorophenol	2.04E+05	NA	1.777E+03	6.620E-05	3.84E+01	7.67E+02	3.84E+01	3.84E+01	7.67E+02	7.67E+02
2,4,6-Trichlorophenol	2.25E+03	5.20E+03	1.777E+03	1.063E-04	2.28E-01	4.56E+00	2.28E-01	2.28E-01	4.56E+00	4.56E+00

Table A-3
Calculation of Type 4 Risk Reduction Standards (RRS) for Soil
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent	Calculated Non-Residential Target Concentrations (mg/kg)		K_{oc}	H'	Leachate		Type 4 RSS (mg/kg)			
					DAF=1	DAF=20	DAF = 1		DAF = 20	
	Non-Cancer	Cancer	(L/kg)	(unitless)	(mg/kg)	(mg/kg)	Surface SS (0-2')	Sub-Surface SB (>2')	Surface SS (0-2')	Sub-Surface SB (>2')
Pesticides / Polychlorinated Biphenyls										
Aroclor 1016	1.43E+02	8.18E+02	4.770E+04	8.177E-03	6.84E-01	1.37E+01	6.84E-01	6.84E-01	1.37E+01	1.37E+01
Aroclor 1260	NA	2.86E+01	3.497E+05	1.374E-02	3.50E-01	7.00E+00	3.50E-01	3.50E-01	7.00E+00	7.00E+00
Aldrin	6.13E+01	3.37E+00	8.202E+04	1.799E-03	6.34E-03	1.27E-01	6.34E-03	6.34E-03	1.27E-01	1.27E-01
alpha-Endosulfan	NA	NA	6.761E+03	2.657E-03	2.74E-02	5.49E-01	2.74E-02	2.74E-02	5.49E-01	5.49E-01
alpha-BHC	1.64E+04	9.08E+00	2.807E+03	2.101E-04	6.09E-04	1.22E-02	6.09E-04	6.09E-04	1.22E-02	1.22E-02
beta-BHC	NA	3.18E+01	2.807E+03	2.101E-04	2.08E-03	4.17E-02	2.08E-03	2.08E-03	4.17E-02	4.17E-02
beta-Endosulfan	NA	NA	6.761E+03	2.657E-03	2.74E-02	5.49E-01	2.74E-02	2.74E-02	5.49E-01	5.49E-01
Chlordane	1.02E+03	1.64E+02	3.378E+04	1.987E-03	1.36E-01	2.71E+00	1.36E-01	1.36E-01	2.71E+00	2.71E+00
delta-BHC	NA	NA	2.807E+03	2.101E-04	NA	NA	DL	1.00E+05	DL	1.00E+05
DDD	NA	2.38E+02	1.175E+05	2.698E-04	6.44E-01	1.29E+01	6.44E-01	6.44E-01	1.29E+01	1.29E+01
DDE	NA	1.68E+02	1.175E+05	1.701E-03	4.57E-01	9.15E+00	4.57E-01	4.57E-01	9.15E+00	9.15E+00
DDT	1.02E+03	1.68E+02	1.686E+05	3.401E-04	6.56E-01	1.31E+01	6.56E-01	6.56E-01	1.31E+01	1.31E+01
Dieldrin	1.02E+02	3.58E+00	2.009E+04	4.088E-04	1.66E-03	3.32E-02	1.66E-03	1.66E-03	3.32E-02	3.32E-02
Endosulfan sulfate	NA	NA	9.850E+03	1.330E-05	NA	NA	DL	1.00E+05	DL	1.00E+05
Endrin	6.13E+02	NA	2.009E+04	4.088E-04	1.24E+00	2.48E+01	1.24E+00	1.24E+00	2.48E+01	2.48E+01
Endrin aldehyde	NA	NA	3.270E+03	1.710E-04	NA	NA	DL	1.00E+05	DL	1.00E+05
Endrin ketone	NA	NA	9.720E+03	8.260E-07	NA	NA	DL	1.00E+05	DL	1.00E+05
Heptachlor epoxide	2.66E+01	6.29E+00	1.011E+04	8.585E-04	4.08E-03	8.17E-02	4.08E-03	4.08E-03	8.17E-02	8.17E-02
Lindane	6.13E+02	5.20E+01	2.807E+03	2.101E-04	3.53E-03	7.05E-02	3.53E-03	3.53E-03	7.05E-02	7.05E-02
Methoxychlor	1.02E+04	NA	2.689E+04	8.299E-06	2.76E+01	5.52E+02	2.76E+01	2.76E+01	5.52E+02	5.52E+02

Notes:
NA = No value available
mg/kg = Milligrams per kilogram
L = Liter

References:

1. USEPA Risk Assessment Guidance for Superfund (RAGS): Volume I - Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals). December 1991. EPA/540/R-92/003.
2. USEPA Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. December 2002. OSWER 9355.4-24.

Calculation of Non-Residential Risk-Based Target Concentrations:

Noncarcinogens:

$$C = \frac{HI*BW*AT*365\ days/year}{EF*ED*[(1/RfD_o*CF*IR)+(1/RfD_i*IR_a*ET(1/VF+1/PEF)]} \quad \text{(Eq. 7, RAGS Part B*)}$$

Carcinogens:

$$C = \frac{TR*BW*AT*365\ days/year}{EF*ED*[(CSF_o*IR*CF)+(CSF_i*IR_a*ET(1/VF+1/PEF)]} \quad \text{(Eq. 6, RAGS Part B*)}$$

*RAGS equations have been modified to account for site-specific exposure times, as captured by the exposure time (ET) term.

where:

HI = Hazard Index (unitless)	1
BW = Body Weight (kg), adult	70
AT = Averaging Time (years), adult, carcinogen	70
AT = Averaging Time (years), adult, noncarcinogen	25
EF = Exposure Frequency (days/year)	250
ED = Exposure Duration (years), adult	25
RfD_o = Oral Reference Dose	Chemical-specific
IR_s = Soil Ingestion Rate (mg/day), adult	50
TR = Target Risk (unitless)	1.00E-05
TR for Class C carcinogen	1.00E-04
CSF_o = Oral Cancer Slope Factor	Chemical-specific
IR_a = Air Inhalation Rate (m^3/day), adult	20
ET = Exposure Time (unitless)	0.33 [Exposure of 8 hours for a typical workday, out of a 24-hour day]
1/PEF = Inv of Particulate Emission Factor (kg/m^3)	2.16E-10
CF = Conversion Factor (kg/mg)	1.00E-06
1/VF = Volatilization Factor (kg/m^3)	Chemical-specific
RfD_i = Inhalation Reference Dose	Chemical-specific
CSF_i = Inhalation Slope Factor	Chemical-specific

***Leachate Model:**

$$C_t = C_w * DAF * [(K_{oc}*f_{oc}) + (Q_w + Q_a*H')/P_b] \quad \text{(Eq. 4-10, SSL Guidance)}$$

where:

C_w = Target soil leachate concentration (mg/kg)	Chemical-specific
K_d = Soil-water partition coefficient (mg/L)	$K_{oc} * f_{oc}$
Q_w = Water filled soil porosity (Lwater/Lsoil)	0.30
Q_a = Air filled soil porosity (Lair/Lsoil)	0.134
H' = Henry's Law Constant (unitless)	Chemical-specific
P_b = Soil bulk density (kg/L)	1.5
f_{oc} = Fraction organic carbon ((g/g)	0.002
DAF = Dilution attenuation factor (unitless)	20 or 1

Table A-4
Calculation of Type 1 Risk Reduction Standards (RRS) for Soil
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent	A Appendix III, Table 2 (mg/kg)	B Notification Conc, Soil (mg/kg)	C Type 1 GW Conc x100 (mg/L)	Appendix III, Table 1 (mg/L)	D Leachate Test (mg/kg)	E Maximum of A, B, C, D (mg/kg)	F Calculated Residential Target Concentrations (mg/kg) Non-Cancer	G Cancer	Type 1 RRS (Min of E, F, G) (mg/kg)
Volatile Organic Compounds									
Acetone	NA	2.74	400	4	NA	400	1.92E+05	NA	4.00E+02
Benzene	NA	0.02	0.5	0.005	NA	0.5	1.76E+02	1.76E+01	5.00E-01
Bromoform	NA	1	10	0.1	NA	10.00	1.28E+04	2.73E+02	1.00E+01
2-Butanone	NA	0.79	200	2	NA	200	4.77E+04	NA	2.00E+02
Carbon Disulfide	NA	DL	400	4	NA	400	8.53E+02	NA	4.00E+02
Chlorobenzene	NA	4.18	10	0.1	NA	10	5.70E+02	NA	1.00E+01
Chloroethane	NA	0.17	NA	DL	NA	0.17	1.46E+04	NA	1.70E-01
Cyclohexane	NA	20	NA	DL	NA	20	6.49E+03	NA	2.00E+01
1,2-Dibromo-3-Chloropropane	NA	DL/0.003	0.02	0.0002	NA	0.02	1.06E+01	2.23E-01	2.00E-02
1,2-Dichlorobenzene	NA	25	60	0.6	NA	60	4.10E+03	NA	6.00E+01
1,3-Dichlorobenzene	NA	2.22	60	0.6	NA	60	NA	NA	6.00E+01
1,4-Dichlorobenzene	NA	6.84	7.5	0.075	NA	7.5	1.17E+04	4.11E+01	7.50E+00
Dichlorodifluoromethane	NA	1.49	100	1	NA	100	2.33E+01	NA	2.33E+01
1,1-Dichloroethane	NA	0.03	400	4	NA	400	1.28E+05	4.22E+02	4.00E+02
1,2-Dichloroethane	NA	0.02	0.5	0.005	NA	0.5	5.03E+01	6.29E+01	5.00E-01
1,1-Dichloroethene	NA	0.36	0.7	0.007	NA	0.7	2.39E+02	NA	7.00E-01
cis-1,2-dichloroethene	NA	0.53	7	0.07	NA	7	1.28E+03	NA	7.00E+00
trans-1,2-dichloroethene	NA	0.53	10	0.1	NA	10	2.25E+02	NA	1.00E+01
1,2-Dichloropropane	NA	0.02	0.5	0.005	NA	0.5	2.39E+01	1.35E+01	5.00E-01
Ethylbenzene	NA	20	70	0.7	NA	70	9.11E+03	9.24E+01	7.00E+01
Isopropylbenzene (cumene)	NA	21.9	NA	DL	NA	21.9	4.37E+03	NA	2.19E+01
4-Methyl-2-pentanone	NA	3.3	200	2	NA	200	2.25E+04	NA	2.00E+02
Methylene chloride	NA	0.08	0.5	0.005	NA	0.5	1.21E+03	3.58E+03	5.00E-01
Styrene	NA	14	10	0.1	NA	14	1.55E+04	NA	1.40E+01
1,1,1,2-Tetrachloroethane	NA	1.03	7	0.07	NA	7	1.92E+04	2.95E+02	7.00E+00
1,1,2,2-Tetrachloroethane	NA	0.13	0.02	0.0002	NA	0.13	1.28E+04	9.46E+00	1.30E-01
Tetrachloroethylene	NA	0.18	0.5	0.005	NA	0.5	1.42E+02	3.16E+02	5.00E-01
Toluene	NA	14.4	100	1	NA	100	2.22E+04	NA	1.00E+02
1,2,4-Trichlorobenzene	NA	10.83	7	0.07	NA	10.8	1.13E+02	5.15E+02	1.08E+01
1,1,1-Trichloroethane	NA	5.44	20	0.2	NA	20	1.07E+04	NA	2.00E+01
1,1,2-Trichloroethane	NA	0.5	0.5	0.005	NA	0.5	2.45E+00	1.67E+02	5.00E-01
Trichloroethylene	NA	0.13	0.5	0.005	NA	0.5	6.66E+00	1.83E+01	5.00E-01
1,2,3-Trichloropropane	NA	0.54	4	0.04	NA	4	1.14E+00	4.98E-01	4.98E-01
Vinyl Chloride	NA	0.04	0.2	0.002	NA	0.2	7.76E+01	3.56E+00	2.00E-01
Xylenes	NA	20	1000	10	NA	1000	1.08E+03	NA	1.00E+03
Semivolatile Organic Compounds									
Acenaphthene	NA	300	200	2	NA	300	3.84E+04	NA	3.00E+02
Acenaphthylene	NA	130	NA	DL	NA	130	NA	NA	1.30E+02
Acetophenone	NA	DL/0.26	400	4	NA	400	6.40E+04	NA	4.00E+02
Anthracene	NA	500	NA	DL	NA	500	1.92E+05	NA	5.00E+02
Benzo(a)anthracene	NA	5	0.01	0.0001	NA	5	NA	2.05E+01	5.00E+00
Benzo(a)pyrene	NA	1.64	0.02	0.0002	NA	1.64	NA	2.05E+00	1.64E+00
Benzo(b)fluoranthene	NA	5	0.02	0.0002	NA	5	NA	2.05E+01	5.00E+00
Benzo(g,h,i)perylene	NA	500	NA	DL	NA	500	NA	NA	5.00E+02
Benzo(k)fluoranthene	NA	5	NA	DL	NA	5	NA	2.05E+02	5.00E+00
bis(2-chloroisopropyl)ether	NA	171	NA	DL	NA	171	2.56E+04	2.13E+02	1.71E+02
bis(2-ethylhexyl)phthalate	NA	50	0.6	0.006	NA	50	1.28E+04	1.07E+03	5.00E+01
2-Chlorophenol	NA	0.68	4	0.04	NA	4	3.20E+03	NA	4.00E+00
Chrysene	NA	5	0.02	0.0002	NA	5	NA	2.05E+03	5.00E+00
Dibenzo(a,h)anthracene	NA	5	0.03	0.0003	NA	5	NA	2.05E+00	2.05E+00
2,4-Dichlorophenol	NA	0.96	2	0.02	NA	2	1.92E+03	NA	2.00E+00
Di-n-butylphthalate	NA	13.7	400	4	NA	400	6.40E+04	NA	4.00E+02
2,4-Dimethylphenol	NA	1.51	70	0.7	NA	70	1.28E+04	NA	7.00E+01
2,4-Dinitrophenol	NA	3.3	7	0.07	NA	7	1.28E+03	NA	7.00E+00
Di-n-octylphthalate	NA	50	70	0.7	NA	70	6.40E+03	NA	7.00E+01
Fluoranthene	NA	500	100	1	NA	500	2.56E+04	NA	5.00E+02
Fluorene	NA	360	100	1	NA	360	2.56E+04	NA	3.60E+02
Indeno(1,2,3-cd)pyrene	NA	5	0.04	0.0004	NA	5	NA	2.05E+01	5.00E+00
2-Methylphenol	NA	3.8	NA	DL	NA	3.8	3.20E+04	NA	3.80E+00
4-Methylphenol	NA	3.8	NA	DL	NA	3.8	6.40E+04	NA	3.80E+00
Naphthalene	NA	100	2	0.02	NA	100	2.62E+02	6.13E+02	1.00E+02
N-Nitrosodiphenylamine	NA	6.46	NA	DL	NA	6.46	NA	3.05E+03	6.46E+00
Pentachlorophenol	NA	3.3	0.1	0.001	NA	3.3	3.20E+03	3.74E+01	3.30E+00
Phenanthrene	NA	110	NA	DL	NA	110	NA	NA	1.10E+02
Phenol	NA	50	400	4	NA	400	1.92E+05	NA	4.00E+02
Pyrene	NA	500	100	1	NA	500	1.92E+04	NA	5.00E+02
2,4,5-Trichlorophenol	NA	4.56	400	4	NA	400	6.40E+04	NA	4.00E+02
2,4,6-Trichlorophenol	NA	0.66	3	0.03	NA	3	7.04E+02	1.36E+03	3.00E+00

Table A-4
Calculation of Type 1 Risk Reduction Standards (RRS) for Soil
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent	A Appendix III, Table 2 (mg/kg)	B Notification Conc, Soil (mg/kg)	C Type 1 GW Conc x100 (mg/L)	Appendix III, Table 1 (mg/L)	D Leachate Test (mg/kg)	E Maximum of A, B, C, D (mg/kg)	F Calculated Residential Target Concentrations (mg/kg) Non-Cancer	G Cancer	Type 1 RRS (Min of E, F, G) (mg/kg)
Pesticides / Polychlorinated Biphenyls									
Aroclor 1016	NA	1.55	0.05	0.0005	NA	1.55	4.48E+01	2.13E+02	1.55E+00
Aroclor 1260	NA	1.55	0.05	0.0005	NA	1.55	NA	7.47E+00	1.55E+00
Aldrin	NA	0.66	0.002	0.00002	NA	0.66	1.92E+01	8.79E-01	6.60E-01
alpha-Endosulfan	NA	10	0.2	0.002	NA	10	NA	NA	1.00E+01
alpha-BHC	NA	0.66	0.0006	0.000006	NA	0.66	5.12E+03	2.37E+00	6.60E-01
beta-BHC	NA	0.66	0.002	0.00002	NA	0.66	NA	8.30E+00	6.60E-01
beta-Endosulfan	NA	10	0.2	0.002	NA	10	NA	NA	1.00E+01
Chlordane	NA	9.2	0.2	0.002	NA	9.2	3.20E+02	4.27E+01	9.20E+00
delta-BHC	NA	25	NA	DL	NA	25	NA	NA	2.50E+01
DDD	NA	0.66	0.01	0.0001	NA	0.66	NA	6.23E+01	6.60E-01
DDE	NA	0.66	0.01	0.0001	NA	0.66	NA	4.39E+01	6.60E-01
DDT	NA	0.66	0.01	0.0001	NA	0.66	3.20E+02	4.39E+01	6.60E-01
Dieldrin	NA	0.66	0.002	0.00002	NA	0.66	3.20E+01	9.34E-01	6.60E-01
Endosulfan sulfate	NA	1.65	NA	DL	NA	1.65	NA	NA	1.65E+00
Endrin	NA	10	0.2	0.002	NA	10	1.92E+02	NA	1.00E+01
Endrin aldehyde	NA	10	NA	DL	NA	10	NA	NA	1.00E+01
Endrin ketone	NA	10	NA	DL	NA	10	NA	NA	1.00E+01
Heptachlor epoxide	NA	1.65	0.02	0.0002	NA	1.65	8.32E+00	1.64E+00	1.64E+00
Lindane	NA	0.66	0.02	0.0002	NA	0.66	1.92E+02	1.36E+01	6.60E-01
Methoxychlor	NA	10	4	0.04	NA	10	3.20E+03	NA	1.00E+01

Notes:
NA = No value available
DL = Analytical detection limit
mg/kg = Milligrams per kilogram
L = Liter

References:

1. Georgia EPD, Risk Reduction Standards, 391-3-19-.07. Available online at: http://www.gaepd.org/Documents/hsraguideCSRRRS.html.
Values presented in columns A through D are obtained from Appendices I and III.
2. USEPA Risk Assessment Guidance for Superfund (RAGS): Volume I - Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals). December 1991. EPA/540/R-92/003.

Calculation of Residential Risk-Based Target Concentrations:

Noncarcinogens:

$$C = \frac{HI*BW*AT*\ 365\ days/year}{EF*ED*[(1/RfD_o*CF*IR_s)+(1/RfD_i*IR_a*(1/VF+1/PEF)]} \quad \text{(Eq. 7, RAGS Part B)}$$

Carcinogens:

$$C = \frac{TR*BW*AT*\ 365\ days/year}{EF*ED*[(CSF_o*IR_s*CF)+(CSF_i*IR_a*(1/VF+1/PEF)]} \quad \text{(Eq. 6, RAGS Part B)}$$

where:

HI = Hazard Index (unitless)	1
BW = Body Weight (kg), adult	70
AT = Averaging Time (years), adult, carcinogen	70
AT = Averaging Time (years), adult, noncarcinogen	30
EF = Exposure Frequency (days/year)	350
ED = Exposure Duration (years), adult	30
RfD_o = Oral Reference Dose	Chemical-specific
IR_s = Soil Ingestion Rate (mg/day), adult residential	114
TR = Target Risk (unitless)	1.00E-05
TR for Class C carcinogen	1.00E-04
CSF_o = Oral Cancer Slope Factor	Chemical-specific
IR_a = Air Inhalation Rate (m^3/day), adult residential	15
1/PEF = Inv of Particulate Emission Factor (kg/m^3)	2.16E-10
CF = Conversion Factor (kg/mg)	1.00E-06
1/VF = Volatilization Factor (kg/m^3)	Chemical-specific
RfD_i = Inhalation Reference Dose	Chemical-specific
CSF_i = Inhalation Slope Factor	Chemical-specific

Table A-5
Soil-to-Air Volatilization Factors Used in Derivation of RRS
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent	Volatile?	D_i (cm^2/s)	H' unitless	H ($atm\text{-}m^3/mol$)	K_{oc} (cm^3/g)	D_{ei} (cm^2/s)	K_d (cm^3/g)	K_{as} (g soil/cm^3 air)	a (cm^2/s)	VF (m^3/kg)
Volatile Organic Compounds										
Acetone	v	1.06E-01	1.43E-03	3.50E-05	2.36E+00	7.49E-02	4.73E-02	3.04E-02	4.59E-04	6.70E+03
Benzene	v	8.95E-02	2.27E-01	5.55E-03	1.46E+02	6.33E-02	2.92E+00	7.80E-02	9.88E-04	4.52E+03
Bromoform	v	3.57E-02	2.19E-02	5.33E-04	3.18E+01	2.53E-02	6.36E-01	3.44E-02	1.75E-04	1.08E+04
2-Butanone	v	9.14E-02	2.33E-03	5.67E-05	4.51E+00	6.47E-02	9.02E-02	2.58E-02	3.37E-04	7.83E+03
Carbon Disulfide	v	1.06E-01	5.89E-01	1.44E-02	2.17E+01	7.53E-02	4.35E-01	1.35E+00	1.62E-02	8.89E+02
Chlorobenzene	v	7.21E-02	1.27E-01	3.10E-03	2.34E+02	5.10E-02	4.68E+00	2.72E-02	2.80E-04	8.58E+03
Chloroethane	v	1.04E-01	4.54E-01	1.11E-02	2.17E+01	7.34E-02	4.34E-01	1.05E+00	1.29E-02	1.05E+03
Cyclohexane	v	8.00E-02	6.13E+00	1.50E-01	1.46E+02	5.66E-02	2.92E+00	2.10E+00	1.69E-02	7.78E+02
1,2-Dibromo-3-Chloropropane	v	3.21E-02	6.01E-03	1.47E-04	1.16E+02	2.27E-02	2.32E+00	2.59E-03	1.20E-05	4.17E+04
1,2-Dichlorobenzene	v	5.62E-02	7.85E-02	1.91E-03	3.83E+02	3.97E-02	7.66E+00	1.03E-02	8.26E-05	1.59E+04
1,3-Dichlorobenzene	v	6.80E-02	7.79E-02	1.90E-03	6.17E+02	4.81E-02	1.23E+01	6.31E-03	6.16E-05	1.84E+04
1,4-Dichlorobenzene	v	5.50E-02	9.85E-02	2.40E-03	3.75E+02	3.89E-02	7.51E+00	1.31E-02	1.04E-04	1.42E+04
Dichlorodifluoromethane	v	7.60E-02	1.40E+01	3.42E-01	4.39E+01	5.38E-02	8.78E-01	1.60E+01	4.11E-02	1.68E+02
1,1-Dichloroethane	v	8.36E-02	2.30E-01	5.60E-03	3.18E+01	5.92E-02	6.36E-01	3.61E-01	4.04E-03	2.12E+03
1,2-Dichloroethane	v	8.57E-02	4.82E-02	1.18E-03	3.96E+01	6.06E-02	7.92E-01	6.09E-02	7.41E-04	5.24E+03
1,1-Dichloroethene	v	8.63E-02	1.07E+00	2.60E-02	3.18E+01	6.10E-02	6.36E-01	1.68E+00	1.55E-02	8.65E+02
cis-1,2-dichloroethene	v	8.84E-02	1.67E-01	4.07E-03	3.96E+01	6.25E-02	7.92E-01	2.11E-01	2.57E-03	2.73E+03
trans-1,2-dichloroethene	v	8.76E-02	1.67E-01	4.07E-03	3.96E+01	6.20E-02	7.92E-01	2.11E-01	2.54E-03	2.75E+03
1,2-Dichloropropane	v	8.13E-02	1.15E-01	2.81E-03	6.07E+01	5.75E-02	1.21E+00	9.50E-02	1.09E-03	4.30E+03
Ethylbenzene	v	6.85E-02	3.22E-01	7.86E-03	4.46E+02	4.84E-02	8.92E+00	3.61E-02	3.53E-04	7.64E+03
Isopropylbenzene (cumene)	v	6.03E-02	4.70E-01	1.15E-02	6.98E+02	4.26E-02	1.40E+01	3.37E-02	2.90E-04	8.43E+03
4-Methyl-2-pentanone	v	6.98E-02	5.64E-03	1.38E-04	1.26E+01	4.93E-02	2.52E-01	2.24E-02	2.23E-04	9.62E+03
Methylene Chloride	v	9.99E-02	1.33E-01	3.24E-03	2.17E+01	7.07E-02	4.35E-01	3.06E-01	4.13E-03	2.12E+03
Styrene	v	7.11E-02	1.12E-01	2.74E-03	4.46E+02	5.03E-02	8.92E+00	1.26E-02	1.28E-04	1.27E+04
1,1,1,2-Tetrachloroethane	v	4.82E-02	1.02E-01	2.49E-03	8.60E+01	3.41E-02	1.72E+00	5.94E-02	4.06E-04	7.08E+03
1,1,2,2-Tetrachloroethane	v	4.89E-02	1.50E-02	3.66E-04	9.49E+01	3.46E-02	1.90E+00	7.90E-03	5.55E-05	1.94E+04
Tetrachloroethylene	v	5.05E-02	7.24E-01	1.76E-02	9.49E+01	3.57E-02	1.90E+00	3.81E-01	2.57E-03	2.65E+03
Toluene	v	7.78E-02	2.71E-01	6.62E-03	2.34E+02	5.50E-02	4.68E+00	5.80E-02	6.41E-04	5.64E+03
1,2,4-Trichlorobenzene	v	3.96E-02	5.81E-02	1.42E-03	1.36E+03	2.80E-02	2.71E+01	2.14E-03	1.22E-05	4.14E+04
1,1,1-Trichloroethane	v	6.48E-02	7.03E-01	1.72E-02	4.39E+01	4.58E-02	8.78E-01	8.01E-01	6.42E-03	1.55E+03
1,1,2-Trichloroethane	v	6.69E-02	3.37E-02	8.22E-04	6.07E+01	4.73E-02	1.21E+00	2.77E-02	2.65E-04	8.82E+03
Trichloroethylene	v	6.87E-02	4.03E-01	9.82E-03	6.07E+01	4.86E-02	1.21E+00	3.32E-01	3.07E-03	2.44E+03
1,2,3-Trichloropropane	v	5.91E-02	7.20E-01	1.75E-02	1.16E+02	4.18E-02	2.32E+00	3.11E-01	2.48E-03	2.73E+03
Vinyl Chloride	v	1.07E-01	1.14E+00	2.77E-02	2.17E+01	7.58E-02	4.35E-01	2.62E+00	2.63E-02	5.82E+02
Xylenes	v	8.47E-02	2.12E-01	5.17E-03	3.83E+02	5.99E-02	7.66E+00	2.77E-02	3.35E-04	7.85E+03
Semivolatile Organic Compounds										
Acenaphthene	v	5.06E-02	7.52E-03	1.83E-04	5.03E+03	3.58E-02	1.01E+02	7.48E-05	5.44E-07	1.96E+05
Acenaphthylene	n	4.39E-02	4.74E-03	1.16E-04	6.92E+03	3.10E-02	1.38E+02	3.43E-05	2.16E-07	NA
Acetophenone	v	6.52E-02	4.25E-04	1.04E-05	5.19E+01	4.61E-02	1.04E+00	4.10E-04	3.84E-06	6.40E+04
Anthracene	v	3.90E-02	2.27E-03	5.54E-05	1.64E+04	2.76E-02	3.27E+02	6.95E-06	3.89E-08	7.32E+05
Benzo(a)anthracene	n	5.09E-02	4.91E-04	1.20E-05	1.77E+05	3.60E-02	3.54E+03	1.39E-07	1.02E-09	NA
Benzo(a)pyrene	n	4.76E-02	1.87E-05	4.56E-07	5.87E+05	3.37E-02	1.17E+04	1.59E-09	1.09E-11	NA
Benzo(b)fluoranthene	n	4.76E-02	2.69E-05	6.56E-07	5.99E+05	3.37E-02	1.20E+04	2.24E-09	1.53E-11	NA
Benzo(g,h,i)perylene	n	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	n	4.76E-02	2.39E-05	5.83E-07	5.87E+05	3.37E-02	1.17E+04	2.03E-09	1.39E-11	NA
bis(2-chloroisopropyl)ether	n	6.30E-02	4.60E-03	1.12E-04	6.10E+01	4.46E-02	1.22E+00	3.77E-03	3.41E-05	NA
bis(2-ethylhexyl)phthalate	n	1.73E-02	1.10E-05	2.68E-07	1.20E+05	1.23E-02	2.39E+03	4.60E-09	1.15E-11	NA
2-Chlorophenol	v	6.61E-02	4.58E-04	1.12E-05	3.07E+02	4.68E-02	6.13E+00	7.47E-05	7.10E-07	1.30E+05
Chrysene	n	2.61E-02	2.14E-04	5.21E-06	1.81E+05	1.85E-02	3.61E+03	5.92E-08	2.22E-10	NA
Dibenzo(a,h)anthracene	n	4.46E-02	5.76E-06	1.41E-07	1.91E+06	3.15E-02	3.82E+04	1.51E-10	9.65E-13	NA
2,4-Dichlorophenol	n	6.37E-02	1.75E-04	4.28E-06	4.92E+02	4.50E-02	9.84E+00	1.78E-05	1.63E-07	NA
Di-n-butylphthalate	n	2.14E-02	7.40E-05	1.80E-06	1.16E+03	1.52E-02	2.31E+01	3.20E-06	9.85E-09	NA
2,4-Dimethylphenol	n	6.22E-02	3.89E-05	9.49E-07	4.92E+02	4.40E-02	9.84E+00	3.95E-06	3.54E-08	NA
2,4-Dinitrophenol	n	4.07E-02	3.52E-06	8.58E-08	4.61E+02	2.88E-02	9.22E+00	3.81E-07	2.23E-09	NA
Di-n-octylphthalate	n	1.51E-02	2.74E-03	6.68E-05	8.32E+07	1.07E-02	1.66E+06	1.65E-09	3.57E-12	NA
Fluoranthene	n	2.76E-02	3.62E-04	8.83E-06	5.55E+04	1.95E-02	1.11E+03	3.27E-07	1.30E-09	NA
Fluorene	v	4.40E-02	3.93E-03	9.59E-05	9.16E+03	3.11E-02	1.83E+02	2.15E-05	1.36E-07	3.92E+05
Indeno(1,2,3-cd)pyrene	n	4.48E-02	1.42E-05	3.46E-07	1.95E+06	3.17E-02	3.90E+04	3.64E-10	2.34E-12	NA
2-Methylphenol	n	7.28E-02	4.91E-05	1.20E-06	3.07E+02	5.15E-02	6.13E+00	8.01E-06	8.38E-08	NA
4-Methylphenol	n	7.24E-02	4.09E-05	9.98E-07	3.00E+02	5.12E-02	6.01E+00	6.81E-06	7.08E-08	NA
Naphthalene	v	6.05E-02	1.80E-02	4.39E-04	1.54E+03	4.28E-02	3.09E+01	5.83E-04	5.06E-06	6.42E+04
N-Nitrosodiphenylamine	n	5.59E-02	4.95E-05	1.21E-06	2.63E+03	3.95E-02	5.26E+01	9.40E-07	7.55E-09	NA
Pentachlorophenol	n	6.60E-02	1.00E-06	2.44E-08	4.96E+03	4.67E-02	9.92E+01	1.01E-08	9.58E-11	NA
Phenanthrene	n	NA	5.40E-03	1.32E-04	1.41E+04	NA	2.83E+02	1.91E-05	NA	NA
Phenol	n	8.34E-02	1.36E-05	3.32E-07	1.87E+02	5.90E-02	3.74E+00	3.63E-06	4.35E-08	NA
Pyrene	n	2.78E-02	4.87E-04	1.19E-05	5.43E+04	1.97E-02	1.09E+03	4.48E-07	1.79E-09	NA
2,4,5-Trichlorophenol	n	5.60E-02	6.62E-05	1.61E-06	1.78E+03	3.96E-02	3.55E+01	1.86E-06	1.50E-08	NA
2,4,6-Trichlorophenol	n	3.14E-02	1.06E-04	2.59E-06	1.78E+03	2.22E-02	3.55E+01	2.99E-06	1.35E-08	NA

Table A-5
Soil-to-Air Volatilization Factors Used in Derivation of RRS
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent	Volatile?	D_i (cm^2/s)	H' unitless	H ($atm\text{-}m^3/mol$)	K_{oc} (cm^3/g)	D_{ei} (cm^2/s)	K_d (cm^3/g)	K_{as} ($g\ soil/cm^3\ air$)	a (cm^2/s)	VF (m^3/kg)
Pesticides / Polychlorinated Biphenyls										
Aroclor 1016	n	4.69E-02	8.18E-03	1.99E-04	4.77E+04	3.32E-02	9.54E+02	8.57E-06	5.78E-08	NA
Aroclor 1260	n	3.53E-02	1.37E-02	3.35E-04	3.50E+05	2.49E-02	6.99E+03	1.96E-06	9.96E-09	NA
Aldrin	n	3.72E-02	1.80E-03	4.39E-05	8.20E+04	2.63E-02	1.64E+03	1.10E-06	5.86E-09	NA
alpha-Endosulfan	n	2.25E-02	2.66E-03	6.50E-05	6.76E+03	1.59E-02	1.35E+02	1.97E-05	6.37E-08	NA
alpha-BHC	n	4.33E-02	2.10E-04	5.14E-06	2.81E+03	3.06E-02	5.61E+01	3.75E-06	2.33E-08	NA
beta-BHC	n	2.77E-02	2.10E-04	5.12E-06	2.81E+03	1.96E-02	5.61E+01	3.74E-06	1.49E-08	NA
beta-Endosulfan	n	2.25E-02	2.66E-03	6.50E-05	6.76E+03	1.59E-02	1.35E+02	1.97E-05	6.37E-08	NA
Chlordane	n	3.44E-02	1.99E-03	4.85E-05	3.38E+04	2.44E-02	6.76E+02	2.94E-06	1.46E-08	NA
delta-BHC	n	2.77E-02	2.10E-04	5.12E-06	2.81E+03	1.96E-02	5.61E+01	3.74E-06	1.49E-08	NA
DDD	n	4.06E-02	2.70E-04	6.58E-06	1.18E+05	2.87E-02	2.35E+03	1.15E-07	6.70E-10	NA
DDE	n	4.08E-02	1.70E-03	4.15E-05	1.18E+05	2.88E-02	2.35E+03	7.24E-07	4.24E-09	NA
DDT	n	3.79E-02	3.40E-04	8.30E-06	1.69E+05	2.68E-02	3.37E+03	1.01E-07	5.50E-10	NA
Dieldrin	n	2.33E-02	4.09E-04	9.97E-06	2.01E+04	1.65E-02	4.02E+02	1.02E-06	3.40E-09	NA
Endosulfan Sulfate	n	3.37E-02	1.33E-05	3.24E-07	9.85E+03	2.38E-02	1.97E+02	6.75E-08	3.27E-10	NA
Endrin	n	3.62E-02	4.09E-04	9.97E-06	2.01E+04	2.56E-02	4.02E+02	1.02E-06	5.29E-09	NA
Endrin aldehyde	n	3.62E-02	1.71E-04	4.17E-06	3.27E+03	2.56E-02	6.54E+01	2.61E-06	1.36E-08	NA
Endrin ketone	n	3.62E-02	8.26E-07	2.01E-08	9.72E+03	2.56E-02	1.94E+02	4.25E-09	2.21E-11	NA
Heptachlor epoxide	n	3.56E-02	8.59E-04	2.10E-05	1.01E+04	2.52E-02	2.02E+02	4.26E-06	2.18E-08	NA
Lindane	n	4.33E-02	2.10E-04	5.12E-06	2.81E+03	3.06E-02	5.61E+01	3.74E-06	2.33E-08	NA
Methoxychlor	n	2.21E-02	8.30E-06	2.02E-07	2.69E+04	1.56E-02	5.38E+02	1.54E-08	4.90E-11	NA

Notes:
v = Volatile compound, defined as having a Henry's Law greater than 10^{-5} $atm\text{-}m^3/mol$
n = Non-volatile compound
NA = Not available

Units:
atm = Atmosphere
cm = Centimeter
m = Meter
s = Second
g = Gram
kg = Kilogram
mol = Mole

References:

1. USEPA Regional Screening Level (RSL) Tables - November, 2012. Available online at http://www.epa.gov/region9/superfund/prg/
2. USEPA Risk Assessment Guidance for Superfund (RAGS): Volume I - Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals). December 1991. EPA/540/R-92/003.

Derivation of VF Values:

$$VF = \frac{LS \times V \times DH}{A} \times \frac{(p \times a \times T)^{1/2}}{2 \times D_{ei} \times E \times K_{as} \times 10^{-3}\ kg/g} \quad \text{(Eq. 8, RAGS Part B)}$$

where:

VF = Soil-to-air volatilization factor (m3/kg)	Calculated
LS = Length of side of contaminated area (m)	45
V = Wind speed in mixing zone (m/s)	2.25
DH = Diffusion height (m)	2
A = Area of contamination (cm^2)	2.03E+07
p = Value of pi (π)	3.141592654
a = (cm^2/s):	$\frac{D_{ei} \times E}{E + (rs \times ((1\text{-}E)/K_{as}))}$
T = Exposure interval (s), industrial:	7.88E+08
r_s = Density of soil solids (g/cm^3):	2.65
OC = Soil organic carbon content fraction (unitless):	0.02
D_{ei} = Effective diffusivity (cm^2/s):	$D_i \times E^{0.33}$
D_i = Molecular diffusivity (cm^2/s):	Chemical-specific
E = Total soil porosity (unitless):	0.35
K_{as} = Soil/air partition coefficient ($g\ soil/cm^3$ air):	$(H/K_d) \times 41$
H = Henry's law constant ($atm\text{-}m^3/mol$):	Chemical-specific
K_d = Soil-water partition coefficient (cm^3/g):	$K_{oc} \times OC$
K_{oc} = Organic carbon partition coefficient (cm^3/g):	Chemical-specific

Table A-6
Toxicity Values Used in Derivation of RRS
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent		RfD_o (mg/kg-d)	Source	RfC (mg/m^3)	Source	RfD_i (mg/kg-d)	CSF_o $(mg/kg\text{-}d)^{-1}$	Source	IUR $(ug/m^3)^{-1}$	Source	CSF_i $(mg/kg\text{-}d)^{-1}$	WOE
Volatile Organic Compounds												
Acetone	67-64-1	9.00E-01	IRIS	3.10E+01	ATSDR	8.86E+00	NA	---	NA	---	NA	ND
Benzene	71-43-2	4.00E-03	IRIS	3.00E-02	IRIS	8.57E-03	5.50E-02	IRIS	7.80E-06	IRIS	2.73E-02	A
Bromoform	75-25-2	2.00E-02	IRIS	NA	---	NA	7.90E-03	IRIS	1.10E-06	IRIS	3.85E-03	B2
2-Butanone	78-93-3	6.00E-01	IRIS	5.00E+00	IRIS	1.43E+00	NA	---	NA	---	NA	NA
Carbon Disulfide	75-15-0	1.00E-01	IRIS	7.00E-01	IRIS	2.00E-01	NA	---	NA	---	NA	NA
Chlorobenzene	108-90-7	2.00E-02	IRIS	5.00E-02	PPRTV	1.43E-02	NA	---	NA	---	NA	D
Chloroethane	75-00-3	NA	---	1.00E+01	IRIS	2.86E+00	NA	---	NA	---	NA	ND
Cyclohexane	110-82-7	NA	---	6.00E+00	IRIS	1.71E+00	NA	---	NA	---	NA	ND
1,2-Dibromo-3-Chloropropane	96-12-8	2.00E-04	PPRTV	2.00E-04	IRIS	5.71E-05	8.00E-01	PPRTV	6.00E-03	PPRTV	2.10E+01	ND
1,2-Dichlorobenzene	95-50-1	9.00E-02	IRIS	2.00E-01	HEAST	5.71E-02	NA	---	NA	---	NA	D
1,3-Dichlorobenzene	541-73-1	NA	---	NA	---	NA	NA	---	NA	---	NA	ND
1,4-Dichlorobenzene	106-46-7	7.00E-02	IRIS	8.00E-01	IRIS	2.29E-01	5.40E-03	Cal EPA	1.10E-05	Cal EPA	3.85E-02	ND
Dichlorodifluoromethane	75-71-8	2.00E-01	IRIS	1.00E-01	PPRTV Appendix	2.86E-02	NA	---	NA	---	NA	ND
1,1-Dichloroethane	75-34-3	2.00E-01	IRIS	NA	---	NA	5.70E-03	Cal EPA	1.60E-06	Cal EPA	5.60E-03	C
1,2-Dichloroethane	107-06-2	6.00E-03	PPRTV Appendix	7.00E-03	PPRTV	2.00E-03	9.10E-02	IRIS	2.60E-05	IRIS	9.10E-02	C
1,1-Dichloroethene	75-35-4	5.00E-02	IRIS	2.00E-01	IRIS	5.71E-02	NA	---	NA	---	NA	C
cis-1,2-dichloroethene	156-59-2	2.00E-03	IRIS	NA	---	NA	NA	---	NA	---	NA	NA
trans-1,2-dichloroethene	156-60-5	2.00E-02	IRIS	6.00E-02	PPRTV	1.71E-02	NA	---	NA	---	NA	ND
1,2-Dichloropropane	78-87-5	9.00E-02	ATSDR	4.00E-03	IRIS	1.14E-03	3.60E-02	Cal EPA	1.00E-05	Cal EPA	3.50E-02	NA
Ethylbenzene	100-41-4	1.00E-01	IRIS	1.00E+00	IRIS	2.86E-01	1.10E-02	Cal EPA	2.50E-06	Cal EPA	8.75E-03	D
Isopropylbenzene (cumene)	98-82-8	1.00E-01	IRIS	4.00E-01	IRIS	1.14E-01	NA	---	NA	---	NA	D
4-Methyl-2-pentanone	108-10-1	8.00E-02	HEAST	3.00E+00	IRIS	8.57E-01	NA	---	NA	---	NA	NA
Methylene chloride	75-09-2	6.00E-03	IRIS	6.00E-01	IRIS	1.71E-01	2.00E-03	IRIS	1.00E-08	IRIS	3.50E-05	B2
Styrene	100-42-5	2.00E-01	IRIS	1.00E+00	IRIS	2.86E-01	NA	---	NA	---	NA	ND
1,1,1,2-Tetrachloroethane	630-20-6	3.00E-02	IRIS	NA	---	NA	2.60E-02	IRIS	7.40E-06	IRIS	2.59E-02	C
1,1,2,2-Tetrachloroethane	79-34-5	2.00E-02	IRIS	NA	---	NA	2.00E-01	IRIS	5.80E-05	IRIS	2.03E-01	ND
Tetrachloroethylene	127-18-4	6.00E-03	IRIS	4.00E-02	IRIS	1.14E-02	2.10E-03	IRIS	2.60E-07	IRIS	9.10E-04	ND
Toluene	108-88-3	8.00E-02	IRIS	5.00E+00	IRIS	1.43E+00	NA	---	NA	---	NA	ND
1,2,4-Trichlorobenzene	120-82-1	1.00E-02	IRIS	2.00E-03	PPRTV	5.71E-04	2.90E-02	PPRTV	NA	---	NA	D
1,1,1-Trichloroethane	71-55-6	2.00E+00	IRIS	5.00E+00	IRIS	1.43E+00	NA	---	NA	---	NA	ND
1,1,2-Trichloroethane	79-00-5	4.00E-03	IRIS	2.00E-04	PPRTV Appendix	5.71E-05	5.70E-02	IRIS	1.60E-05	IRIS	5.60E-02	C
Trichloroethylene	79-01-6	5.00E-04	IRIS	2.00E-03	IRIS	5.71E-04	4.60E-02	IRIS	4.10E-06	IRIS	1.44E-02	ND
1,2,3-Trichloropropane	96-18-4	4.00E-03	IRIS	3.00E-04	IRIS	8.57E-05	3.00E+01	IRIS	NA	---	NA	ND
Vinyl Chloride	75-01-4	3.00E-03	IRIS	1.00E-01	IRIS	2.86E-02	7.20E-01	IRIS	4.40E-06	IRIS	1.54E-02	A
Xylenes	1330-20-7	2.00E-01	IRIS	1.00E-01	IRIS	2.86E-02	NA	---	NA	---	NA	ND
Semivolatile Organic Compounds												
Acenaphthene	83-32-9	6.00E-02	IRIS	NA	---	NA	NA	---	NA	---	NA	ND
Acenaphthylene	208-96-8	NA	---	NA	---	NA	NA	---	NA	---	NA	D
Acetophenone	98-86-2	1.00E-01	IRIS	NA	---	NA	NA	---	NA	---	NA	D
Anthracene	120-12-7	3.00E-01	IRIS	NA	---	NA	NA	---	NA	---	NA	ND
Benzo(a)anthracene	56-55-3	NA	---	NA	---	NA	7.30E-01	ECAO	1.10E-04	Cal EPA	3.85E-01	B2
Benzo(a)pyrene	50-32-8	NA	---	NA	---	NA	7.30E+00	IRIS	1.10E-03	Cal EPA	3.85E+00	B2
Benzo(b)fluoranthene	205-99-2	NA	---	NA	---	NA	7.30E-01	ECAO	1.10E-04	Cal EPA	3.85E-01	B2
Benzo(g,h,i)perylene	191-24-2	NA	---	NA	---	NA	NA	---	NA	---	NA	D
Benzo(k)fluoranthene	207-08-9	NA	---	NA	---	NA	7.30E-02	ECAO	1.10E-04	Cal EPA	3.85E-01	B2
bis(2-chloroisopropyl)ether	108-60-1	4.00E-02	IRIS	NA	---	NA	7.00E-02	HEAST	1.00E-05	HEAST	3.50E-02	NA
bis(2-ethylhexyl)phthalate	117-81-7	2.00E-02	IRIS	NA	---	NA	1.40E-02	IRIS	2.40E-06	Cal EPA	8.40E-03	B2
2-Chlorophenol	95-57-8	5.00E-03	IRIS	NA	---	NA	NA	---	NA	---	NA	NA
Chrysene	218-01-9	NA	---	NA	---	NA	7.30E-03	ECAO	1.10E-05	Cal EPA	3.85E-02	B2
Dibenzo(a,h)anthracene	53-70-3	NA	---	NA	---	NA	7.30E+00	ECAO	1.20E-03	Cal EPA	4.20E+00	B2
2,4-Dichlorophenol	120-83-2	3.00E-03	IRIS	NA	---	NA	NA	---	NA	---	NA	NA
Di-n-butylphthalate	84-74-2	1.00E-01	IRIS	NA	---	NA	NA	---	NA	---	NA	NA
2,4-Dimethylphenol	105-67-9	2.00E-02	IRIS	NA	---	NA	NA	---	NA	---	NA	NA
2,4-Dinitrophenol	51-28-5	2.00E-03	IRIS	NA	---	NA	NA	---	NA	---	NA	NA
Di-n-octylphthalate	117-84-0	1.00E-02	PPRTV	NA	---	NA	NA	---	NA	---	NA	NA
Fluoranthene	206-44-0	4.00E-02	IRIS	NA	---	NA	NA	---	NA	---	NA	NA
Fluorene	86-73-7	4.00E-02	IRIS	NA	---	NA	NA	---	NA	---	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	NA	---	NA	---	NA	7.30E-01	ECAO	1.10E-04	Cal EPA	3.85E-01	B2
2-Methylphenol	95-48-7	5.00E-02	IRIS	6.00E-01	Cal EPA	1.71E-01	NA	---	NA	---	NA	NA
4-Methylphenol	106-44-5	1.00E-01	ATSDR	6.00E-01	Cal EPA	1.71E-01	NA	---	NA	---	NA	NA
Naphthalene	91-20-3	2.00E-02	IRIS	3.00E-03	IRIS	8.57E-04	NA	---	3.40E-05	Cal EPA	1.19E-01	C
N-Nitrosodiphenylamine	86-30-6	NA	---	NA	---	NA	4.90E-03	IRIS	2.60E-06	Cal EPA	9.10E-03	B2
Pentachlorophenol	87-86-5	5.00E-03	IRIS	NA	---	NA	4.00E-01	IRIS	5.10E-06	Cal EPA	1.79E-02	NA
Phenanthrene	85-01-8	NA	---	NA	---	NA	NA	---	NA	---	NA	D
Phenol	108-95-2	3.00E-01	IRIS	2.00E-01	Cal EPA	5.71E-02	NA	---	NA	---	NA	NA
Pyrene	129-00-0	3.00E-02	IRIS	NA	---	NA	NA	---	NA	---	NA	NA
2,4,5-Trichlorophenol	95-95-4	1.00E-01	IRIS	NA	---	NA	NA	---	NA	---	NA	NA
2,4,6-Trichlorophenol	88-06-2	1.10E-03	PPRTV	NA	---	NA	1.10E-02	IRIS	3.10E-06	IRIS	1.09E-02	B2

Table A-6
Toxicity Values Used in Derivation of RRS
Former Oxford Chemicals Property, Chamblee, Georgia

Constituent		RfD_o (mg/kg-d)	Source	RfC (mg/m^3)	Source	RfD_i (mg/kg-d)	CSF_o $(mg/kg\text{-}d)^{-1}$	Source	IUR $(ug/m^3)^{-1}$	Source	CSF_i $(mg/kg\text{-}d)^{-1}$	WOE
Pesticides / Polychlorinated Biphenyls												
Aroclor 1016	12674-11-2	7.00E-05	IRIS	NA	---	NA	7.00E-02	RSL	2.00E-05	RSL	7.00E-02	B2
Aroclor 1260	11096-82-5	NA	---	NA	---	NA	2.00E+00	RSL	5.70E-04	RSL	2.00E+00	B2
Aldrin	309-00-2	3.00E-05	IRIS	NA	---	NA	1.70E+01	IRIS	4.90E-03	IRIS	1.72E+01	B2
alpha-Endosulfan	95-99-98	NA	---	NA	---	NA	NA	---	NA	---	NA	NA
alpha-BHC	319-84-6	8.00E-03	ATSDR	NA	---	NA	6.30E+00	IRIS	1.80E-03	IRIS	6.30E+00	B2
beta-BHC	319-85-7	NA	---	NA	---	NA	1.80E+00	IRIS	5.30E-04	IRIS	1.86E+00	B2
beta-Endosulfan	33213-65-9	NA	---	NA	---	NA	NA	---		---	0.00E+00	NA
Chlordane	12789-03-6	5.00E-04	IRIS	7.00E-04	IRIS	2.00E-04	3.50E-01	IRIS	1.00E-04	IRIS	3.50E-01	B2
delta-BHC	319-86-8	NA	---	NA	---	NA	NA	---	NA	---	NA	B2
DDD	72-54-8	NA	---	NA	---	NA	2.40E-01	IRIS	6.90E-05	Cal EPA	2.42E-01	B2
DDE	72-55-9	NA	---	NA	---	NA	3.40E-01	IRIS	9.70E-05	Cal EPA	3.40E-01	B3
DDT	50-29-3	5.00E-04	IRIS	NA	---	NA	3.40E-01	IRIS	9.70E-05	IRIS	3.40E-01	B4
Dieldrin	60-57-1	5.00E-05	IRIS	NA	---	NA	1.60E+01	IRIS	4.60E-03	IRIS	1.61E+01	B2
Endosulfan sulfate	1031-07-8	NA	---	NA	---	NA	NA	---	NA	---	NA	ND
Endrin	72-20-8	3.00E-04	IRIS	NA	---	NA	NA	---	NA	---	NA	D
Endrin aldehyde	7421-93-4	NA	---	NA	---	NA	NA	---	NA	---	NA	ND
Endrin ketone	53494-70-5	NA	---	NA	---	NA	NA	---	NA	---	NA	ND
Heptachlor epoxide	1024-57-3	1.30E-05	IRIS	NA	---	NA	9.10E+00	IRIS	2.60E-03	IRIS	9.10E+00	B2
Lindane	58-89-9	3.00E-04	IRIS	NA	---	NA	1.10E+00	Cal EPA	3.10E-04	Cal EPA	1.09E+00	NA
Methoxychlor	72-43-5	5.00E-03	IRIS	NA	---	NA	NA	---	NA	---	NA	D

Notes
RfD = Reference Dose (o = oral ingestion, i = inhalation)
RfC = Reference Concentration
CSF = Cancer Slope Factor (o = oral ingestion, i = inhalation)
IUR = Inhalation Unit Risk
WOE = Weight-of-evidence narrative

Toxicity values are obtained from USEPA Regional Screening Level (RSL) Tables, last updated May, 2013. Online at: http://www.epa.gov/region9/superfund/prg/
Values contained in RSL tables come from the following sources:
IRIS = USEPA Integrated Risk Information System (IRIS). Online at: http://www.epa.gov/iris. Values current as of February 2013.
PPRTV = Provisional Peer-Reviewed Toxicity Values
HEAST = USEPA Health Effects Assessment Summary Tables. July 1997. EPA 540/R-97-036.
ATSDR = Agency for Toxic Substances and Disease Registry toxicological profiles. Online at: http://www.atsdr.cdc.gov/toxprofiles/index.asp
ECAO = Environmental Criteria and Assessment Office
Cal EPA = California Environmental Protection Agency

Appendix B
Boring, Monitoring Well Construction Logs

Soil Boring Log

Boring ID: **WCB-43**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Light Brown Silty Clay FILL w/wood pieces, soft	40%	2-4	0	
				0	
				0	
				0	
5			4-6	0	
	Orange and Tan Sandy CLAY (CL)	40%		0	
				0	
				0	
				0	
10	Mottled Orange and Red Sandy CLAY (CL)	80%	8-10	0	Saprolite
				0	
				0	
				0	
				0	
15	white and orange 14-15			0	
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-44**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	11 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Tan and Orange-brown Silty Clay FILL layered, w/wood pieces	60%		0	
5	White and Orange Sandy CLAY (CL)	100%	5-7	0	moist
10		100%		0	Saprolite
15	Boring completed at 15ft, backfilled with bentonite chips			0	
20				0	
25				0	
30				0	
35				0	

Soil Boring Log

Boring ID: **WCB-45**

WOODARD &CURRAN

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Gray Silty Clay FILL w/gravel	60%	2-4	0 0 0 0	
5	Orange-brown slightly Sandy CLAY (CL) stiff		4-6	0 0	
	increasing sand with depth	90%		0 0 0 0	
10					
15	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-46**

WOODARD &CURRAN

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Gray and Brown Sandy Clay FILL w/gravel			0	
				0	
		80%	2-4	0	
	Orange-brown Sandy CLAY (CL)			0	
	stiff		4-6	0	
5				0	
		95%		0	
				0	
				0	
10					
	Boring completed at 15ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-47**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	13 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Brown and Tan Sandy Clay FILL	80%	0-2	0	
				0	
				0	
				0	
5			4-6	258	
		100%		35	
				368	
				144	
			8-10	367	
10	White Sandy CLAY (CL)			118	
				123	
				392	moist
	Orange and Brown Sandy CLAY (CL)	75%		235	Saprolite
	White Silty SAND (SM)			220	
15					
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-48**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Brown and Gray Sandy Clay FILL	80%	0-2	2	
				2	
				2	
				4	
5	Orange and Brown Sandy Clay FILL stiff		4-6	2	
		100%		6	
				20	
				40	
			8-10	10	
10				6	
				3	
				8	
		90%	12-14	5	
	Brown and Gray Sandy CLAY (CL)			12	
15				42	
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-49**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	12 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Tan-gray Sandy Clay FILL	75%	0-2	2	
				2	
				2	
				4	
5	Orange and Tan Sandy CLAY (CL) stiff		4-6	2	
		100%		6	
				20	
				40	
			8-10	10	
10				6	
				3	
	6" clayey sand @12'			8	moist
		100%		5	
	Gray and Orange Sandy CLAY (CL)			12	Saprolite
15				42	
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-50**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	13 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Orange-brown Sandy Clay FILL	75%	0-2	12	
				20	
				2	
				4	
5	Gray Sandy CLAY (CL)		4-6	10	
				151	moist 5-6
	Orange and Tan Sandy CLAY (CL)	80%		703	
				361	
			8-10	51	
10				74	
				92	
				46	
		90%	12-13	160	
				36	
15				35	
	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-B15**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	13 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0					
	Tan-gray Sandy Clay FILL	60%	0-2	2	
				10	
				270	
				46	
5			4-6	123	
	Orange and Tan Sandy CLAY (CL)	100%		633	
				561	
				541	
			8-10	462	
10				585	
				506	
				609	
		90%	12-13	673	
	dark orange brown				
15					
	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-51**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	12 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Dark Gray Sandy Clay FILL w/gravel	80%	0-2	0	
	Orange-brown Sandy Clay FILL			0	
	stiff			0	
				0	
	Tan Sandy Clay FILL		4-6	0	
5	Orange and Tan Sandy CLAY (CL)	100%		0	
				0	
				1	
			8-10	6	
				150	
10	Tan Gray Sandy CLAY (CL)	90%		154	
				56	
				167	
				59	
	orange and gray			144	
15	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-52**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	12 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Gray Sandy Clay FILL	80%	0-2	0	
	stiff			0	
				0	
	tan-gray to orange		4-6	0	
5	Orange and Tan Sandy CLAY (CL)	100%		0	
				0	
				0	
			8-10	0	
10	Tan Gray Sandy CLAY (CL)	95%		0	
				0	
				0	
	Orange-brown Sandy CLAY (CL)			0	
15				0	
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-53**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	12 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Gray and Brown Silty Clay FILL		0-2	0	
				0	
	Orange-brown Sandy Clay FILL	100%		0	
	stiff			0	
5			4-6	0	
				1	
				13	
	Tan Gray Sandy CLAY (CL)	80%		62	
			8-10	133	
				163	
10	gray and white 10-15			12	
				80	
		100%		74	
				12	
15				28	
	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-54**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	11 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Gray and Brown Silty Clay FILL		0-2	0	
	stiff			0	
		80%		0	
				1	
5	reddish brown 4-6		4-6	5	
				87	
				170	
	Orange and Tan Sandy CLAY (CL)	90%		218	
	stiff		8-10	345	
				300	
10				127	
	more sandy 11-15			426	
		100%		191	
				196	
15				362	
	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-55**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	10.5 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Dark Gray Silty Clay FILL		0-2	7	
	Orange-brown Silty Clay FILL			92	
	stiff	80%		50	
				12	
			4-6	4	
5	tan-brown 5-8			0	
				0	
		75%		0	
	Orange-brown Sandy CLAY (CL)		8-10	1	
				2	
10				7	
				151	
		100%		210	
				161	
15				140	
	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-B08**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	11.0 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Dark Gray Silty Clay FILL w/gravel	90%	0-2	0	Saprolite
	Orange-brown Silty Clay FILL			0	
	stiff			0	
				0	
			4-6	1	
5	Tan and Orange Sandy CLAY FILL	75%		1	
	4" gravel layer @5.5			9	
				8	
	White and Gray Sandy CLAY (CL)		8-10	4	
	Pink and Black Silty CLAY (CL)			0	
10	White and Gray Sandy CLAY (CL)	80%		1	
				3	
				2	
	Tan-brown very Sandy CLAY (CL)			6	
15				14	
	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-56**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	10.5 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Orange and Tan Sandy CLAY (CL)	80%	0-2	0	
				0	
				0	
				0	
5			4-6	0	
				0	
		75%		0	
	White and Light Gray Sandy CLAY (CL)		7-9	0	
10				0	
		100%		0	Saprolite
15					
	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-57**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	14 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Tan Gray to Light Brown Sandy Clay FILL w/silty clay layers	60%	0-2	0	
				0	
				0	
				0	
5	dark gray @4.5-5		4-6	0	
	Orange and Tan Sandy CLAY (CL)	80%		1	
				25	
				39	
			7-9	53	
10				3	
		80%		1	
			11-13	4	
				6	
				3	
15				2	
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-58**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	11 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Gray and Brown Silty Clay FILL		0-2	0	
	Orange and Tan Sandy CLAY (CL)	80%		0	
				0	
				0	
			4-6	0	
5	White and Pink Sandy CLAY (CL)			0	
				0	
	Orange and Tan Sandy CLAY (CL)	90%		46	
	Tan-white Sandy CLAY (CL)		7-9	40	
				5	
10				8	
	Pink and Light Gray Sandy CLAY (CL)		11-13	11	Saprolite
		100%		20	
				47	
15					
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-59**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	10 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Light Brown Silty Clay FILL	75%		1 0 0 0 1	
5	Light Gray and White Sandy CLAY (CL)	90%	8-10	1 0 0 1 1	
10		100%		1 1 1 4 2	Saprolite
15	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-B26**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	11 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Light Brown Silty Clay FILL	75%		0 0 0 0 0	
5	Pink and White Sandy CLAY (CL)	90%		20 102 84	
	Light Gray and White Sandy CLAY (CL)		8-10	109 126 63	
10		100%		72 83 36	
15				50	
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-60**

WOODARD &CURRAN

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Light Brown Silty Clay FILL	80%	0-2	1 0 0 0 1	
5	Orange and Tan Sandy CLAY (CL)	80%	5-7	1 0 0 1	
10	Light Gray and White Sandy CLAY (CL)	100%	9-11	1 1 1 1	
	Light Tan-brown to red Silty CLAY (CL)			1 4	
15	White Sandy CLAY (CL)			2	
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-61**

WOODARD &CURRAN

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Yellow and Brown Silty Clay FILL	60%	0-2	0 0 0 0 0	
5	stiff Tan and Yellow Silty Clay FILL	80%	5-7	0 0 0 0 0	
10	Light Gray and White Sandy CLAY (CL)	80%	9-11	0 0 0 0 2	
15				1	
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-VER77**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Light Brown and Tan Silty Clay FILL	50%	0-2	0 0 0 0 0	
5	Light Gray and White Sandy CLAY (CL)	80%	5-7	0 0 2 92	
10		100%	9-11	128 85 98 15 12	
15	Boring completed at 15ft, backfilled with bentonite chips			25	
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-62**

WOODARD &CURRAN

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Light Brown and Tan Silty Clay FILL	60%	0-2	0 0 0 0	
	Red and White Silty Clay FILL stiff			2	
5	Light Brown Silty Clay FILL	100%	5-7	1 128 13 15	
10			9-11	24 1	
	Tanand Yellow Sandy CLAY (CL)			1	
	Brown and Red Sandy CLAY (CL)	100%		0 0	
15	White and Gray Sandy CLAY (CL)			0	
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-63**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	7 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Yellow and Brown Silty Clay FILL		0-2	0	
	Reddish-brown Silty Clay FILL	75%		0	
5	Yellow and Orange sandy CLAY (CL) w/pink streaks		5-7	0	
	more pink below 7	90%		0	Saprolite
10				0	
		100%		0	
15	Boring completed at 15ft, backfilled with bentonite chips			0	
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-64**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	8 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Reddish-brown Silty Clay FILL stiff	80%	0-2	0 0 0 0 0	
5	Yellow and Orange Sandy CLAY (CL)		5-7	0 0	
	Tan-yellow Sandy CLAY (CL) w/pink streaks below 8	100%		0 0 0 0	
10	Reddish-brown Sandy CLAY (CL) pink and white below 12	100%		0 0 0 0 0	
15					
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-65**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	7 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Dark Gray Clayey Sand FILL w/gravel		0-2	0	
	Reddish-brown Silty Clay FILL	85%		0 0 0 0 0	
5	Reddish-brown and White Sandy CLAY (CL)		5-7	0	
		100%		0 0 0 0 0	Saprolite
10		100%		0 0 0 0 0	
15					
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-66**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	11 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	6" Gray Clayey Sand FILL w/gravel		0-2	0	
	6" Red-brown Silty Clay FILL very stiff			0	
	Reddish-brown and White Sandy CLAY (CL)	75%		0	
				0	
5				0	
			5-7	0	
	pink and gray below 7			0	
		75%		0	
				0	Saprolite
10				0	
				0	
				0	
	6" gravel layer @13	100%		0	
				0	
15				0	
	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-67**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/10/2013
Location:	Former Oxford Chem	Date Completed:	9/10/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Tan Sandy Clay FILL		0-2	0	
	Yellow-orange Sandy CLAY (CL) w/pink streaks below 3	75%		0	
				0	
				0	
5			4-6	0	
				0	Saprolite
				0	
		75%	7-9	0	
				0	
10				0	
	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-68**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Orange and Light Gray Sandy CLAY (CL)	90%	0-2	0	Saprolite
				0	
				0	
				0	
5			4-6	0	
				0	
				0	
		100%	7-9	0	
				0	
10				0	
	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-69**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Light Gray and Ornge Sandy Clay FILL w/gravel	75%	0-2	0	
				0	
				0	Saprolite
	gravel layer @4			0	
5	brown below 4		4-6	0	
				0	
				0	
		100%	7-9	0	
	6" concrete gravel @8.5-9			0	moist, perched above concrete
10	Orange and Light Gray Sandy CLAY (CL)			0	
	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-70**

WOODARD &CURRAN

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/9/2013
Location:	Former Oxford Chem	Date Completed:	9/9/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Reddish-orange Silty Clay FILL	90%	0-2	0	
				0	
	wood pieces @ 3 and 4			3	Naphthalene odor
				0	
			4-6	0	
5	Orange and Light Gray Sandy CLAY (CL)			0	Saprolite
				0	
		100%	7-9	0	
	Orange and White Sandy CLAY (CL)			0	
10				0	
	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-71**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Gray Sandy Clay FILL w/gravel	90%	2-4	0 0 1.5 1	
5	Orange and Tan Sandy CLAY (CL)	100%	6-8	1 0 0 0 0 0	
10	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-72**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Gray-brown Sandy Clay FILL stiff			0	
	Reddish-brown slightly Sandy Clay FILL			0	
		100%	2-4	0	
				0	
	Tan and Orange Slightly Sandy CLAY (CL)			0	
5				0	
	increasing sand w/depth		6-8	0	
		95%		0	
				0	
10				0	
	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-73**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	8 ft	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Gray and Orange-brown Sandy Clay FILL	75%	2-4	0 0 0 1	
5	Tan and White Sandy CLAY (CL) w/black streaks	100%	6-8	0 0 0 0 0	Saprolite
10	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-74**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	7 ft	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Dark Gray and Brown Sandy Clay FILL w/gravel	90%	2-4	0 0 0	
5	White and Orange Sandy CLAY (CL)	100%	6-7	0 0 0 0	
10	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-75**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	7.5 ft	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	6" Brwn and Gray sandy Clay FILL w/gravel			0	
				0	
		80%	2-4	0	
	White and Orange Sandy CLAY (CL)			0	
5				0	
				0	
			6-8	0	
		100%		0	
10	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-76**

WOODARD &CURRAN

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Brown and Gray Sandy Clay FILL w/gravel	95%	2-4	0 10 68	
	Orange and Brown Sandy CLAY (CL)			26 24	
5	Tan and Gray Sandy CLAY (CL)	75%	6-8	10 17 46 60 40	
10	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-77**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Tan-gray Sandy Clay FILL w/gravel	95%	2-4	0 0 0	
	Tan-orange Sandy CLAY (CL)			0 4 5	
5		75%	6-8	1 27	
	Dark Brown Sandy CLAY (CL) w/black streaks				
10	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-78**

WOODARD &CURRAN

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Gray-brown Sandy Clay FILL w/gravel			0	
				0	
		80%	2-4	0	
	Orange-brown slightly Sandy CLAY (CL)			0	
5				0	
	increasing sand w/depth			0	
			6-8	0	
		100%		0	
				0	
10				0	
	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-79**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	10 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Tan-brown Sandy Clay FILL w/gravel			0	
				0	
		80%	2-4	0	
	Orange-brown slightly Sandy CLAY (CL)			0	
5				0	
	increasing sand w/depth			0	
			6-8	0	
		100%		0	
				0	
10				0	
	Boring completed at 10ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-80**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/6/2013
Location:	Former Oxford Chem	Date Completed:	9/6/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	nfwe	Final Depth:	5 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Light Gray Silty Clay FILL	75%	0-2	0	
				0	
	Tan Silty Clay FILL		2-4	0	
				0	
5				0	
10	Boring completed at 5ft, backfilled with bentonite chips				
15					
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-81**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/11/2013
Location:	Former Oxford Chem	Date Completed:	9/11/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	13 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Reddish-brown Silty Clay FILL	50%	0-2	0	soft
				0	
				0	
	Orange and Brown Silty Clay FILL			0	
5	stiff		4-6	0	
	2" gravel layer @7	50%	8-10	0	
				0	
	Gray-brown Sandy CLAY (CL)			0	
10				12	
				26	
			11-13	56	
		90%		28	Saprolite
				151	
15				239	
	Boring completed at 15ft, backfilled with bentonite chips				
20					
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-82**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/11/2013
Location:	Former Oxford Chem	Date Completed:	9/11/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	13.5 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	6"gray Silty Sand FILL w/gravel Dark Gray Silty Clay FILL stiff	80%	0-2	0 0 0 0	
5	Orange and Brown Silty CLAY (CL) stiff		4-6	0 0 0	
10	pink @12.5	100%	8-10	0 0 0 0	Saprolite
15		100%	12-14	0 12 25	
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **WCB-83**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	9/11/2013
Location:	Former Oxford Chem	Date Completed:	9/11/2013
Driller:	GeoLab	Field Oversight:	T L / J K
DTW:	10 ft	Final Depth:	15 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Remarks
0	Gray-brown very Sandy Clay FILL	80%	0-2	0 0 0 0	stiff
5	Orange and Brown Silty CLAY (CL) more yellow @ 4.5		4-6	0 0 0 0	moist
10	Tan and Orange sandy CLAY (CL)	90%	8-10	0 0 0 0	
15	Light Gray and White Sandy CLAY (CL)	100%		0 0 0 0	Saprolite
20	Boring completed at 15ft, backfilled with bentonite chips				
25					
30					
35					

Soil Boring Log

Boring ID: **MW-25**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	12/13/2013
Location:	Former Oxford Chem	Date Completed:	12/13/2013
Driller:	GeoLab	Field Oversight:	JDK
DTW:	12 ft	Final Depth:	20 ft

Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Well Completion	Remarks
0	Reddish-brown Silty Clay FILL	100%		0		
5	Pink and tan sandy silt w/ some rock fragments, moist (SM)	100%		0		
10	Tan Sandy silt (SM) w/ some rock fragments, wet	100%		0		
15		100%		0		
20	Pink and tan sandy silt w/ rock frag (SM)					
	Boring terminated at 20ft, completed as 2-inch PVC well					
25						
30						
35						

Soil Boring Log

Boring ID: **MW-26**

Project:	Soil Delineation	Elevation:	
Project No:	226278	Date started:	12/13/2013
Location:	Former Oxford Chem	Date Completed:	12/13/2013
Driller:	GeoLab	Field Oversight:	JDK
DTW:	11.5 ft	Final Depth:	20 ft

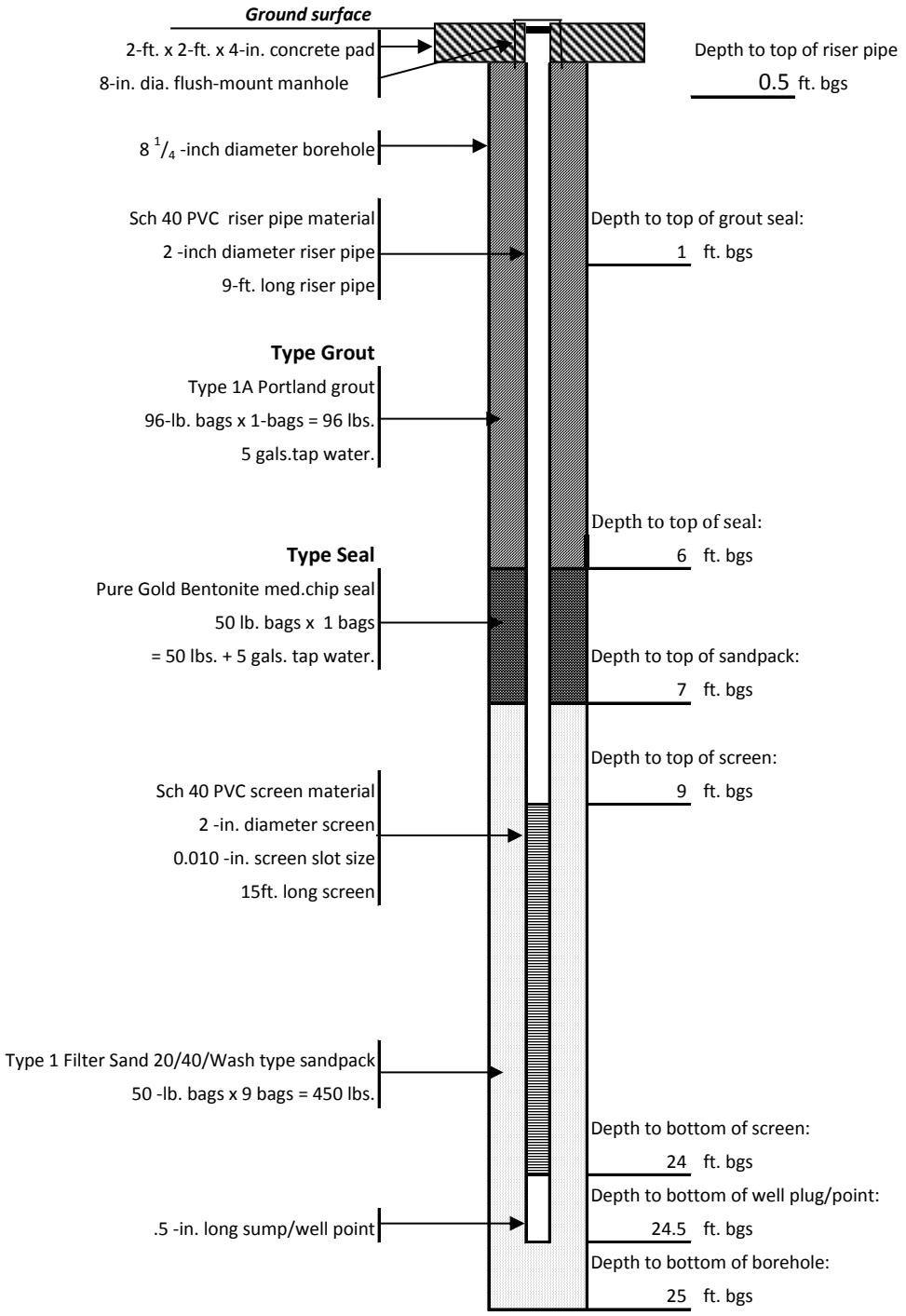
Depth (feet bgs)	Soil Classification	% Recovery	Sample No.	PID (ppm)	Well Completion	Remarks
0	Reddish-brown Silt, moist FILL	100%		0 8.2		
5	Tan fine sandy silt, moist, some quartz (SM)	100%		9.1 10.8 22.1 48.3 89.1		
10	Green and gray sandy silt, moist to wet (SM)	100%		21.2 19.1 11.1 9.1 1.4		
15		100%		0		
20	Boring terminated at 20ft, completed as 2-inch PVC well					
25						
30						
35						

Monitor Well Log - Flush Mount

	Constr. Start	Constr. Finish
Time	1020	1125
Date	9/30/13	9/30/13

Well ID:	MW-13
Project No:	226278.00
Geol./Eng:	JDK
Driller:	Geo Lab

Temp Well



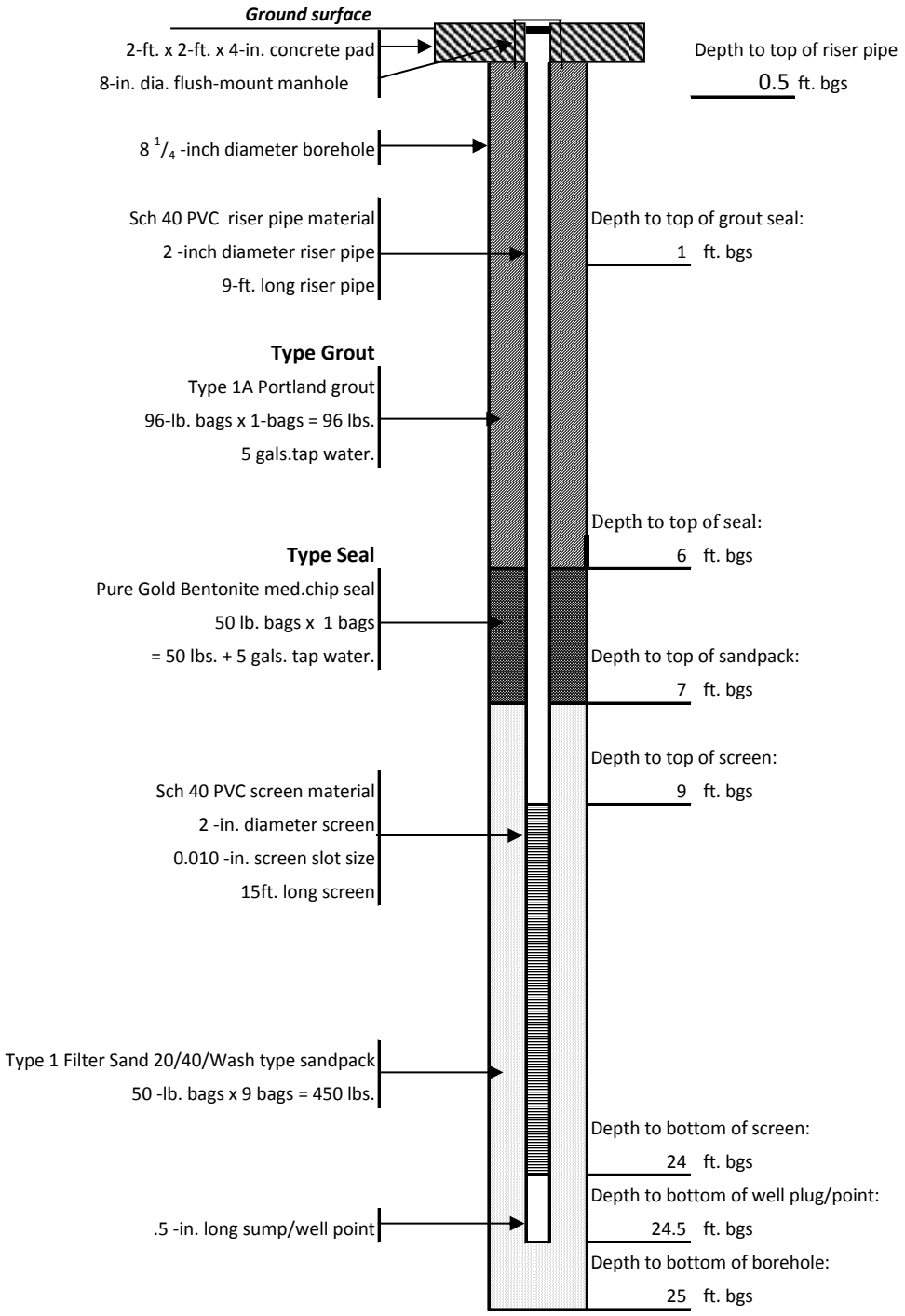
NOT TO SCALE

Monitor Well Log - Flush Mount

	Constr. Start	Constr. Finish
Time	1445	1550
Date	9/30/13	9/30/13

Well ID:	MW-14
Project No:	226278.00
Geol./Eng:	JDK
Driller:	Geo Lab

Temp Well



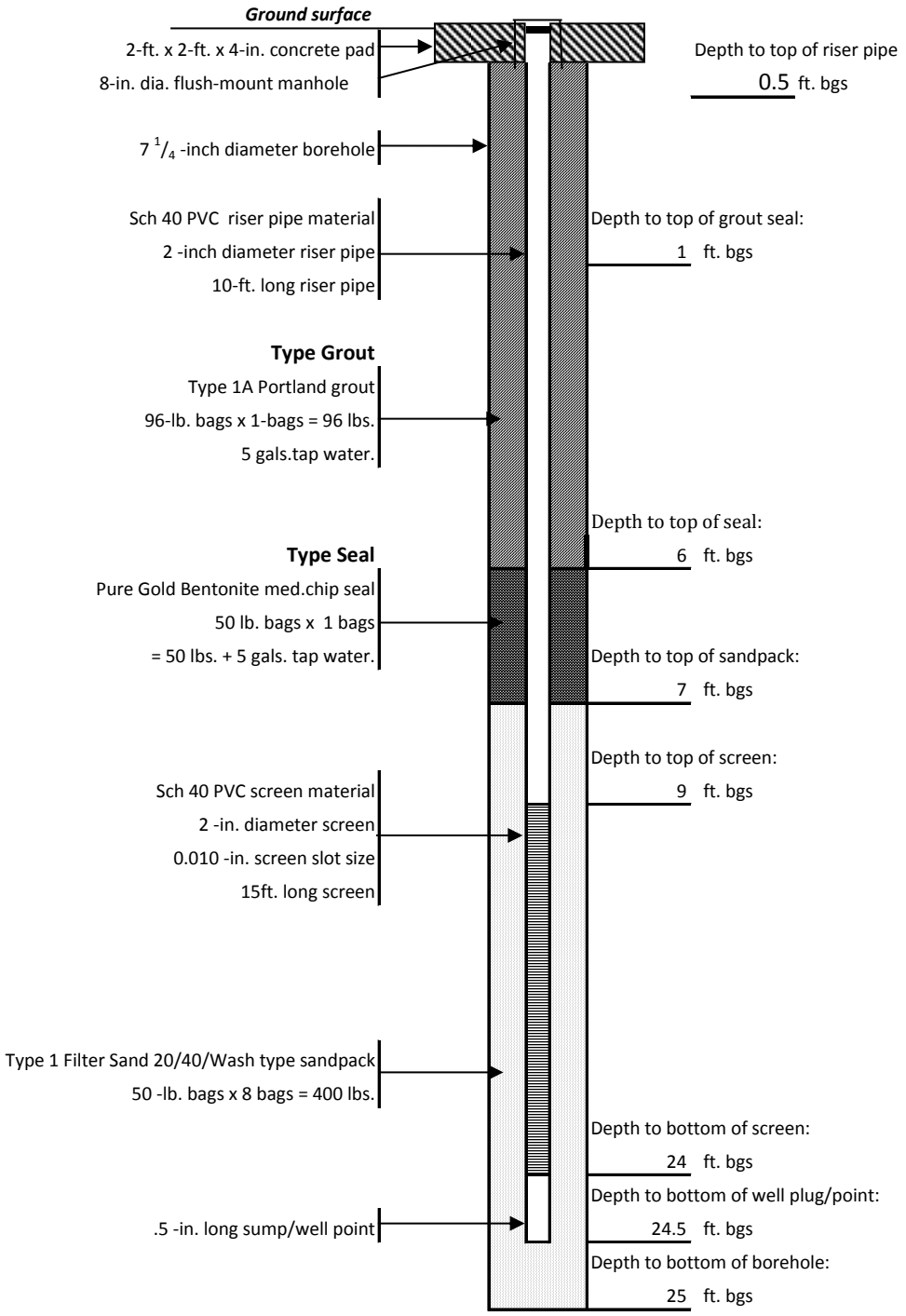
NOT TO SCALE

Monitor Well Log - Flush Mount

	Constr. Start	Constr. Finish
Time	1130	1345
Date	9/30/13	9/30/13

Well ID:	MW-15
Project No:	226278.00
Geol./Eng:	JDK
Driller:	Geo Lab

Temp Well



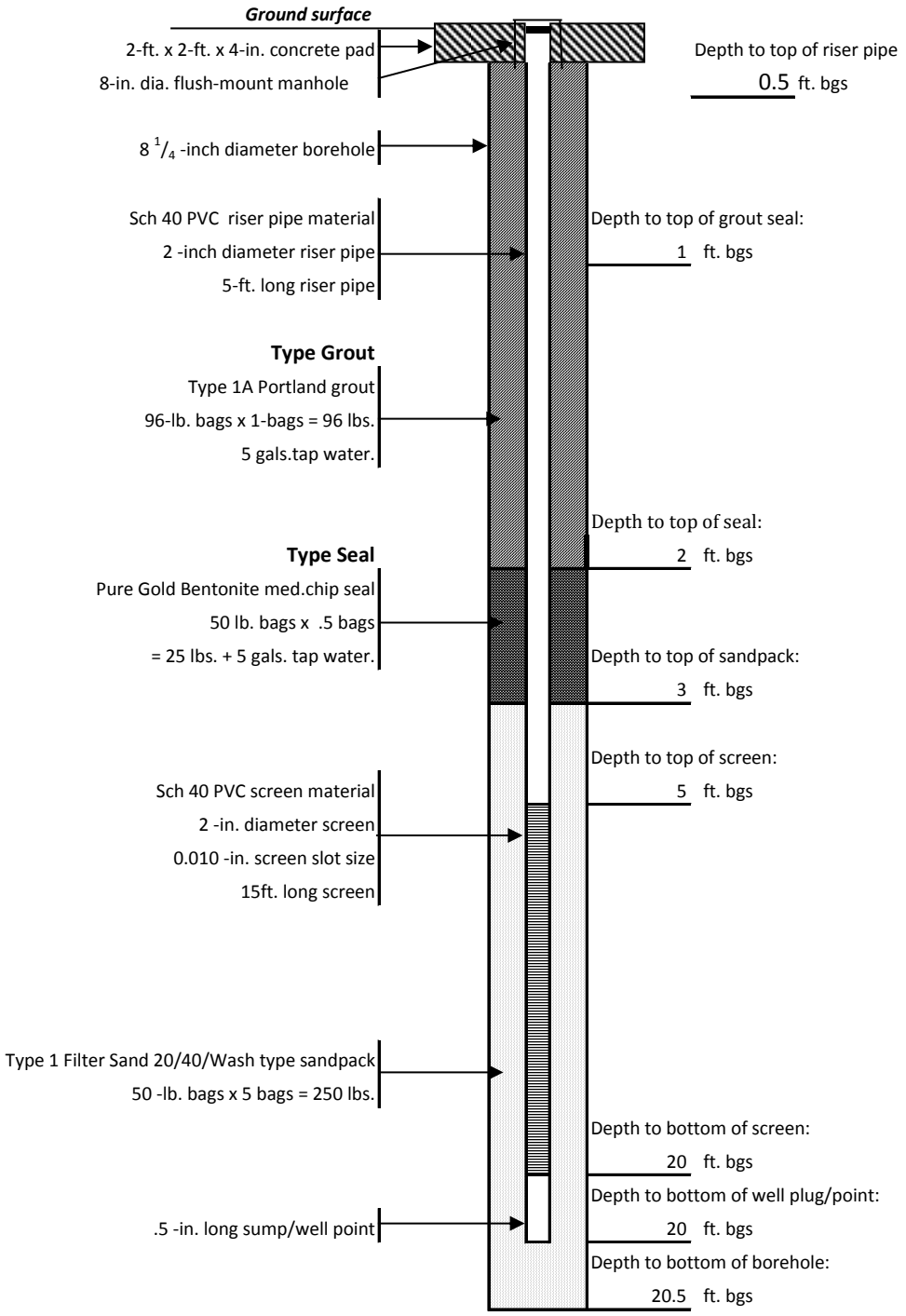
NOT TO SCALE

Monitor Well Log - Flush Mount

	Constr. Start	Constr. Finish
Time	1245	1445
Date	9/30/13	9/30/13

Well ID:	MW-15
Project No:	226278.00
Geol./Eng:	JDK
Driller:	Geo Lab

Temp Well



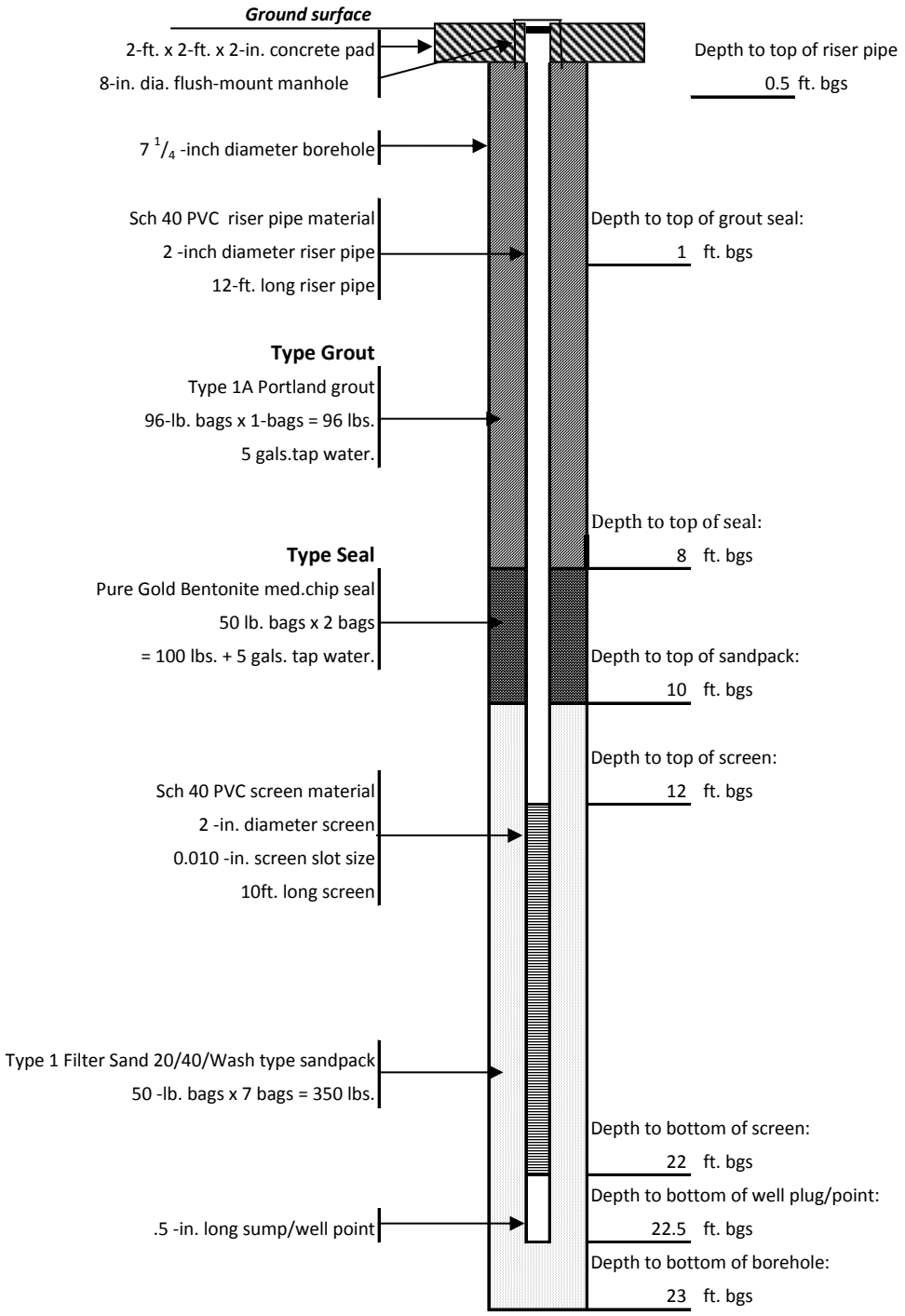
NOT TO SCALE

Monitor Well Log - Flush Mount

	Constr. Start	Constr. Finish
Time	1330	1450
Date	11/12/13	11/12/13

Well ID:	MW-17
Project No:	226278.00
Geol./Eng:	JDK
Driller:	Geo Lab

Temp Well



NOT TO SCALE

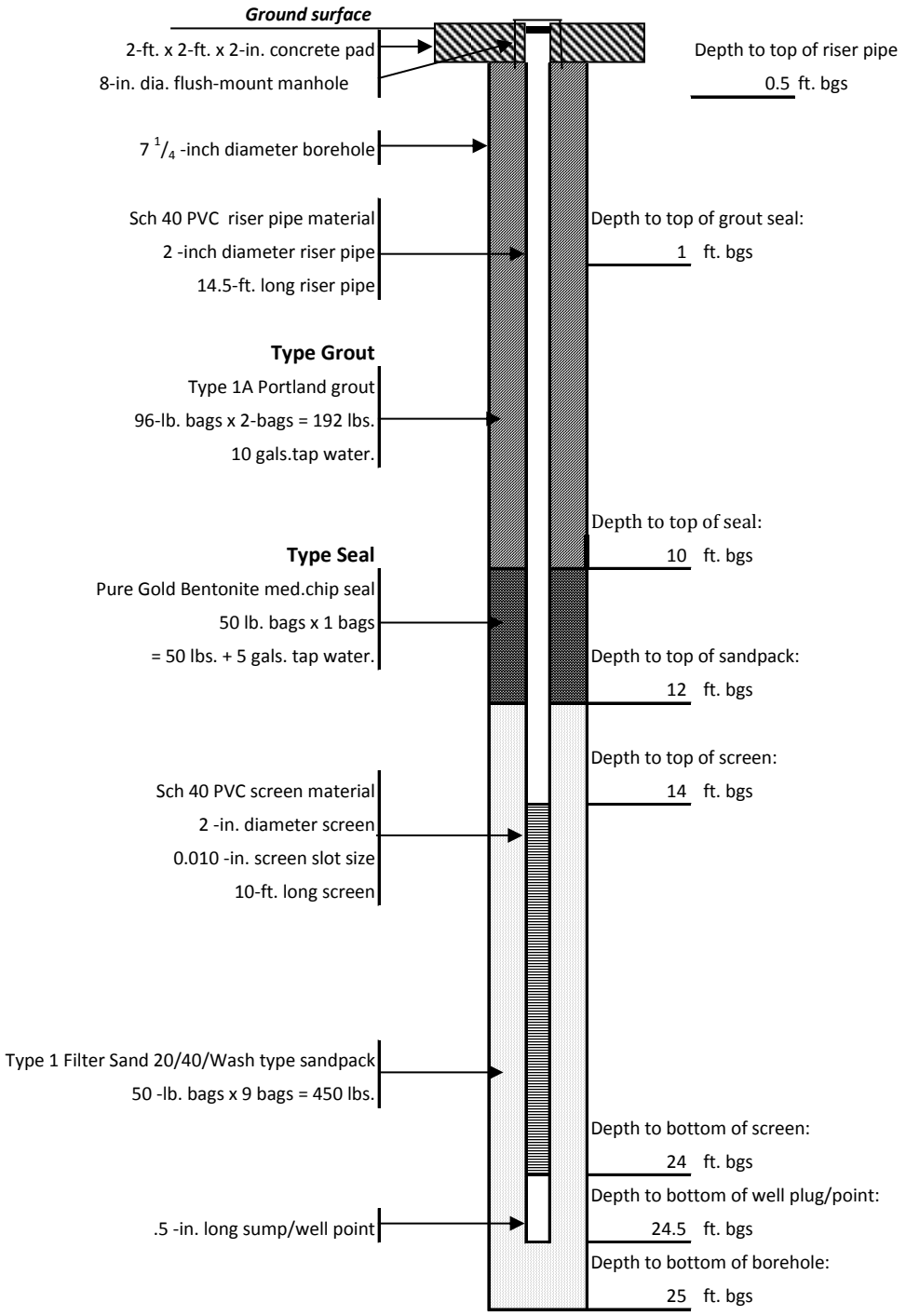
Monitor Well Log - Flush Mount

WOODARD &CURRAN

	Constr. Start	Constr. Finish
Time	1010	1120
Date	11/12/13	11/12/13

Well ID:	MW-18
Project No:	226278.00
Geol./Eng:	JDK / RMS
Driller:	Geo Lab

Temp Well



NOT TO SCALE

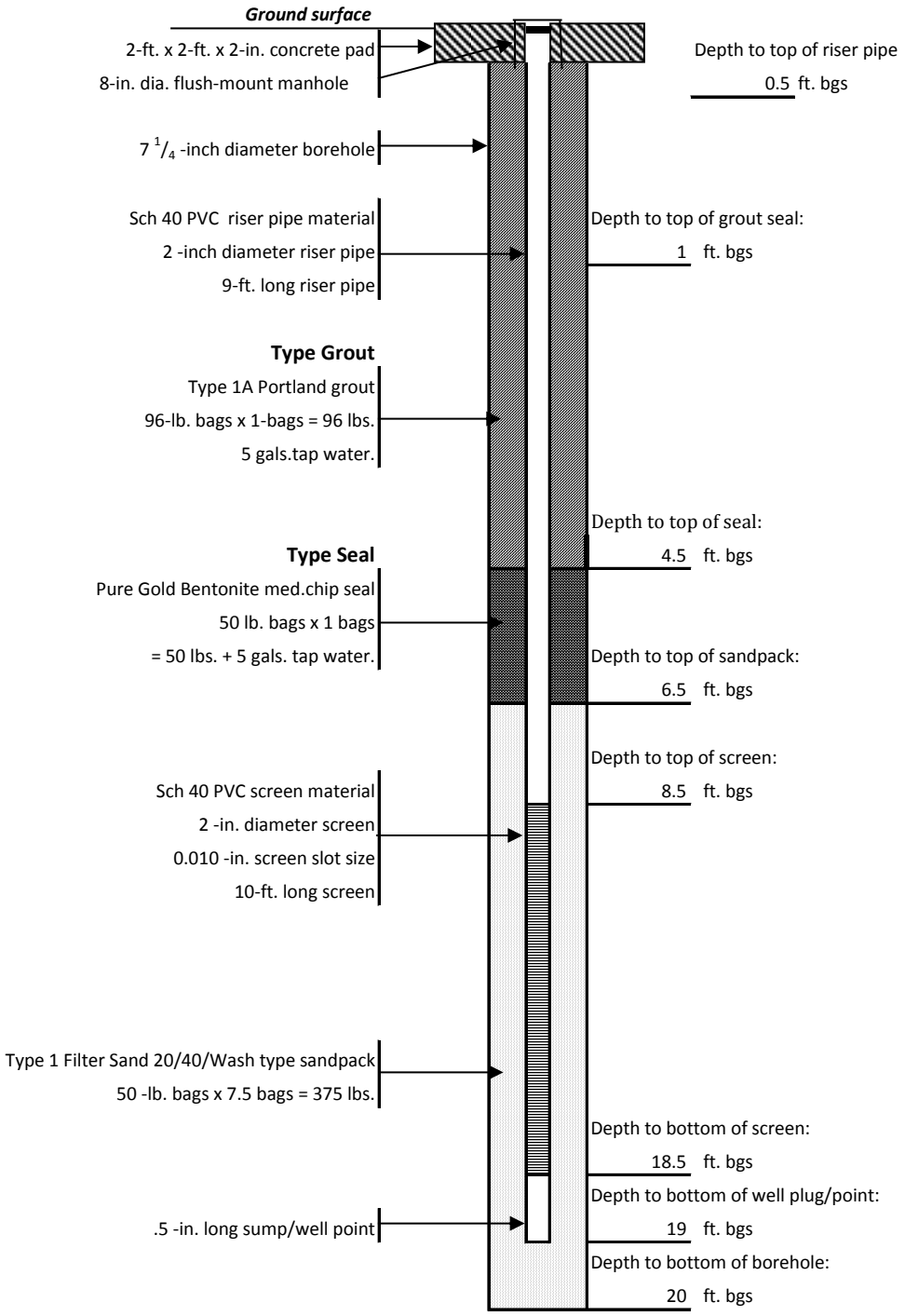
Monitor Well Log - Flush Mount

WOODARD &CURRAN

	Constr. Start	Constr. Finish
Time	820	1000
Date	11/12/13	11/12/13

Well ID:	MW-19
Project No:	226278.00
Geol./Eng:	JDK / RMS
Driller:	Geo Lab

Temp Well



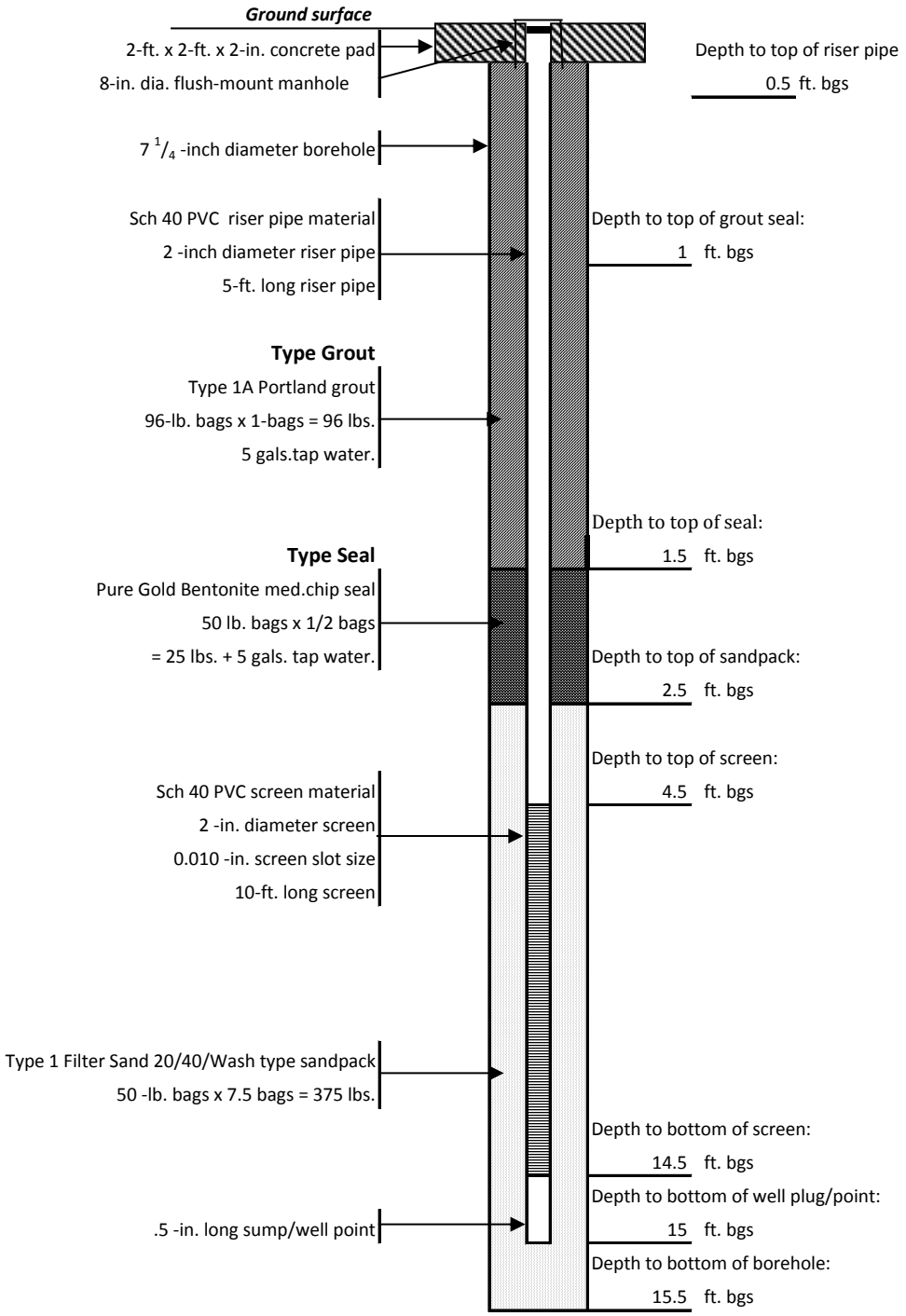
NOT TO SCALE

Monitor Well Log - Flush Mount

	Constr. Start	Constr. Finish
Time	1440	1600
Date	11/11/13	11/11/13

Well ID:	MW-20
Project No:	226278.00
Geol./Eng:	JDK
Driller:	Geo Lab

Temp Well



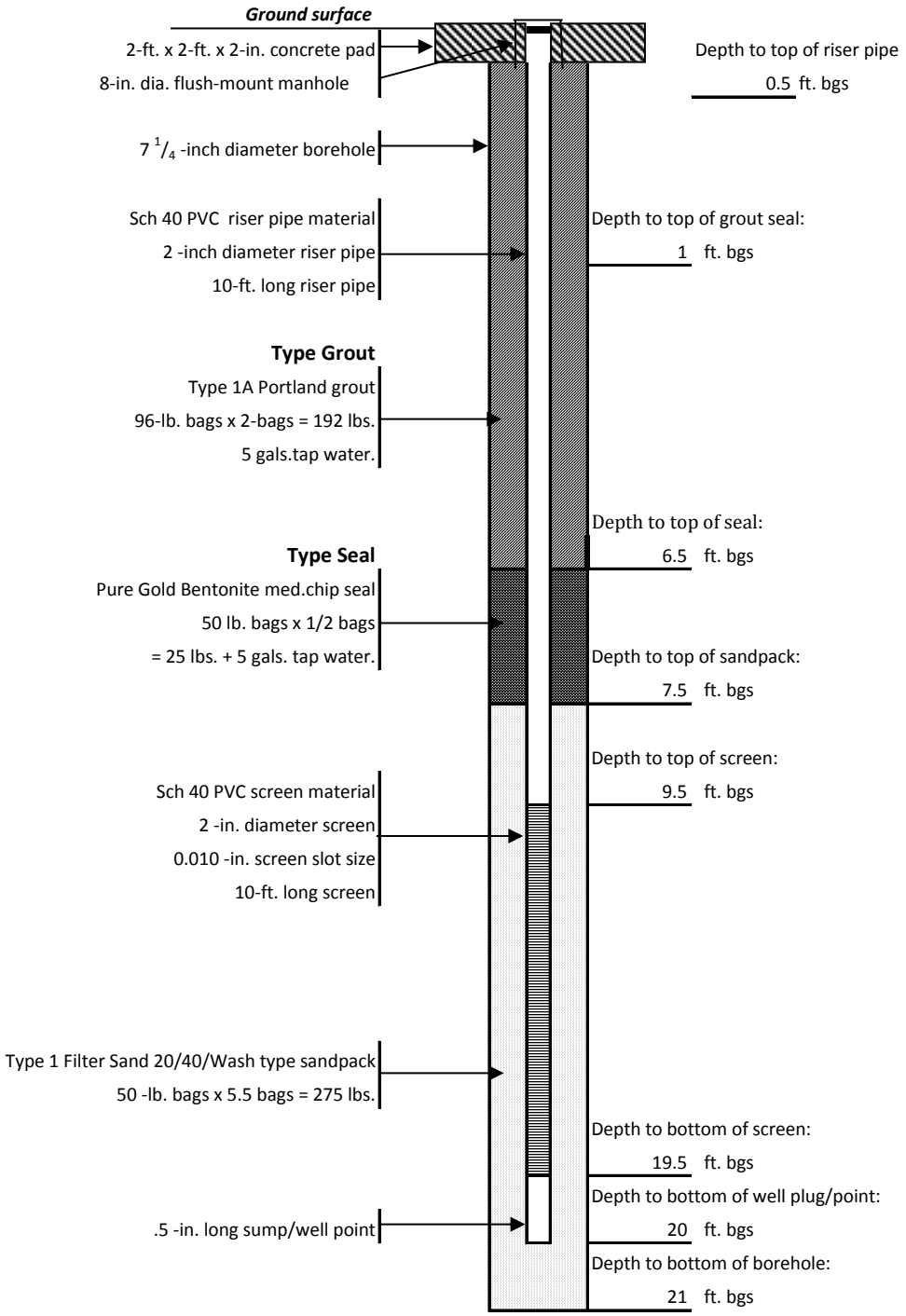
NOT TO SCALE

Monitor Well Log - Flush Mount

	Constr. Start	Constr. Finish
Time	1230	1420
Date	11/11/13	11/11/13

Well ID:	MW-21
Project No:	226278.00
Geol./Eng:	JDK
Driller:	Geo Lab

Temp Well



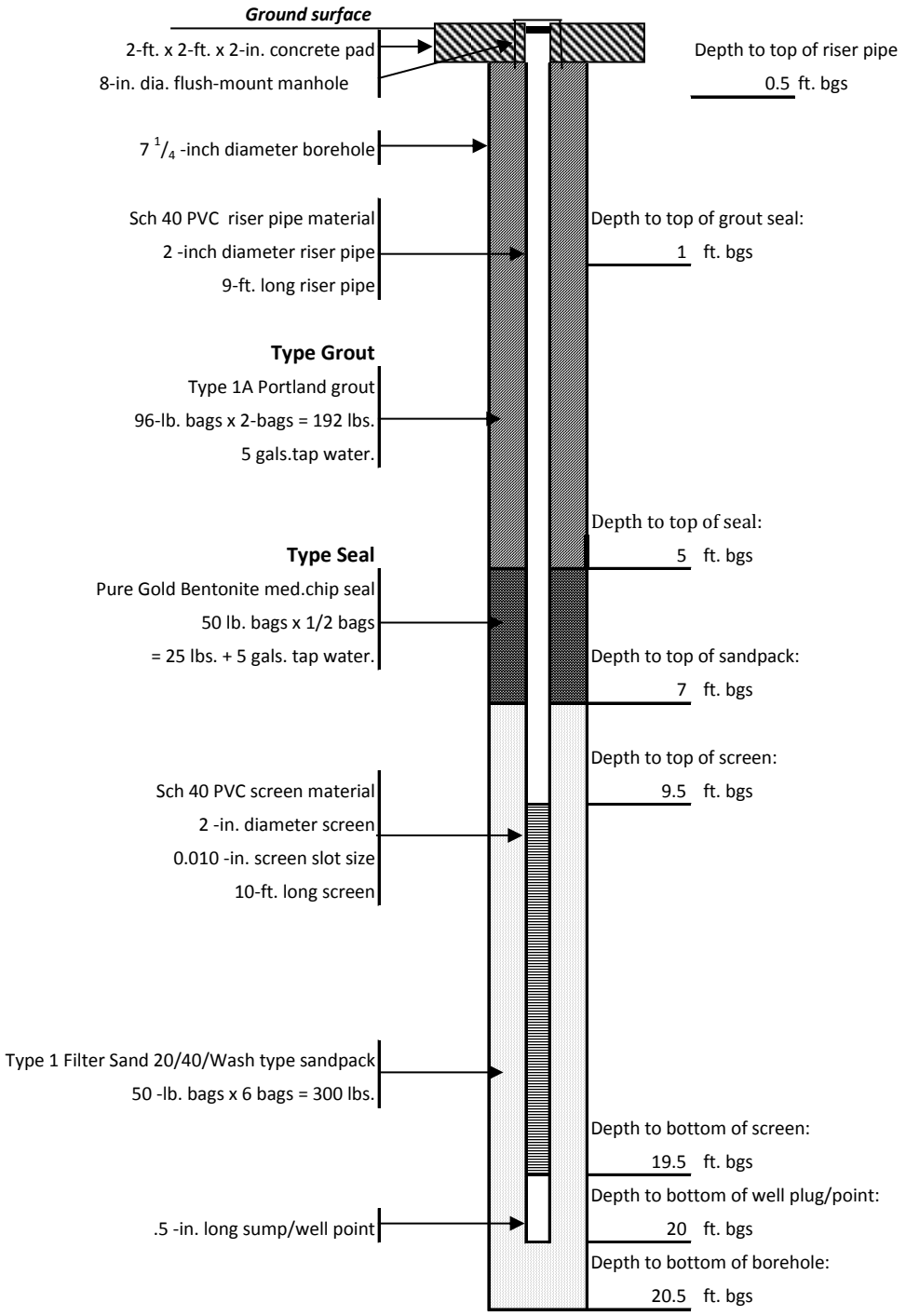
NOT TO SCALE

Monitor Well Log - Flush Mount

	Constr. Start	Constr. Finish
Time	800	930
Date	12/13/13	12/13/13

Well ID:	MW-25
Project No:	226278.00
Geol./Eng:	JDK
Driller:	Geo Lab

Temp Well



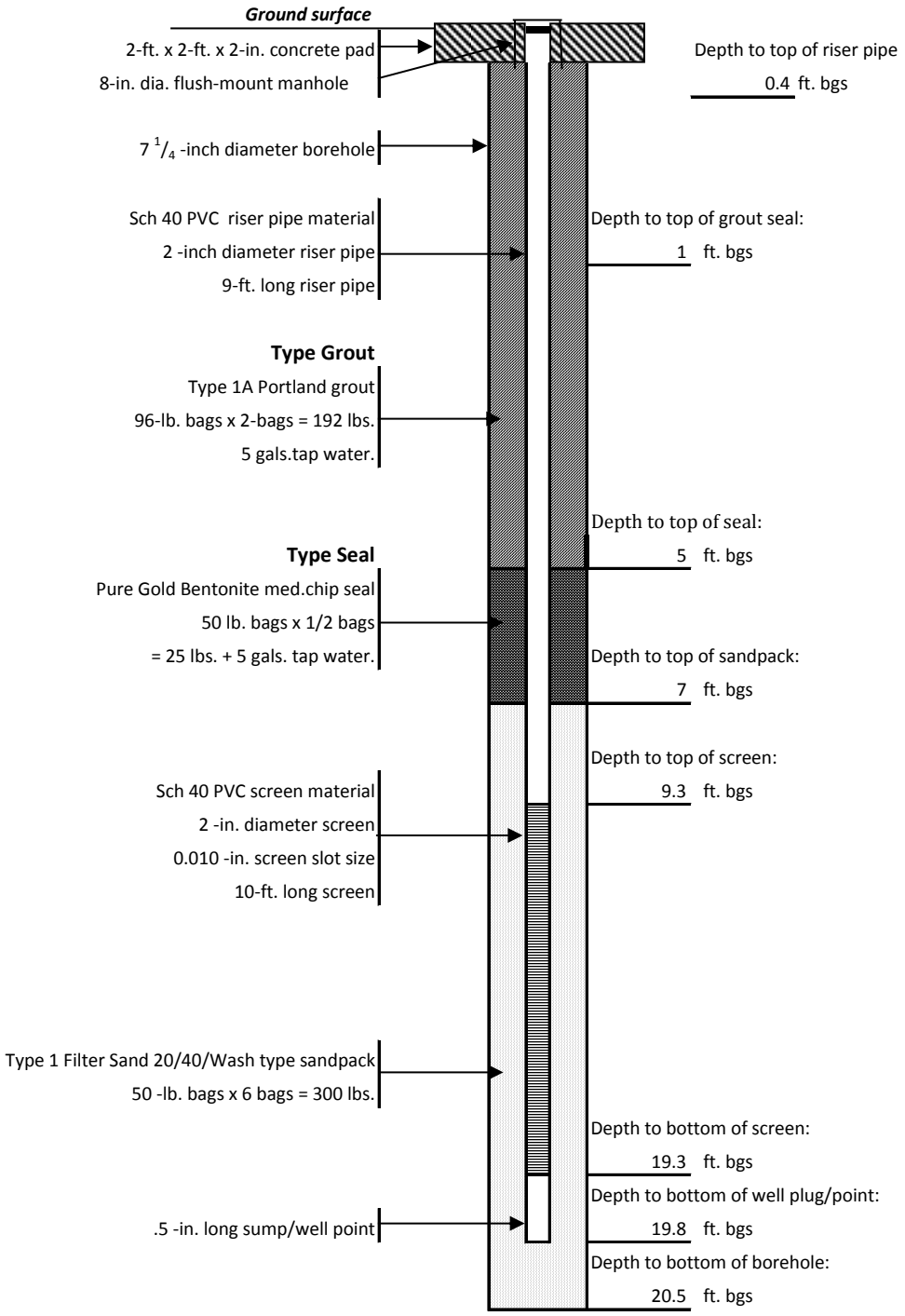
NOT TO SCALE

Monitor Well Log - Flush Mount

	Constr. Start	Constr. Finish
Time	935	1050
Date	12/13/13	12/13/13

Well ID:	MW-26
Project No:	226278.00
Geol./Eng:	JDK
Driller:	Geo Lab

Temp Well



NOT TO SCALE

Appendix C
Groundwater Sampling Logs

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-12		Date:	9/17/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	63.15	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	10.60	(ft)	Weather:	Cloudy, Warm
Water Column Height (CH):	52.55	(ft) = TD - GW	Additional Notes:	
Well Volume:	8.57	(gals)		
Total Liters Purged:	2.63	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
8:25	125	11.3	22.13	1.27	1.05	5.99	55.3	n/a	C
8:30	75	12	21.66	1.27	0.73	5.99	40.8	n/a	C
8:35	75	12.01	21.87	1.27	0.69	6	40.4	n/a	C
8:40	75	12.02	21.91	1.27	0.69	9.29	40.4	n/a	C
8:45	75	12.2	21.83	1.26	0.64	6.38	42.1	n/a	C
8:50	75	12.04	21.73	1.24	0.59	6.58	42.7	n/a	C
8:55	75	12.03	21.64	1.21	0.54	6.62	46	n/a	C
9:00	75	12.03	21.63	1.21	0.54	6.62	46	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a QED micro purge bladder pump, YSI 556 MPS water checker and a Heron water level tape.

Had to slow pump down it was pulling well down faster than recharge.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 9:02

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #: 226278.00
Facility Name: Rathon
Facility Location: Chamblee Ga.

Well ID: EW-D9
Well Diameter: 4" (inches)
Total Depth (TD): 15.59 (ft)
Depth to Groundwater (GW): 10.60 (ft)
Water Column Height (CH): 4.99 (ft) = TD - GW
Well Volume: 3.26 (gals)
Total Liters Purged: 8.25 (Lt)

Date: 9/17/2013
Measuring Pt: No
Personnel: JDK
Weather: Cloudy, Warm
Additional Notes:

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
10:42	150	10.22	20.38	0.074	4.93	7.23	189.2	n/a	SC
10:47	150	10.21	21.11	0.067	4.28	6.32	250.5	n/a	AC
10:52	150	10.22	21.15	0.065	4.15	9.43	254.5	n/a	AC
10:57	150	10.21	21.03	0.064	4.12	11.74	245.2	n/a	AC
11:02	150	10.22	21.01	0.063	4.11	11.99	236.2	n/a	AC
11:07	150	10.22	20.8	0.063	4.14	11.98	222.1	n/a	AC
11:12	150	10.22	20.82	0.062	4.09	11.54	219.1	n/a	C
11:17	150	10.21	21.2	0.063	4.14	9.14	201.1	n/a	C
11:22	150	10.22	20.87	0.063	4.22	9.64	209.1	n/a	C
11:27	150	10.22	20.84	0.062	4.11	9.44	199.1	n/a	C
11:32	150	10.22	20.83	0.062	4.14	9.52	197.1	n/a	C
11:37	150	10.22	20.81	0.062	4.14	9.49	193.2	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 9:02

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-6		Date:	9/17/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	28.90	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	11.75	(ft)	Weather:	Cloudy, Hot
Water Column Height (CH):	17.15	(ft) = TD - GW	Additional Notes:	
Well Volume:	11.20	(gals)		
Total Liters Purged:	6.30	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
12:28	140	11.92	20.23	0.18	2.9	6.56	226.1	n/a	C
12:33	140	11.96	20.97	0.185	2.71	6.11	204.1	n/a	C
12:38	140	11.98	20.94	0.185	2.64	5.8	193.1	n/a	C
12:43	140	11.96	20.88	0.183	2.71	5.57	190.1	n/a	C
12:48	140	11.94	20.92	0.18	2.87	5.33	193.1	n/a	C
12:53	140	11.93	21.09	0.178	2.96	5.16	198.1	n/a	C
12:58	140	11.93	21.17	0.175	3.03	5	204.1	n/a	C
13:03	140	11.92	21.32	0.173	3.15	4.8	208.1	n/a	C
13:08	140	11.92	21.3	0.17	3.18	4.76	215.1	n/a	C
13:13	140	11.91	21.36	0.167	3.34	4.66	203.1	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

DUPGW-1 for VOC's/SVOC's and Pesticides pulled at this well

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 13:15

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
4-40 Ml VOA's	HCL	VOC	n	n/a	n/a	DUPGW-1
4-1Lt Amber	Neat	SVOC	n	n/a	n/a	DUPGW-1
4-1Lt Amber	Neat	Pesticides	n	n/a	n/a	DUPGW-1

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-D7		Date:	9/17/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	30.35	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	8.10	(ft)	Weather:	P Cloudy, Hot
Water Column Height (CH):	22.25	(ft) = TD - GW	Additional Notes:	
Well Volume:	14.53	(gals)		
Total Liters Purged:	9.00	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
14:17	150	8.35	22.02	0.153	0.95	5.77	267.2	n/a	C
14:22	150	8.36	22.64	0.155	0.72	6.63	306.1	n/a	C
14:27	150	8.36	22.67	0.155	0.68	6.83	267.2	n/a	C
14:32	150	8.35	22.46	0.155	0.65	6.75	245.1	n/a	C
14:37	150	8.37	22.19	0.155	0.62	8.52	235.1	n/a	C
14:42	150	8.38	22.23	0.156	0.58	8.37	233.5	n/a	C
14:47	150	8.38	22.3	0.159	0.61	8.01	233.5	n/a	C
14:52	150	8.38	21.89	0.161	0.61	7.92	245.5	n/a	C
14:57	150	8.38	22	0.164	0.62	7.43	252.4	n/a	C
15:02	150	8.39	22.13	0.166	0.59	6.36	255.1	n/a	C
15:07	150	8.37	22.15	0.167	0.54	6.18	257.1	n/a	C
15:12	150	8.36	22.01	0.169	0.57	6.25	260.9	n/a	C
15:17	150	8.37	22.08	0.169	0.62	6.28	265.4	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 15:19

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-D3		Date:	9/18/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	29.70	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	6.30	(ft)	Weather:	P Cloudy, Cool
Water Column Height (CH):	23.4	(ft) = TD - GW	Additional Notes:	
Well Volume:	14.53	(gals)		
Total Liters Purged:	3.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
8:52	150	6.51	21.63	0.066	36.7	4.05	110.8	n/a	SC
8:57	150	6.51	22.07	0.062	35.2	4.08	116.8	n/a	SC
9:02	150	6.51	22.3	0.062	33.8	4.39	103.8	n/a	SC
9:07	150	6.52	22.37	0.062	33.1	4.44	100.3	n/a	SC
9:12	150	6.52	22	0.062	31.8	4.46	100	n/a	SC
9:17	150	6.52	21.98	0.061	31.6	4.39	105	n/a	SC

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 9:19

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-D5		Date:	9/18/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	24.00	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	12.60	(ft)	Weather:	P Cloudy, Cool
Water Column Height (CH):	11.4	(ft) = TD - GW	Additional Notes:	
Well Volume:	7.44	(gals)		
Total Liters Purged:	3.50	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
9:53	140	13.08	19.38	0.836	17.7	6.3	20.7	n/a	SC
9:58	140	13.08	19.34	0.899	14.6	6.24	18.5	n/a	SC
10:03	140	13.08	19.09	0.901	11.8	6.14	19	n/a	SC
10:08	140	13.09	18.98	0.899	10.4	6.14	18.3	n/a	AC
10:13	140	13.09	18.98	0.899	10.3	6.17	15.3	n/a	C
10:18	140	13.09	18.98	0.898	10.2	6.18	15	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 10:19

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-5		Date:	9/18/2013
Well Diameter:	2"	(inches)	Measuring Pt:	No
Total Depth (TD):	29.70	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	15.64	(ft)	Weather:	Cloudy, Warm
Water Column Height (CH):	14.06	(ft) = TD - GW	Additional Notes:	
Well Volume:	2.29	(gals)		
Total Liters Purged:	3.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
10:48	150	16.42	19.22	0.615	7.2	6.38	212.9	n/a	C
10:53	150	16.44	19.23	0.613	7.5	6.19	-180.1	n/a	C
10:58	150	16.48	19.15	0.605	6.8	6.1	-165.7	n/a	C
11:03	150	16.49	19.11	0.595	7.3	6.1	-153.7	n/a	C
11:08	150	16.52	19.12	0.596	7.1	6.14	-155.8	n/a	C
11:13	150	16.54	19.12	0.602	7.3	6.18	-155.5	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 11:15

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-A1		Date:	9/18/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	28.90	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	12.60	(ft)	Weather:	Cloudy, Warm
Water Column Height (CH):	16.3	(ft) = TD - GW	Additional Notes:	
Well Volume:	10.64	(gals)		
Total Liters Purged:	5.60	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
14:00	140	12.81	20.95	0.425	21	6.11	-45.4	n/a	CL
14:05	140	12.82	21.09	0.422	13.6	5.88	-26.1	n/a	SC
14:10	140	12.85	20.9	0.42	11.4	5.72	-20.5	n/a	SC
14:15	140	12.86	20.75	0.418	9.9	5.71	-18.8	n/a	AC
14:20	140	12.85	20.67	0.417	9.4	5.76	-22	n/a	AC
14:25	140	12.85	20.73	0.417	8.7	5.83	-26.1	n/a	AC
14:30	140	12.84	20.77	0.416	8.2	5.9	-28.7	n/a	AC
14:35	140	12.84	20.74	0.415	8.2	5.93	-31.6	n/a	AC
14:40	140	12.84	20.77	0.415	8.4	5.93	-31.4	n/a	AC

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 14:42

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-A1		Date:	9/18/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	28.90	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	12.60	(ft)	Weather:	Cloudy, Warm
Water Column Height (CH):	16.3	(ft) = TD - GW	Additional Notes:	
Well Volume:	10.64	(gals)		
Total Liters Purged:	5.60	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
14:00	140	12.81	20.95	0.425	21	6.11	-45.4	n/a	CL
14:05	140	12.82	21.09	0.422	13.6	5.88	-26.1	n/a	SC
14:10	140	12.85	20.9	0.42	11.4	5.72	-20.5	n/a	SC
14:15	140	12.86	20.75	0.418	9.9	5.71	-18.8	n/a	AC
14:20	140	12.85	20.67	0.417	9.4	5.76	-22	n/a	AC
14:25	140	12.85	20.73	0.417	8.7	5.83	-26.1	n/a	AC
14:30	140	12.84	20.77	0.416	8.2	5.9	-28.7	n/a	AC
14:35	140	12.84	20.74	0.415	8.2	5.93	-31.6	n/a	AC
14:40	140	12.84	20.77	0.415	8.4	5.93	-31.4	n/a	AC

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 14:42

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN
2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-B4		Date:	9/19/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	26.80	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	11.72	(ft)	Weather:	Clear, Cool
Water Column Height (CH):	15.08	(ft) = TD - GW	Additional Notes:	
Well Volume:	9.84	(gals)		
Total Liters Purged:	5.60	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
7:26	140	11.82	20.39	0.426	13.6	5.5	55	n/a	C
7:31	140	11.82	20.53	0.426	20.1	5.54	48.6	n/a	C
7:36	140	11.82	20.66	0.419	13.8	5.48	43.7	n/a	C
7:41	140	11.83	20.7	0.409	11.7	5.41	49.3	n/a	C
7:46	140	11.82	20.75.	0.4	10.1	5.22	56.3	n/a	C
7:51	140	11.83	20.74	0.394	9.4	5.27	61.2	n/a	C
7:56	140	11.84	20.79	0.388	9.1	5.23	64.7	n/a	C
8:01	140	11.83	20.83	0.381	9	5.2	69.2	n/a	C
8:06	140	11.84	20.87	0.378	9	5.2	71.2	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 8:08

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
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Ph: 770.622.6766
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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-A3		Date:	9/19/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	24.70	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	13.25	(ft)	Weather:	Clear, Warn
Water Column Height (CH):	11.45	(ft) = TD - GW	Additional Notes:	
Well Volume:	18.93	(gals)		
Total Liters Purged:	9.60	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
10:12	160	13.6	20.41	0.791	107.3	6.12	-51.1	n/a	SC
10:17	160	13.6	20.65	0.806	9.1	6	-50.1	n/a	SC
10:22	160	13.61	20.98	0.815	10.2	6.09	-60.8	n/a	SC
10:27	160	13.61	20.98	0.822	8.6	6.16	-66.2	n/a	SC
10:32	160	13.61	21.05	0.826	8	6.17	-68.1	n/a	SC
10:37	160	13.62	21.06	0.829	8.4	6.22	-74.2	n/a	SC
10:42	160	13.61	21.14	0.833	7.8	6.23	-78.4	n/a	SC
10:47	160	13.62	21.21	0.841	8.1	6.26	-79.4	n/a	SC
10:52	160	13.61	21.32	0.9	8	6.29	-82.1	n/a	SC
10:57	160	13.62	21.33	0.955	8.1	6.26	-80.9	n/a	SC
11:02	160	13.61	21.39	1.006	7.4	6.3	-83.9	n/a	SC
11:07	160	13.61	21.49	1.028	7.2	6.3	-85.9	n/a	SC
11:12	160	13.62	21.49	1.045	7.3	6.32	-86.9	n/a	SC

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 11:14

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Duluth, GA 30097
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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-B3		Date:	9/19/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	25.30	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	12.10	(ft)	Weather:	Clear, Hot
Water Column Height (CH):	13.2	(ft) = TD - GW	Additional Notes:	
Well Volume:	8.62	(gals)		
Total Liters Purged:	8.80	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
12:05	160	12.2	24.82	0.922	11.7	6.78	-133.9	n/a	C
12:10	160	12.35	24.55	0.921	10.7	6.7	-125.3	n/a	C
12:15	160	12.34	24.01	0.918	7.4	6.49	-120.2	n/a	C
12:20	160	12.35	23.91	0.917	6.5	6.45	-121	n/a	C
12:25	160	12.34	23.79	0.917	5.7	6.45	-123.4	n/a	C
12:30	160	12.38	23.83	0.917	5.2	6.52	-135.2	n/a	C
12:35	160	12.39	23.81	0.918	6.3	6.58	-140.9	n/a	C
12:40	160	12.41	23.79	0.915	7.3	6.62	-139.3	n/a	C
12:45	160	12.41	23.78	0.915	8.2	6.66	-126.2	n/a	C
12:50	160	12.42	23.83	0.916	5.8	6.68	-119.2	n/a	C
12:55	160	12.42	23.88	0.912	5.5	6.73	-129.2	n/a	C
13:00	160	12.42	23.86	0.915	5.7	6.71	-131.2	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 13:03

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN
2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-B5		Date:	9/19/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	28.35	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	13.20	(ft)	Weather:	Clear, Hot
Water Column Height (CH):	15.15	(ft) = TD - GW	Additional Notes:	
Well Volume:	9.89	(gals)		
Total Liters Purged:	4.50	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
13:38	150	13.35	23.87	0.706	13.3	5.57	17.1	n/a	C
13:43	150	13.34	25.77	0.699	14.3	5.533	56.7	n/a	C
13:48	150	13.35	23.39	0.695	13.6	5.16	72.5	n/a	C
13:53	150	13.35	23.15	0.692	11.6	5.1	81.2	n/a	C
13:58	150	13.36	23.04	0.691	11	5.11	83.3	n/a	C
14:03	150	13.35	22.96	0.69	11	5.12	83.3	n/a	C
14:08	150	13.36	22.94	0.69	10.6	5.15	80.7	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 14:10

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-A4		Date:	9/20/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	29.15	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	13.80	(ft)	Weather:	Clear, Warm
Water Column Height (CH):	15.35	(ft) = TD - GW	Additional Notes:	
Well Volume:	10.02	(gals)		
Total Liters Purged:	4.80	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
6:55	160	14.22	18.63	0.253	25.8	4.9	77.1	n/a	SC
7:00	160	14.15	18.61	0.254	17.6	4.89	82	n/a	SC
7:05	160	14.14	18.58	0.256	15.7	4.91	79.8	n/a	SC
7:10	160	14.14	18.56	0.257	14.4	4.93	77	n/a	SC
7:15	160	14.14	18.56	0.259	14	4.98	72.8	n/a	SC
7:20	160	14.15	18.56	0.259	14	4.99	72.2	n/a	SC
7:25	160	14.15	18.57	0.26	14.3	5	70.1	n/a	SC

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 7:27

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #: 226278.00
Facility Name: Rathon
Facility Location: Chamblee Ga.

Well ID: EW-B6
Well Diameter: 4" (inches)
Total Depth (TD): 28.73 (ft)
Depth to Groundwater (GW): 14.20 (ft)
Water Column Height (CH): 14.53 (ft) = TD - GW
Well Volume: 9.49 (gals)
Total Liters Purged: 7.70 (Lt)

Date: 9/20/2013
Measuring Pt: No
Personnel: JDK
Weather: Clear, Warm
Additional Notes:

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
8:22	140	14.52	20.89	0.523	9.1	7.26	-129.4	n/a	C
8:27	140	14.52	21.02	0.525	6.9	7.34	-157.4	n/a	C
8:32	140	14.52	21.13	0.525	7.1	7.36	-108.2	n/a	C
8:37	140	14.52	21.24	0.524	7.5	7.38	-89.1	n/a	C
8:42	140	14.52	21.38	0.524	10.6	7.38	-125.3	n/a	C
8:47	140	14.52	21.06	0.527	10.2	7.28	-125.7	n/a	C
8:52	140	14.52	21.15	0.526	12	7.18	-126.7	n/a	C
8:57	140	14.52	20.94	0.524	14.9	7.19	-117.7	n/a	C
9:02	140	14.51	20.96	0.523	15.3	7.2	-118.2	n/a	C
9:07	140	14.51	21.03	0.523	13	7.23	-124.1	n/a	C
9:12	140	14.51	21.08	0.523	13	7.25	-128.1	n/a	C
9:17	140	14.51	21.17	0.522	12.9	7.24	-126.1	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 9:20

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-A6		Date:	9/20/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	29.25	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	15.22	(ft)	Weather:	Clear, Hot
Water Column Height (CH):	14.03	(ft) = TD - GW	Additional Notes:	
Well Volume:	9.16	(gals)		
Total Liters Purged:	4.50	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
10:07	150	16.83	19.96	0.829	9.6	5.29	132.5	n/a	CL
10:12	150	16.84	19.71	0.829	8.8	5.16	155.2	n/a	CL
10:17	150	16.85	19.63	0.831	9.9	5.1	169.2	n/a	CL
10:22	150	16.86	19.51	0.831	10.7	5.08	179.1	n/a	CL
10:27	150	16.88	19.65	0.831	10.6	5.11	179.1	n/a	CL
10:32	150	16.89	19.77	0.83	10.5	5.16	176	n/a	SC
10:37	150	16.89	19.76	0.829	10.4	5.15	177	n/a	SC

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 10:39

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
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F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-7		Date:	9/20/2013
Well Diameter:	4"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	23.68	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	10.26	(ft)	Weather:	Clear, Hot
Water Column Height (CH):	13.42	(ft) = TD - GW	Additional Notes:	
Well Volume:	8.76	(gals)		
Total Liters Purged:	6.00	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
11:18	150	10.56	20.44	0.46	20.9	4.47	177	n/a	C
11:23	150	10.59	20.31	0.459	19.1	4.29	199.5	n/a	C
11:28	150	10.61	20.23	0.457	18	4.18	212.5	n/a	C
11:33	150	10.62	20.18	0.455	19	4.17	217.5	n/a	C
11:38	150	10.64	20.17	0.454	19.5	4.21	219.5	n/a	C
11:43	150	10.66	20.13	0.452	21	4.24	219.4	n/a	C
11:48	150	10.68	20.06	0.451	21.3	4.24	222.1	n/a	C
11:53	150	10.69	20.05	0.452	21.2	4.26	223.1	n/a	C
11:58	150	10.7	19.99	0.451	21.2	4.27	223.1	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 12:00

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-A7		Date:	9/20/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	29.80	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	13.90	(ft)	Weather:	Clear, Hot
Water Column Height (CH):	15.9	(ft) = TD - GW	Additional Notes:	
Well Volume:	10.38	(gals)		
Total Liters Purged:	3.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
13:01	150	14.2	21.5	0.394	9	5.49	105.5	n/a	C
13:06	150	14.22	21.56	0.394	7.5	5.37	113.1	n/a	C
13:11	150	14.23	21.18	0.394	6.1	5.28	115.4	n/a	C
13:16	150	14.24	21.13	0.394	5.6	5.24	114	n/a	C
13:21	150	14.24	21.14	0.391	5.2	5.23	111.4	n/a	C
13:26	150	14.24	21.23	0.391	5.1	5.24	106.1	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 13:28

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-A8		Date:	9/20/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	29.15	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	13.70	(ft)	Weather:	Clear, Hot
Water Column Height (CH):	15.45	(ft) = TD - GW	Additional Notes:	
Well Volume:	10.09	(gals)		
Total Liters Purged:	6.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
14:42	150	13.92	21.46	0.775	17.4	6.24	-29	n/a	C
14:47	150	13.93	21.24	0.771	17.9	6.23	-13.6	n/a	C
14:52	150	13.94	20.84	0.769	17.7	6.26	-10.3	n/a	C
14:57	150	13.94	20.62	0.765	15.5	6.31	-9.1	n/a	C
15:02	150	13.95	20.54	0.756	14	6.37	-10.7	n/a	C
15:.07	150	13.96	20.6	0.754	13.8	6.4	-11.4	n/a	C
15:12	150	13.97	20.51	0.742	13.5	6.42	-12.1	n/a	C
15:17	150	13.98	20.5	0.739	13	6.43	-12.8	n/a	C
15:22	150	13.99	20.56	0.731	12.5	6.44	-14.7	n/a	C
15:27	150	13.98	20.51	0.732	12.6	6.44	-14.7	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

DUPGW-2 for VOC's was pulled at this well.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 15:30

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
4-40 Ml VOA's	HCL	VOC	n	n/a	n/a	DUPGW-2

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-A9		Date:	9/23/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	29.40	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	13.68	(ft)	Weather:	Clear, Cool
Water Column Height (CH):	15.72	(ft) = TD - GW	Additional Notes:	
Well Volume:	10.27	(gals)		
Total Liters Purged:	6.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
7:52	150	13.22	17.65	0.337	19.3	5.88	135.7	n/a	VC
7:57	150	13.23	17.79	0.335	13.1	5.76	131.1	n/a	VC
8:02	150	13.22	17.91	0.335	13.5	5.76	124.1	n/a	CL
8:07	150	13.22	17.97	0.334	14.4	5.74	119.8	n/a	CL
8:12	150	13.24	17.98	0.332	15.8	5.72	115.4	n/a	CL
8:17	150	13.22	17.99	0.33	15.1	5.71	111.4	n/a	SC
8:22	150	13.21	18.04	0.33	14.5	5.72	106.2	n/a	SC
8:27	150	13.22	18.04	0.331	14.5	5.7	103.7	n/a	SC
8:32	150	13.22	18.05	0.332	14.3	5.69	100.3	n/a	SC
8:37	150	13.22	18.03	0.333	14.1	5.69	100.1	n/a	SC

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 8:40

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-11		Date:	9/23/2013
Well Diameter:	4"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	28.96	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	11.25	(ft)	Weather:	Clear, Warm
Water Column Height (CH):	17.71	(ft) = TD - GW	Additional Notes:	
Well Volume:	11.56	(gals)		
Total Liters Purged:	3.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
9:11	150	11.48	18.47	0.258	33.1	4.55	101.7	n/a	C
9:16	150	11.48	18.62	0.257	32.5	4.68	102.3	n/a	C
9:21	150	11.49	18.66	0.259	33.4	4.68	111.8	n/a	C
9:26	150	11.49	18.63	0.258	32.6	4.63	120.9	n/a	C
9:31	150	11.49	18.63	0.258	32.4	4.63	126.1	n/a	C
9:36	150	11.5	18.62	0.258	32.1	4.63	130.8	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 9:38

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-9		Date:	9/23/2013
Well Diameter:	4"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	15.59	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	10.60	(ft)	Weather:	Clear, Warm
Water Column Height (CH):	4.99	(ft) = TD - GW	Additional Notes:	
Well Volume:	2.81	(gals)		
Total Liters Purged:	6.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
10:05	150	10.8	18.89	0.511	9.7	5.14	68.1	n/a	C
10:10	150	10.81	19.9	0.511	9.8	5.14	62.5	n/a	C
10:15	150	10.8	19.92	0.514	10.2	5.22	48	n/a	C
10:20	150	10.81	19.97	0.517	10.8	5.22	17.6	n/a	C
10:25	150	10.82	19.11	0.516	9.2	5.27	-0.9	n/a	C
10:30	150	10.84	19.46	0.514	8.2	5.27	-2.1	n/a	C
10:35	150	10.86	20.13	0.514	7.6	5.35	-24.6	n/a	C
10:40	150	10.85	20.49	0.513	7.4	5.35	-29.1	n/a	C
10:45	150	10.86	20.72	0.512	7.1	5.32	-17.2	n/a	C
10:50	150	10.87	20.74	0.513	7.2	5.34	-10.2	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 10:52

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-A10		Date:	9/24/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	24.63	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	12.45	(ft)	Weather:	Cloudy, Rain
Water Column Height (CH):	12.18	(ft) = TD - GW	Additional Notes:	
Well Volume:	7.95	(gals)		
Total Liters Purged:	12.40	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
7:01	150	12.56	19.18	0.452	60.5	4.84	9.3	n/a	CL
7:06	150	12.58	19.37	0.451	52.1	4.83	45.5	n/a	CL
7:11	150	12.59	19.39	0.454	45.8	4.84	65.7	n/a	CL
7:16	150	12.6	19.44	0.454	41.5	4.82	80.5	n/a	CL
7:21	150	12.61	19.46	0.454	40.4	4.83	82.8	n/a	CL
7:26	150	12.62	19.62	0.447	38.6	4.89	85.1	n/a	CL
7:31	150	12.64	19.66	0.434	36.6	4.86	89.7	n/a	CL
7:36	150	12.64	19.66	0.424	35.5	4.87	90.6	n/a	SC
7:41	150	12.65	19.51	0.421	34.7	4.79	96.6	n/a	SC
7:46	150	12.64	19.39	0.422	33.8	4.77	98.1	n/a	SC
7:51	150	12.65	19.24	0.427	33.1	4.71	101.7	n/a	SC
7:56	150	12.64	19.17	0.429	32.4	4.73	101.5	n/a	SC
8:01	150	12.64	19.24	0.439	31.4	4.8	99	n/a	SC
8:06	150	12.65	19.3	0.446	30.4	4.85	97.8	n/a	SC
8:11	150	12.64	19.31	0.452	29.9	4.88	97	n/a	SC
8:16	150	12.64	19.29	0.45	30	4.83	99.6	n/a	SC
8:21	150	12.65	19.32	0.451	30.1	4.86	98.9	n/a	SC

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 8:22

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	PZ-2		Date:	9/24/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	19.00	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	11.60	(ft)	Weather:	Cloudy, Rain
Water Column Height (CH):	7.4	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.21	(gals)		
Total Liters Purged:	3.50	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
8:47	140	11.92	19.37	0.578	10.3	5.57	18.8	n/a	SC
8:52	140	11.98	19.4	0.511	9	5.55	25.9	n/a	SC
8:57	140	12	19.49	0.486	8.3	5.5	36.1	n/a	SC
9:02	140	12.05	19.55	0.48	8.1	5.5	38.1	n/a	AC
9:07	140	12.1	19.54	0.484	7.9	5.5	38	n/a	AC
9:12	140	12.14	19.56	0.483	7.8	5.49	35.1	n/a	AC

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 9:14

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	Pesticides	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	PZ-1		Date:	9/24/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	19.30	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	11.35	(ft)	Weather:	Cloudy, Warm
Water Column Height (CH):	7.95	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.30	(gals)		
Total Liters Purged:	5.25	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
10:04	150	11.61	19.09	1.248	7.3	6.26	-97.3	n/a	CL
10:09	150	11.71	19.22	1.236	6.4	6.36	-108.7	n/a	C
10:14	150	11.74	19.3	1.225	5.6	6.38	-116.3	n/a	C
10:19	150	11.76	19.32	1.202	5.3	6.38	-123.6	n/a	C
10:24	150	11.78	19.3	1.157	5.2	6.38	-125.2	n/a	C
10:29	150	11.78	19.33	1.126	5.3	6.38	-130.6	n/a	C
10:34	150	11.79	19.34	1.079	5	6.38	-129.7	n/a	C
10:39	150	11.78	19.35	1.075	5.1	6.39	-131.7	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 10:40

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-1		Date:	9/24/2013
Well Diameter:	4"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	17.10	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	9.96	(ft)	Weather:	Cloudy, Warm
Water Column Height (CH):	7.14	(ft) = TD - GW	Additional Notes:	
Well Volume:	4.66	(gals)		
Total Liters Purged:	9.60	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
12:00	160	6.65	20.04	0.993	6.1	6.22	-97.3	n/a	C
12:05	160	6.68	20.21	0.956	5.2	6.22	-102.3	n/a	C
12:10	160	6.67	20.28	0.933	4.7	6.18	-106.3	n/a	C
12:15	160	6.68	20.36	0.916	4.6	6.16	-108.3	n/a	C
12:20	160	6.68	20.39	0.899	4.6	6.15	-109.3	n/a	C
12:25	160	6.69	20.47	0.883	4.5	6.13	-108.1	n/a	C
12:30	160	6.68	20.51	0.852	4.2	6.1	-107.1	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 12:32

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-24		Date:	9/24/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	15.10	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	11.35	(ft)	Weather:	Cloudy, Warm
Water Column Height (CH):	3.75	(ft) = TD - GW	Additional Notes:	
Well Volume:	0.61	(gals)		
Total Liters Purged:	4.20	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
13:01	140	9.6	21.94	0.755	9	4.69	115.6	n/a	CL
13:06	140	9.6	22.23	0.752	7.2	4.77	152.2	n/a	C
13:11	140	9.6	22.42	0.744	6.4	4.7	168	n/a	C
13:16	140	9.61	22.51	0.732	5.7	4.67	178.1	n/a	C
13:21	140	9.61	22.46	0.709	5.7	4.64	185.1	n/a	C
13:26	140	9.63	22.47	0.687	5.4	4.62	190.1	n/a	C
13:31	140	9.64	22.51	0.665	5.5	4.63	191.5	n/a	C
13:36	140	9.65	22.49	0.648	5.4	4.62	193.1	n/a	C
13:41	140	9.66	22.56	0.636	5.3	4.63	193.8	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 13:43

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-12		Date:	9/24/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	15.10	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	11.35	(ft)	Weather:	Cloudy, Warm
Water Column Height (CH):	3.75	(ft) = TD - GW	Additional Notes:	
Well Volume:	0.61	(gals)		
Total Liters Purged:	6.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
14:13	150	11.95	20.38	0.418	30.4	5.72	111.7	n/a	CL
14:18	150	12	21.39	0.496	24.5	5.71	108.2	n/a	C
14:23	150	12.05	21.34	0.598	16.5	6.02	87.3	n/a	C
14:28	150	12.1	21.18	0.676	13	6.09	77.4	n/a	C
14:33	150	12.12	21.07	0.72	12.4	6.12	70	n/a	C
14:38	150	12.14	21.01	0.721	12.4	6.15	62.7	n/a	C
14:43	150	12.14	20.97	0.7	16.4	6.13	58.4	n/a	C
14:48	150	12.15	21.03	0.693	22.8	6.18	54.3	n/a	C
14:53	150	12.16	21.1	0.695	23.1	6.19	50.2	n/a	C
14:58	150	12.18	21.14	0.696	22.7	6.2	49.1	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 15:00

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-23		Date:	9/24/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	14.72	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	8.68	(ft)	Weather:	Cloudy, Warm
Water Column Height (CH):	6.04	(ft) = TD - GW	Additional Notes:	
Well Volume:	0.98	(gals)		
Total Liters Purged:	2.80	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
15:27	140	8.91	23.51	0.608	6.3	5.14	96.3	n/a	C
15:32	140	8.94	23.53	0.6	5.8	4.97	119.3	n/a	C
15:37	140	8.96	23.61	0.598	6	4.91	131.7	n/a	C
15:42	140	8.96	23.71	0.597	5.7	4.9	142	n/a	C
15:47	140	8.98	23.72	0.599	5.7	4.88	144.2	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 15:50

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-C8		Date:	9/25/2013
Well Diameter:	4"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	28.46	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	8.10	(ft)	Weather:	Cloudy, Rain
Water Column Height (CH):	20.36	(ft) = TD - GW	Additional Notes:	
Well Volume:	13.29	(gals)		
Total Liters Purged:	8.00	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
7:46	160	8	21.2	2.353	8.1	6.59	-118.6	n/a	C
7:51	160	8.02	21.23	2.357	10.9	6.59	-123.9	n/a	C
7:56	160	8.04	21.3	2.354	8.7	6.56	-130.2	n/a	C
8:01	160	8.04	21.3	2.351	6.9	6.53	-132.1	n/a	C
8:06	160	8.05	21.35	2.349	5.5	6.52	-135.6	n/a	C
8:11	160	8.05	21.25	2.345	5	6.5	-136.6	n/a	C
8:16	160	8.07	21.28	2.342	4.4	6.49	-139.2	n/a	C
8:21	160	8.1	21.29	2.337	4.4	6.49	-138.2	n/a	C
8:26	160	8.11	21.19	2.332	3.6	6.48	-140.1	n/a	C
8:31	160	8.11	21.19	2.329	3.3	6.48	-141	n/a	C
8:36	160	8.12	21.25	2.327	3.2	6.48	-145.1	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 8:38

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-20		Date:	9/25/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	19.21	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	7.58	(ft)	Weather:	Cloudy, Rain
Water Column Height (CH):	11.63	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.90	(gals)		
Total Liters Purged:	4.50	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
9:04	150	7.68	22.87	0.247	6.2	5.79	31.2	n/a	C
9:09	150	7.69	23.06	0.248	5.5	5.7	30.9	n/a	C
9:14	150	7.7	23.11	0.253	4.9	5.65	27.4	n/a	C
9:19	150	7.72	23.11	0.26	4.5	5.6	24.3	n/a	C
9:24	150	7.75	23.08	0.265	4.2	5.58	22.1	n/a	C
9:29	150	7.76	22.86	0.27	4.6	5.53	22.1	n/a	C
9:34	150	7.77	22.84	0.271	4.2	5.49	23.5	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

DUPGW-3 for VOC's as pulled at this well

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 9:36

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
4-40 Ml VOA's	HCL	VOC	n	n/a	n/a	DUPGW-3

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-22		Date:	9/25/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	21.00	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	11.15	(ft)	Weather:	Cloudy, Rain
Water Column Height (CH):	9.85	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.61	(gals)		
Total Liters Purged:	3.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
10:05	150	11.45	21.74	3.207	4.4	6.53	-108.1	n/a	C
10:10	150	11.51	21.96	3.268	3.4	6.59	-121.4	n/a	C
10:15	150	11.53	22.09	3.244	3.2	6.59	-130.1	n/a	C
10:20	150	11.54	22.23	3.19	3.3	6.59	-136.6	n/a	C
10:25	150	11.55	22.21	3.135	3.6	6.58	-139.6	n/a	C
10:30	150	11.56	22.21	3.105	3.6	6.57	-141.1	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 10:32

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-21		Date:	9/25/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	21.00	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	6.10	(ft)	Weather:	Cloudy, Rain
Water Column Height (CH):	14.9	(ft) = TD - GW	Additional Notes:	
Well Volume:	2.43	(gals)		
Total Liters Purged:	3.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
10:56	150	6.1	22.9	0.423	6.6	5.67	82.8	n/a	C
11:01	150	6.11	23.09	0.411	5.2	5.6	93.8	n/a	C
11:06	150	6.13	23.3	0.408	4.5	5.57	99.2	n/a	C
11:11	150	6.15	23.3	0.408	4.2	5.57	101	n/a	C
11:16	150	6.18	23.38	0.41	4.2	5.55	101.2	n/a	C
11:21	150	6.19	23.45	0.411	4.1	5.54	100.2	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 11:23

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN
2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-13		Date:	9/25/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	14.74	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	3.70	(ft)	Weather:	Cloudy, Rain
Water Column Height (CH):	11.04	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.80	(gals)		
Total Liters Purged:	5.60	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
12:46	140	4.34	20.69	0.454	5.8	6.71	-97.2	n/a	C
12:51	140	4.36	20.99	0.459	3.9	6.86	-130.1	n/a	C
12:56	140	4.37	21.01	0.466	3.6	6.85	-131.1	n/a	C
13:01	140	4.38	21.1	0.476	3.5	6.61	-121.1	n/a	C
13:06	140	4.38	.21.09	0.458	3.5	6.78	-127.8	n/a	C
13:11	140	4.39	21.1	0.5	3.1	6.75	-122.4	n/a	C
13:16	140	4.39	21.05	0.506	2.9	6.71	-120.1	n/a	C
13:21	140	4.38	21.05	0.51	2.8	6.67	-115.1	n/a	C
13:26	140	4.38	21.01	0.512	2.8	6.65	-112.1	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 13:29

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber's	Neat	SVOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-2		Date:	9/26/2013
Well Diameter:	4"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	26.29	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	11.85	(ft)	Weather:	Clear, Cool
Water Column Height (CH):	15.25	(ft) = TD - GW	Additional Notes:	
Well Volume:	9.96	(gals)		
Total Liters Purged:	8.40	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
7:15	140	12	19.47	0.141	35.2	5.08	182.1	n/a	C
7:20	140	12.01	19.7	0.138	37.8	5.03	186.2	n/a	C
7:25	140	12.01	19.85	0.137	37.1	4.98	190.2	n/a	C
7:30	140	12.01	19.83	0.136	36.2	4.96	195	n/a	C
7:35	140	12.01	19.84	0.136	35.3	4.93	199	n/a	C
7:40	140	12.03	19.86	0.135	34.3	4.9	199.9	n/a	C
7:45	140	12.04	19.86	0.135	33.6	4.89	202.2	n/a	C
7:50	140	12.05	19.89	0.135	32.7	4.87	203.9	n/a	C
7:55	140	12.05	19.88	0.135	31.8	4.87	203.9	n/a	C
8:00	140	12.05	19.95	0.134	30.8	4.85	205.1	n/a	C
8:05	140	12.05	19.95	0.134	30.5	4.85	205.7	n/a	C
8:10	140	12.06	19.93	0.133	30.1	4.83	206.1	n/a	C
8:15	140	12.06	19.98	0.133	30	4.83	205.1	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 8:17

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-C7		Date:	9/26/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	28.05	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	3.85	(ft)	Weather:	Cloudy, Rain
Water Column Height (CH):	24.2	(ft) = TD - GW	Additional Notes:	
Well Volume:	15.80	(gals)		
Total Liters Purged:	4.50	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
8:45	150	3.61	19.61	0.605	20.3	6.57	100.8	n/a	C
8:50	150	3.64	19.87	0.608	19.7	6.72	80.1	n/a	C
8:55	150	3.74	19.98	0.61	19	6.74	66.1	n/a	C
9:00	150	3.78	19.51	0.611	18.8	6.74	52.1	n/a	C
9:05	150	3.79	20.29	0.612	18.2	6.76	40	n/a	C
9:10	150	3.82	20.27	0.612	18.1	6.75	37.4	n/a	C
9:15	150	3.88	20.22	0.612	18.1	6.72	33.2	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 9:18

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	EW-C6		Date:	9/26/2013
Well Diameter:	4"	(inches)	Measuring Pt:	No
Total Depth (TD):	13.68	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	5.82	(ft)	Weather:	Clear, Cool
Water Column Height (CH):	7.86	(ft) = TD - GW	Additional Notes:	
Well Volume:	5.13	(gals)		
Total Liters Purged:	10.50	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
10:26	150	5.54	22.8	0.719	8.6	6.42	-141.8	n/a	C
10:31	150	5.56	22.41	0.706	8.1	6.33	-141.8	n/a	C
10:36	150	5.58	22.18	0.68	7.8	6.32	-144.8	n/a	C
10:41	150	5.6	22.15	0.65	7.8	6.34	-136.8	n/a	C
10:46	150	5.61	22.24	0.628	8.5	6.41	-119.9	n/a	C
10:51	150	5.61	22.31	0.604	8.2	6.41	-105.1	n/a	C
10:56	150	5.62	22.41	0.58	8.4	6.4	-96.1	n/a	C
11:01	150	5.62	22.49	0.55	11.4	6.4	-87.4	n/a	C
11:06	150	5.63	22.6	0.516	13.3	6.4	-77.3	n/a	C
11:11	150	5.63	22.65	0.485	17.9	6.38	-66.1	n/a	C
11:16	150	5.64	22.66	0.445	25.2	6.35	-54.1	n/a	C
11:21	150	5.64	22.48	0.413	30.1	6.3	-45.1	n/a	C
11:26	150	5.64	22.48	0.403	28.7	6.34	-44.1	n/a	C
11:31	150	5.64	22.33	0.401	28.9	6.26	-37.3	n/a	C
11:36	150	5.64	22.36	0.403	28.9	6.34	-40.1	n/a	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 11:38

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-19		Date:	9/26/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	16.81	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	8.85	(ft)	Weather:	Clear, Warm
Water Column Height (CH):	7.96	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.30	(gals)		
Total Liters Purged:	7.00	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
12:02	140	8.25	24.7	0.435	11.4	5.55	-35.2	n/a	C
12:07	140	8.28	24.86	0.434	9.1	5.23	-13.9	n/a	C
12:12	140	8.29	24.75	0.435	7.2	5.35	-18	n/a	C
12:17	140	8.29	24.64	0.434	6.8	5.37	-16.1	n/a	C
12:22	140	8.28	24.56	0.437	6.3	5.31	-12	n/a	C
12:27	140	8.28	24.57	0.435	7.1	5.39	-14.7	n/a	C
12:32	140	8.29	24.48	0.434	8.4	5.36	-12.7	n/a	C
12:37	140	8.29	24.56	0.432	7.4	5.42	-14.2	n/a	C
12:42	140	8.29	24.56	0.433	5.8	5.45	-14.9	n/a	C
12:47	140	8.29	24.55	0.433	6.1	5.42	-12.9	n/a	C
12:52	140	8.29	24.72	0.433	6.1	4.56	-13.4	n/a	C

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 12:54

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-17		Date:	9/26/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	19.18	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	9.80	(ft)	Weather:	Clear, Warm
Water Column Height (CH):	9.38	(ft) = TD - GW	Additional Notes:	
Well Volume:	15.29	(gals)		
Total Liters Purged:	4.20	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
13:20	140	9.15	24.38	0.646	10.1	6.13	-85.1	n/a	C
13:25	140	9.16	25.28	0.651	8.4	5.62	-67.2	n/a	C
13:30	140	9.17	25.25	0.65	5.4	5.66	-78.1	n/a	C
13:35	140	9.2	25.43	0.647	4.8	5.8	-95.2	n/a	C
13:40	140	9.22	25.42	0.641	4.9	5.84	-99.1	n/a	C
13:45	140	9.24	25.24	0.637	4.4	5.82	-103.5	n/a	C
13:50	140	9.26	25.08	0.632	4.4	5.81	-102.9	n/a	C
:									

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 13:53

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN
2055 Sugarloaf Circle, Suite 175
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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-11		Date:	9/26/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	13.73	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	8.15	(ft)	Weather:	Clear, Hot
Water Column Height (CH):	5.58	(ft) = TD - GW	Additional Notes:	
Well Volume:	0.90	(gals)		
Total Liters Purged:	8.70	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
14:14	140	7.95	25.82	0.436	10.1	5.99	-106.3	n/a	C
14:19	140	8.16	26.19	0.268	8.2	5.52	-69.3	n/a	C
14:24	140	8.2	26.19	0.201	9.4	5.75	-67.8	n/a	C
14:29	140	8.4	26.33	0.174	14.4	6.03	-69.3	n/a	C
14:34	110	8.45	26.49	0.169	15.9	5.96	-70	n/a	C
14:39	110	8.5	26.16	0.176	14.9	5.84	-63.7	n/a	C
14:44	110	8.55	26.02	0.178	12.8	5.82	-77.3	n/a	C
14:49	110	8.6	26.24	0.183	10.9	5.92	-90.3	n/a	C
14:54	110	8.65	26.5	0.192	9.3	6.01	-105.3	n/a	C
14:59	110	8.7	26.38	0.2	8.2	5.91	-102.3	n/a	C
15:04	110	8.75	26.38	0.206	7.4	5.77	-98.3	n/a	C
15:09	110	8.82	26.27	0.218	6.9	5.68	-99.3	n/a	C
15:14	110	8.84	26.47	0.223	6.4	5.87	-111.5	n/a	C
15:19	110	8.9	26.44	0.231	6.1	5.81	-111.7	n/a	C
15:24	110	8.95	26.59	0.238	6.3	5.82	-112.7	n/a	C
15:29	110	8.98	26.6	0.236	6.2	5.82	-113.1	n/a	C

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Pump slow as it will go and still pulling well down.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 15:31

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber's	Neat	SVOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-14		Date:	9/27/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	17.08	(ft)	Personnel:	JDK / RMS
Depth to Groundwater (GW):	6.60	(ft)	Weather:	Clear, Cool
Water Column Height (CH):	10.48	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.71	(gals)		
Total Liters Purged:	7.00	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
7:04	140	6.95	22.76	0.659	27.6	5.57	-56.4	n/a	C
7:09	140	6.99	22.86	0.663	21.1	5.53	-63.2	n/a	C
7:14	140	7.04	22.89	0.661	17.7	5.49	-65.1	n/a	C
7:19	140	7.08	22.92	0.653	14.9	5.45	-65.7	n/a	C
7:24	140	7.1	22.89	0.655	13.7	5.4	-66.3	n/a	C
7:29	140	7.14	22.85	0.654	13.1	5.36	-66.5	n/a	C
7:34	140	7.15	22.82	0.652	11.7	5.34	-67.4	n/a	C
7:39	140	7.17	22.73	0.648	11.1	5.31	-67.4	n/a	C
7:44	140	7.19	22.78	0.645	10.2	5.3	-68	n/a	C
7:49	140	7.2	22.76	0.643	9.7	5.29	-69.1	n/a	C
7:54	140	7.19	22.78	0.641	10	5.28	-69	n/a	C

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Pump slow as it will go and still pulling well down.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 7:56

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-10		Date:	9/27/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	13.41	(ft)	Personnel:	JDK / RMS
Depth to Groundwater (GW):	5.60	(ft)	Weather:	Clear, Warm
Water Column Height (CH):	7.81	(ft) = TD - GW	Additional Notes:	
Well Volume:	12.73	(gals)		
Total Liters Purged:	4.50	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
8:34	150	5.15	23.21	0.203	12.6	5.52	-110.1	n/a	C
8:39	150	5.15	23.33	0.197	12.1	5.47	-106.1	n/a	C
8:44	150	5.17	23.43	0.194	11.4	5.45	-104.6	n/a	C
8:49	150	5.19	23.53	0.191	11	5.42	-101.6	n/a	C
8:54	150	5.21	23.71	0.188	10.5	5.42	-97.7	n/a	C
8:59	150	5.25	23.68	0.186	11	5.39	-97	n/a	C
9:04	150	5.23	23.76	0.184	11	5.33	-94	n/a	C

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 9:06

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-6		Date:	9/27/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	11.76	(ft)	Personnel:	JDK / RMS
Depth to Groundwater (GW):	6.55	(ft)	Weather:	Clear, Warm
Water Column Height (CH):	5.21	(ft) = TD - GW	Additional Notes:	
Well Volume:	0.85	(gals)		
Total Liters Purged:	7.50	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
9:42	150	6.63	25.62	0.122	18	5.79	-12.4	n/a	C
9:47	150	6.79	25.66	0.132	18.4	5.43	-39.3	n/a	C
9:52	150	6.9	25.62	0.144	16.5	5.41	-68.8	n/a	C
9:57	150	7.01	25.48	0.153	14.8	5.3	-79	n/a	C
10:02	150	7.05	25.34	0.159	14.4	5.31	-86.8	n/a	C
10:07	150	7.1	25.27	0.168	13.7	5.35	-92.3	n/a	C
10:12	150	7.11	25.29	0.177	11	5.38	-102.2	n/a	C
10:17	150	7.11	25.29	0.183	11.9	5.4	-105.1	n/a	C
10:22	150	7.12	25.47	0.189	10.2	5.45	-111.1	n/a	C
10:27	150	7.13	25.5	0.192	10.5	5.48	-115.6	n/a	C
10:32	150	7.12	25.41	0.193	10	5.44	-113.7	n/a	C

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 10:34

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	BH-7		Date:	9/27/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	13.74	(ft)	Personnel:	JDK / RMS
Depth to Groundwater (GW):	8.90	(ft)	Weather:	Clear,Hot
Water Column Height (CH):	4.84	(ft) = TD - GW	Additional Notes:	
Well Volume:	0.79	(gals)		
Total Liters Purged:	9.00	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
11:28	150	8.89	23.45	0.726	11.4	5.4	-50.7	n/a	C
11:33	150	9.02	23.32	0.827	12	5.5	-59.9	n/a	C
11:38	150	9.11	23.18	0.869	11	5.58	-69.9	n/a	C
11:43	150	9.18	23.03	0.896	10.1	5.64	-78.9	n/a	C
11:48	150	9.25	22.99	0.898	9	5.69	-89.5	n/a	C
11:53	150	9.27	22.9	0.915	9.5	5.7	-99.8	n/a	C
11:58	150	9.31	22.85	0.927	8.6	5.71	-105.2	n/a	C
12:03	100	9.34	22.82	0.937	11.3	5.73	-111.9	n/a	C
12:08	100	9.36	22.91	0.939	9.6	5.76	-110.9	n/a	C
12:13	100	9.45	23.05	0.969	8.6	5.74	-115.8	n/a	C
12:18	100	9.45	23.03	0.985	9	5.69	-109.4	n/a	C
12:23	100	9.46	23.16	1.004	9.3	5.67	-101.3	n/a	C
12:28	100	9.47	23.16	1.006	9.9	5.65	-91.4	n/a	C
12:33	100	9.48	23.18	1.012	11.4	5.64	-84.3	n/a	C
12:38	100	9.49	23.18	1.014	11.1	5.61	-76.6	n/a	C
12:43	100	9.5	23.18	1.017	11.2	5.62	-74.1	n/a	C

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

DUPGW-4 for PCB's was pulled at this well.

Slow pump down to its slowest setting and it is still pulling the well down.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 12:45

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber,s	Neat	Pesticides	n	n/a	n/a	n/a
4-1Lt Amber,s	Neat	PCB	n	n/a	n/a	DUPGW-4

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
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F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-A		Date:	9/27/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	32.00	(ft)	Personnel:	JDK / RMS
Depth to Groundwater (GW):	11.41	(ft)	Weather:	Clear,Hot
Water Column Height (CH):	20.59	(ft) = TD - GW	Additional Notes:	
Well Volume:	3.36	(gals)		
Total Liters Purged:	5.25	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
13:15	150	11.59	22.42	0.264	13	5.87	-78.2	n/a	C
13:20	150	11.48	22.62	0.243	9.2	4.97	-22	n/a	C
13:25	150	11.47	22.2	0.234	9.9	4.91	-6.3	n/a	C
13:30	150	11.47	22	0.232	7.3	4.97	-6.3	n/a	C
13:35	150	11.47	21.83	0.232	6.3	5.06	-9.8	n/a	C
13:40	150	11.47	21.78	0.231	5.6	5.1	-10	n/a	C
13:45	150	11.47	21.78	0.23	5.4	5.2	-15.3	n/a	C
13:50	100	11.47	21.66	0.231	5.3	5.19	-15.9	n/a	C

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 13:55

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-14		Date:	10/2/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	25.70	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	15.41	(ft)	Weather:	Clear, Warm
Water Column Height (CH):	10.29	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.68	(gals)		
Total Liters Purged:	6.00	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
9:58	150	15.55	19.73	0.561	66.6	3.98	22	n/a	C
10:03	150	15.58	19.71	0.558	60.2	3.12	267	n/a	C
10:08	150	15.59	19.7	0.557	59.2	3.12	268.1	n/a	C
10:13	150	15.58	19.68	0.561	59.1	3.23	263.1	n/a	C
10:18	150	15.58	19.82	0.572	57.9	3.33	261.1	n/a	C
10:23	150	15.58	19.72	0.58	59.2	3.4	258.1	n/a	C
10:28	150	15.58	19.92	0.581	58.5	3.46	257.1	n/a	C
10:33	150	15.58	19.87	0.582	58.3	3.5	255.1	n/a	C
10:38	150	15.58	19.93	0.583	58.1	3.51	255.1	n/a	C

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 10:41

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-13		Date:	10/2/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	25.11	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	14.60	(ft)	Weather:	Clear, Warm
Water Column Height (CH):	10.51	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.71	(gals)		
Total Liters Purged:	5.60	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
8:30	160	14.72	19.38	0.371	88.7	4.23	163.7	n/a	C
8:35	160	14.75	19.26	0.313	74.3	3.59	213.9	n/a	C
8:40	160	14.73	19.22	0.302	67.2	3.41	237.9	n/a	C
8:45	160	14.76	19.21	0.301	67.4	3.44	237	n/a	C
8:50	160	14.79	19.28	0.3	67.7	3.47	237.1	n/a	C
8:55	160	14.8	19.39	0.3	68	3.53	237.1	n/a	C
9:00	160	14.81	19.48	0.304	68.1	3.59	236.1	n/a	C
9:05	160	14.82	19.45	0.302	68.4	3.61	236.9	n/a	C

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 9:08

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	DUPGW-5
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	DUPGW-5

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
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Ph: 770.622.6766
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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-15		Date:	10/2/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	25.38	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	12.96	(ft)	Weather:	Clear, Warm
Water Column Height (CH):	12.42	(ft) = TD - GW	Additional Notes:	
Well Volume:	2.02	(gals)		
Total Liters Purged:	9.60	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
11:13	160	13.25	20.49	1.979	52.6	6.04	181.2	n/a	C
11:18	160	13.25	20.44	1.978	51.9	6.05	167.2	n/a	C
11:23	160	13.25	20.6	1.964	50.9	6.05	115.7	n/a	C
11:28	160	13.26	20.68	1.975	50.1	6.08	89.5	n/a	C
11:33	160	13.25	20.67	1.958	48.3	6.11	76.1	n/a	C
11:38	160	13.28	20.7	1.934	15.2	6.12	66.4	n/a	C
11:43	160	13.28	20.67	1.918	44.5	6.12	59.4	n/a	C
11:48	160	13.29	20.59	1.901	43.8	6.13	50.8	n/a	C
11:53	160	13.28	20.63	1.88	42.8	6.12	46.6	n/a	C
11:58	160	13.28	20.63	1.852	41.9	6.11	41.2	n/a	C
13:03	160	13.28	20.75	1.825	42.6	6.11	36.1	n/a	C
12:08	160	13.28	20.7	1.824	42.5	6.12	36.3	n/a	C
12:13	160	13.29	20.71	1.819	42.6	6.11	35.9	n/a	C

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 12:15

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
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Ph: 770.622.6766
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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	Chamblee Ga.

Well ID:	MW-16		Date:	10/2/2013
Well Diameter:	2"	(inches)	Measuring Pt:	Yes
Total Depth (TD):	20.34	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	6.01	(ft)	Weather:	Clear, Warm
Water Column Height (CH):	14.33	(ft) = TD - GW	Additional Notes:	
Well Volume:	2.34	(gals)		
Total Liters Purged:	9.60	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
12:36	160	6.15	21.01	0.234	44.7	5.77	115.3	n/a	C
12:41	160	6.18	20.8	0.229	41.6	5.16	151.1	n/a	C
12:46	160	6.19	20.93	0.224	39.8	5.03	160.4	n/a	C
12:51	160	6.19	20.69	0.222	38.7	5.1	157.4	n/a	C
12:56	160	6.19	20.66	0.222	38.2	5.17	155.4	n/a	C
13:01	160	6.18	20.69	0.2185	37.1	5.2	154.2	n/a	C
13:06	160	6.18	21.15	0.194	32.7	5.18	151.2	n/a	C
13:11	160	6.19	21.12	0.16	24.36	5.06	150.2	n/a	C
13:16	160	6.19	21.06	0.141	18.8	4.97	150.9	n/a	C
13:21	160	6.19	20.93	0.134	16.3	4.95	152.2	n/a	C
13:26	160	6.18	20.87	0.134	16	4.91	155.2	n/a	C
13:31	160	6.18	20.63	0.135	16.1	4.89	159.2	n/a	C

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 13:33

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40 Ml VOA's	HCL	VOC	n	n/a	n/a	n/a
2-1Lt Amber	Neat	SVOC	n	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

2055 Sugarloaf Circle, Suite 175
Duluth, GA 30097
Ph: 770.622.6766
F: 770.396.0095

Project #:	226278.00
Facility Name:	Rathon
Facility Location:	5001 PIB Chamblee GA

Well ID:	MW-17		Date:	11/14/2013
Well Diameter:	2	(inches)	Measuring Pt:	North
Total Depth (TD):	22.31	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	9.89	(ft)	Weather:	Clear Cold
Water Column Height (CH):	12.42	(ft) = TD - GW	Additional Notes:	
Well Volume:	2.02	(gals)		
Total Liters Purged:	4.5	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
9:08	150	10.21	17.13	0.934	7.74	7.15	177.6	N/A	C
9:13	150	10.23	17.39	0.932	7.43	7.11	188.6	N/A	C
9:18	150	10.25	17.13	0.939	7.43	7.06	197.1	N/A	C
9:23	150	10.25	17.18	0.951	7.2	7.01	206.1	N/A	C
9:28	150	10.25	17.13	0.957	7.19	7.04	209.7	N/A	C
9:33	150	10.25	17.22	0.963	7.2	6.99	211.1	N/A	C
9:38	150	10.25	17.29	0.965	7.21	7.03	207.1	N/A	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 9:40

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40mL VOA	HCL	VOC's	N	n/a	n/a	n/a
2-1Lt Amber	neat	SVOC's	N	n/a	n/a	n/a
2-1Lt Amber	neat	Pesticides	N	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Ph: 770.622.6766
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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	5001 PIB Chamblee GA

Well ID:	MW-18		Date:	11/14/2013
Well Diameter:	2	(inches)	Measuring Pt:	North
Total Depth (TD):	24.40	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	11.3	(ft)	Weather:	Clear Cold
Water Column Height (CH):	13.1	(ft) = TD - GW	Additional Notes:	
Well Volume:	2.14	(gals)		
Total Liters Purged:	6.0	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
10:19	150	11.38	20.64	0.539	3.42	5.97	296.1	N/A	AC
10:24	150	11.39	21.35	0.526	2.78	5.85	286.1	N/A	AC
10:29	150	11.4	21.44	0.507	2.49	5.77	280	N/A	AC
10:34	150	11.4	21.45	0.504	2.37	5.71	277	N/A	AC
10:39	150	11.4	21.64	0.496	2.26	5.68	271.1	N/A	AC
10:44	150	11.41	22.21	0.488	2.31	5.67	266.1	N/A	C
10:49	150	11.41	22.16	0.494	2.38	5.68	262.1	N/A	C
10:54	150	11.41	21.79	0.502	2.41	5.67	261.1	N/A	C
10:59	150	11.41	21.6	0.504	2.43	5.67	258.1	N/A	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 11:02

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40mL VOA	HCL	VOC's	N	n/a	n/a	n/a
2-1Lt Amber	neat	SVOC's	N	n/a	n/a	n/a
2-1Lt Amber	neat	Pesticides	N	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN
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F: 770.396.0095

Project #: 226278.00
Facility Name: Rathon
Facility Location: 5001 PIB Chamblee GA

Well ID: MW-19
Well Diameter: 2 (inches)
Total Depth (TD): 18.95 (ft)
Depth to Groundwater (GW): 9.5 (ft)
Water Column Height (CH): 9.45 (ft) = TD - GW
Well Volume: 1.54 (gals)
Total Liters Purged: 5.25 (Lt)

Date: 11/14/2013
Measuring Pt: North
Personnel: JDK
Weather: Clear Cool
Additional Notes: Dup 1114 pulled @ this location

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
11:33	150	9.62	19.14	0.677	5.57	6.2	257.5	N/A	C
11:38	150	9.63	19.35	0.677	5.11	6.19	93	N/A	C
11:43	150	9.63	19.51	0.677	4.97	6.37	54.4	N/A	C
11:48	150	9.64	19.4	0.674	5.1	6.37	55	N/A	C
11:53	150	9.64	19.73	0.668	4.64	6.35	62.8	N/A	C
11:58	150	9.64	19.67	0.671	4.75	6.39	68.9	N/A	C
12:03	150	9.63	19.49	0.675	4.74	6.3	69.1	N/A	C
12:08	150	9.63	19.49	0.675	4.73	6.32	79.1	N/A	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Dup 1114 at this location

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 12:15

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
4-40mL VOA	HCL	VOC's	N	n/a	n/a	DUP1114
4-1Lt Amber	neat	SVOC's	N	n/a	n/a	DUP1114
4-1Lt Amber	neat	Pesticides	N	n/a	n/a	DUP1114

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	5001 PIB Chamblee GA

Well ID:	MW-20		Date:	11/14/2013
Well Diameter:	2	(inches)	Measuring Pt:	North
Total Depth (TD):	14.80	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	7.35	(ft)	Weather:	Clear Cool
Water Column Height (CH):	7.45	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.21	(gals)		
Total Liters Purged:	3.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
13:28	150	7.5	20.58	0.558	1.76	6.17	34.1	N/A	SC
13:33	150	7.55	20.43	0.562	1	6.22	-22	N/A	SC
13:38	150	7.61	20.36	0.547	1.01	6.17	-25.2	N/A	SC
13:43	150	7.62	20.41	0.543	1.03	6.14	-23	N/A	AC
13:48	150	7.63	20.54	0.548	1	6.12	-26.2	N/A	AC
13:53	150	7.64	20.58	0.549	1.04	6.12	-29.1	N/A	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 13:55

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40mL VOA	HCL	VOC's	N	n/a	n/a	n/a
2-1Lt Amber	neat	SVOC's	N	n/a	n/a	n/a
2-1Lt Amber	neat	Pesticides	N	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	5001 PIB Chamblee GA

Well ID:	MW-21		Date:	11/14/2013
Well Diameter:	2	(inches)	Measuring Pt:	North
Total Depth (TD):	19.20	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	11.57	(ft)	Weather:	Clear Warm
Water Column Height (CH):	7.63	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.24	(gals)		
Total Liters Purged:	3.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
14:21	150	11.69	20.64	0.721	1.77	5.23	97.8	N/A	C
14:26	150	11.7	20.49	0.721	1.49	5.2	100.8	N/A	C
14:31	150	11.71	20.44	0.717	1.23	5.19	107.1	N/A	C
14:36	150	11.72	20.67	0.706	1.23	5.27	108.1	N/A	C
14:41	150	11.72	20.61	0.709	1.25	5.23	114.1	N/A	C
14:46	150	11.73	20.73	0.71	1.24	5.28	113.1	N/A	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 14:50

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40mL VOA	HCL	VOC's	N	n/a	n/a	n/a
2-1Lt Amber	neat	SVOC's	N	n/a	n/a	n/a
2-1Lt Amber	neat	Pesticides	N	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #: 226278.00
Facility Name: Rathon
Facility Location: 5001 PIB Chamblee GA

Well ID: MW-25
Well Diameter: 2 (inches)
Total Depth (TD): 19.50 (ft)
Depth to Groundwater (GW): 10.12 (ft)
Water Column Height (CH): 9.38 (ft) = TD - GW
Well Volume: 1.53 (gals)
Total Liters Purged: 3.50 (Lt)

Date: 12/18/2013
Measuring Pt: North
Personnel: JDK
Weather: clear cold
Additional Notes:

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
10:37	175	10.24	20.04	0.108	76.1	5.05	189.2	N/A	SC
10:42	175	10.26	20	0.054	77	5.11	178.2	N/A	SC
10:47	175	10.27	20.49	0.051	77	5.13	172.8	N/A	SC
10:52	175	10.28	20.19	0.05	77.4	5.14	170.8	N/A	AC
10:57	175	10.27	20.18	0.051	77.1	5.11	171.9	N/A	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 11:00

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40mL VOA	HCL	VOC's	N	n/a	n/a	n/a
2-1Lt Amber	neat	SVOC's	N	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

LOW FLOW GROUNDWATER MONITORING WELL SAMPLING FORM

WOODARD &CURRAN

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Project #:	226278.00
Facility Name:	Rathon
Facility Location:	5001 PIB Chamblee GA

Well ID:	MW-26		Date:	12/18/2013
Well Diameter:	2	(inches)	Measuring Pt:	North
Total Depth (TD):	19.40	(ft)	Personnel:	JDK
Depth to Groundwater (GW):	10.08	(ft)	Weather:	clear cold
Water Column Height (CH):	9.32	(ft) = TD - GW	Additional Notes:	
Well Volume:	1.52	(gals)		
Total Liters Purged:	3.75	(Lt)		

Well Volume Factors (gallons/foot of water in well): 0.75-inch (0.023), 1-inch (0.041), 1.5-inch (0.092), 2-inch (0.163), 4-inch (0.653)

Parameter Monitoring Results

Time	Vol. Purged (units: mL/min)	D.T.W. (feet)	Temp. (°C)	Sp. Cond (mS/cm)	D.O. (mg/l)	pH (su)	Orp (mV)	Turb. (NTUs)	Clarity /Color
Instrument Accuracy			+/- 0.5 °C	+/- 5%	+/- 0.5 mg/L	+/- 0.2	+/- 20mV	+/- 10%	Stabilization Criteria
11:25	150	10.08	20.08	0.183	32	5.7	85.7	N/A	AC
11:30	150	10.12	19.95	0.182	25.8	5.67	77.5	N/A	AC
11:35	150	10.13	20.19	0.187	25.4	5.72	66.4	N/A	AC
11:40	150	10.12	20.23	0.193	25.9	5.73	62.3	N/A	C
11:45	150	10.13	20.25	0.198	25.9	5.73	60.4	N/A	C
11:50	150	10.13	20.32	0.197	25.4	5.74	60.1	N/A	C

Clarity: VC = very cloudy, CL = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

Comments:

Low flow sampling method used with a GEO pump peristaltic pump, YSI 556 MPS water checker and a Heron water level tape.

Note: Sampling Method, Sample Interval, Recharge Conditions, Color, Odor, Sediment Content, etc.

Sample Time: 11:55

# Containers/Type	Preservative	Analysis/Method	Field Filter Y/N	Filter size	MS/MSD	Dup ID
2-40mL VOA	HCL	VOC's	N	n/a	n/a	n/a
2-1Lt Amber	neat	SVOC's	N	n/a	n/a	n/a

Note sample time, parameters, duplicates, field blanks, etc.

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