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ASSESSMENT REPORT

SECOND ANNUAL ASSESSMENT REPORT

APRIL 2015 - MARCH 2016 REPORTING PERIOD

Groundwater Remediation Permit No. WQ0034465
GlaxoSmithKline
South Campus, North Complex
Research Triangle Park, NC

Submitted To: GlaxoSmithKline
5 Moore Drive
P.O. Box 1398
RTP, North Carolina 27709-3398

Submitted By: Golder Associates NC, Inc.
5B Oak Branch Drive
Greensboro, NC 27407 USA

Distribution:

Electronic Copy (EC) – NCDEQ – Division of Waste Management
2 Copies, EC – NCDEQ – Division of Water Resources
1 Copy, EC – GlaxoSmithKline
1 Copy – Golder Associates

Date: **June 30, 2016** **Project No. 0739611502**

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June 30, 2016 Project No.: 073-96115

NCDEQ
Division of Water Resources
UIC Program
1636 Mail Service Center
Raleigh, NC 27699-1636
(919) 733-3221

Attn: Mr. Michael Rogers

RE: **Non-Discharge Permit Renewal**
GlaxoSmithKline, South Campus, North Complex, RTP, NC
NCDEQ Groundwater Remediation Permit No. WQ 0034465
RCRA Permit #NCD052547635

Dear Mr. Rogers:

Golder Associates NC, Inc. (Golder), on behalf of GlaxoSmithKline (GSK), is submitting the attached Non-discharge Permit Renewal Form (Form) to request renewal of the Groundwater Remediation Permit (Permit No. WQ0034465) for GSK's South Campus, North Complex remediation system. With the renewal GSK is requesting a minor permit modification to incorporate changes previously approved by NCDEQ in an email from Michael Rogers of NCDEQ to Brian Eichlin of Golder dated July 22, 2015, as requested in the First Annual Assessment Report December 2013-March 2015 Reporting Period (Golder Associates, May 15, 2015) (2015 Annual Report) and recommendations presented in the Second Annual Assessment Report April 2015-March 2016 Reporting Period (Golder Associates, June 2016) (2016 Annual Report). The 2016 Annual Report is provided as a supplement to the Form. The requested permit modification is being submitted as a minor modification since the proposed changes do not include a change in the areas of injection, quantities of injection slurry, or the review and compliance boundaries. The following provides a summary of the remediation system performance and proposed permit modifications as described in the 2016 Annual Report.

1.0 REMEDIATION SYSTEM OVERVIEW

The Permit included approval for installation of six (6) extraction wells and two granular activated carbon (GAC) treatment systems for the injection of ZVI and soy powder mixed with extracted groundwater at SWMUs 13 (deep and shallow) and 15/16 in thirty-four (34) Class 5L injection wells to treat chlorinated Volatile Organic Compounds (c-VOCs). The Permit also included the injection of ZVI mixed with potable water at AOCs GW-6, AOC GW-6 Strike and AOC W-1 in seven (7) Class 5I injection wells. The current injection system includes both the Phase I and Phase II injection wells listed in the Permit since on January 24, 2012 GSK submitted documentation that the compliance boundary easement with the neighboring property owner, required to construct the Phase II system, had been implemented. NCDENR approved the construction of the Phase II system on January 24, 2012.

Of the 34 permitted Class 5L wells, the Permit Application identified six as contingent injections wells that were not initially constructed by GSK. As approved in the July 22, 2015 by NCDEQ, one contingent injection, IW-02, was relocated from its permitted location and constructed during the Year 2 operational

period, and monitoring well GW-4 was permitted as contingent injection well IW-04. The remaining contingent Class 5L injection wells (IW-7, IW-9, IW-13 and IW-15) for the SWMU 13 shallow treatment zone remain unconstructed. The July 22, 2015 email also approved the use of sodium lactate (ABC lactate) as an additional injectant and the use of monitoring well GW-32S as an additional injection point at AOC GW-6.

The Permit issued in December 2010 included requirements for the monitoring of fourteen (14) groundwater wells (compliance monitoring wells) for VOCs, total iron and field parameters quarterly for two years, followed by semiannual monitoring for the Permit-listed parameters. The March 2016 (Y2Q4) monitoring event completes the second year of annual monitoring, and, in accordance with the Permit, semiannual monitoring of compliance monitoring wells can be initiated with the Year 3 operating and monitoring period.

The proposed zero valent iron (NZVI) groundwater remedy design was submitted to NCDENR's DWM as part of the Phase II PDI and Groundwater and SVE Corrective Measure Design Report (CM Design) (Golder Associates, February 2009). DWM approved the ZVI remedy as part of corrective measures for the Site. The CM Design outlined a proposed groundwater monitoring program to evaluate the effectiveness of the ZVI remedy. The CM Design groundwater monitoring program included quarterly monitoring of 32 groundwater monitoring wells for two years followed by semiannual monitoring for Volatile Organic Compounds (VOCs).

2.0 SUMMARY OF YEAR 2 OPERATIONS

The following presents a summary of the compliance and remedy performance groundwater monitoring results as presented in Sections 5.4 and 5.5 of the 2016 Annual Report, respectively.

2.1 AOC GW-6 and AOC GW-6 Strike

Trichloroethylene (TCE) concentrations continued to decline during the Year 2 monitoring period at AOC GW-6 and AOC GW-6 Strike. At GW-6 TCE concentrations have declined from the baseline monitoring result for TCE of 47 ug/l to below the NC2L standard of 3 ug/l as reported for the Y2Q3 and Y2Q4 monitoring events. The decline in TCE concentrations can be attributed to the stimulation of anaerobic biodegradation as a result of the injection of sodium lactate at AOC GW-6, including the first injection at GW-32S as approved by NCDEQ in the July 22, 2015 email, in December 2015 during the sixth injection event. As a result of the breakdown of TCE, increases in the presence of degradation compounds cis-1,2-Dichloroethylene (cis-1,2-DCE) and Vinyl Chloride (VC) were observed in select monitoring wells.

The monitoring results for the Permit compliance monitoring wells at AOC GW-6 and AOC GW-6 Strike for the reporting period do not indicate migration of injectants or the spread of the existing contamination as a result of injection activities. As allowed under the Permit, monitoring of compliance monitoring wells for AOC GW-6 and GW-6 Strike will be reduced to semiannual monitoring during the Year 3 Quarter 2 (Y3Q2) and Year 3 Quarter 4 (Y3Q4) monitoring events.

2.2 AOC W-1

TCE concentrations at IW-36 declined during the Year 2 monitoring period from 94 ug/l (Y2Q1) to 7.7 ug/l (Y2Q4). While concentrations for TCE declined at W-1 from 160 ug/l (Y2Q1) to 130 ug/l (Y2Q4) the decline in TCE lagged that of the nearby injection well IW-36. While pressure transducers installed during injection events during Year 2 indicate a hydraulic connection between W-1 and IW-36 during injections, the lag in treatment results may indicate that W-1 has a greater hydraulic connection via fractures to the upgradient contamination than IW-36. Corresponding increases in cis-1,2-DCE were reported for IW-36 as a result of bio-degradation of TCE. While TCE concentrations declined at W-1, concentrations for cis-1,2-DCE at W-1 were constant during the Year 2 monitoring period.

As presented in the 2015 Annual Report, fluctuating VC concentrations were reported for compliance monitoring well GW-49I during the Year 1 monitoring period. During the Year 2 monitoring period VC was reported to be non-detect in compliance monitoring well GW-49I but present in compliance monitoring well

GW-40I. Due to the historical presence of VC in monitoring well GW-40I and GW-49I, the AOC W-1 compliance monitoring wells will continue to be monitored quarterly during the Year 3 monitoring period.

If IW-36 achieves NC2L standards prior to W-1, the benefit of injecting nZVI and/or sodium lactate in W-1, as an alternative to IW-36, should be evaluated during future reporting periods. Injecting at W-1 would provide greater influence on the fracture flow impacting this location. It is recommended that the permit renewal incorporate the flexibility for future injections at W-1. W-1 is used to monitoring the remedy effectiveness under the CM Design monitoring program and is not part of the Permit compliance monitoring program. If injections are to be performed at W-1, IW-36 can be used to evaluate the performance of the remedy as a replacement to W-1.

2.3 SWMU 15/16

TCE concentrations continued to decline at SWMU 15/16 area as a result of injections. Breakdown concentrations of cis-1,2-DCE and VC increased in select wells and declined in other wells as a result of continued biodegradation of c-VOCs. Based on the available data, the SWMU 15/16 injection well network is sufficient with continued injections of sodium lactate and ZVI.

2.4 SWMU 13

TCE concentrations at SWMU 13 are declining as a result of the injections. Anaerobic breakdown concentrations cis-1,2-DCE and VC increased in select wells and declined in other wells as a result of continued biodegradation of c-VOCs. TCE concentrations in the SWMU 13 shallow injection zone have declined by an order of magnitude or greater as the result of injections, with the exception of IW-17/BNP-1 where concentrations of TCE rebounded during the March 2016 monitoring event. As discussed below, IW-17/BNP-1 is connected to the residual contamination underlying the former disposal trenches via a shallow hydraulic connection not present in other wells downgradient of the former disposal trenches. Permit modifications are proposed below that will target treatment of this connection via injection and potential mass removal via groundwater extraction.

Increases in VC for the Year 2 monitoring period compared to the Year 1 monitoring period were observed in compliance monitoring wells located near SWMU 13, specifically indowngradient shallow compliance monitoring wells MW-13 and downgradient deep compliance monitoring well GW-30I, and side-gradient to SWMU 13 in deep monitoring well GW-1AD. C-VOCs have historically been detected at each of these wells as a result of existing contamination at SWMU 13. As described in the 2016 Annual Report these compliance monitoring wells are showing slight declines in parent compounds TCE (GW-30I, GW-1AD, and MW-19) andcis-1,2-DCE in select wells (GW-30I and GW-1AD). The corresponding increases in VC are a result of the biodegradation of TCE and other c-VOCs. Due to the increases in VC, the SWMU 13 and 15/16 compliance monitoring wells will continue to be monitored quarterly during the Year 3 monitoring period.

Using a packer, shallow zone and deeper zone groundwater samples were collected from IW-17/BNP-1 in December 2015. TCE concentrations in the shallow zone sample above the packer (97,000 ug/l) were an order of magnitude greater than the deeper zone sample below the packer. TCE concentrations in the shallow IW-17/BNP-1 sample were similar to concentrations for a shallow monitoring well, P-5, located upgradient of IW-17/BNP-1. Concentrations of TCE below the packer are similar to reported concentrations in IW-16 from the January 2016 groundwater monitoring event, which is consistent with injection influences observed between the two wells during injection events. Based on these monitoring results, it is believed that there is a low flow hydraulic connection between P-5, IW-17/BNP-1, and GW-4 in an upper sandstone that should be targeted for treatment. It is proposed that a shallow injection well (unconstructed contingent well IW-07) should be installed within this zone at a location up-gradient to IW-17/BNP-1. It is also recommended that IW-17/BNP-1 be permitted for use as an extraction well to remove c-VOC mass and supplement the existing extraction wells, if warranted based on future monitoring events.

An SVE system is operated within the former disposal trenches using eleven shallow hydraulically fractured SVE wells as shown on Figure 9 of the 2016 Annual Report. The SVE wells were constructed in accordance with a Class 5Z Application Permit to Construct Enhanced Soil Vapor Extraction Wells (Golder Associates,

August 2011) and the approved Injection Permit WI0500421 issued by the NCDENR Aquifer Protection Section, UIC Injection Control Program on September 26, 2011. It is proposed that the Permit be modified to include an annual injection of sodium lactate be performed in the SVE wells in the late fall to introduce a carbon source to the residual underlying contamination.

The greatest remaining concentration of TCE in the SWMU 13 deep zone was reported for the Y2Q4 monitoring event at well P-6 (91 ug/l). P-6, located down-gradient of the former disposal trenches, has shown a decline in TCE concentrations but is lagging other locations including neighboring injection well IW-08D. IW-08D was reported to have concentrations of TCE below the NC2L standard of 3 ug/l.

The potential benefits of injecting in P-6 to target fractures at this location should be evaluated during future reporting periods. It is recommended that the permit renewal incorporate the flexibility for future injections at P-6. P-6 is monitored to evaluate the performance of the remedy and is not part of the Permit compliance monitoring program. If injections are to be performed at P-6, IW-08D can be used to evaluate the performance of the remedy as a replacement to P-6.

2.5 Injectants

The current approved injectants (ZVI, sodium lactate and soy powder) are providing effective treatment. Periodic injections of micro-organisms at select injection wells may be required to enhance the microbial population.

In addition to biodegradation of c-VOCs, methanogenesis is occurring as shown by the production of methane gases at a number of locations. Methanogenic reactions produce volatile fatty acids and acetic acid which can lower groundwater pH. Low groundwater pHs can inhibit micro-organisms that bio-degrade c-VOCs.'s. In the event groundwater pH's decline, it is recommended that the permit be modified to allow the addition of sodium bicarbonate to buffer the pH effects of methanogenesis.

Benzene concentrations for SWMU 13 throughout the reporting period remained stable at a number of well locations. While some biodegradation of benzene is occurring as part of the reductive de-chlorination processes, benzene is typically treated using aerobic biological processes. Polishing for benzene will likely be required following the completion of long term treatment for c-VOCs. It is recommended that the permit be modified to allow for the future injection of activated persulfate to treat benzene. The benefit of using persulfate is that a byproduct of the initial abiotic reaction (benzene oxidation) is sulfate, which can then be utilized as an electron acceptor by indigenous microbes capable of coupling sulfate reduction to benzene oxidation.

3.0 PROPOSED PERMIT CHANGES

The Permit includes four unconstructed contingent injection wells (IW-7, IW-9, IW-13 and IW-15) for the SWMU 13 shallow treatment zone. As presented on Figure 9 and described in the 2016 Annual Report, the following modifications to the permitted injection points at SWMU 13 are requested with the permit renewal:

1) Relocation of contingent injection well IW-07 to a location up-gradient of IW-17/BNP-1. Injection IW-07 will be constructed as detailed in the Permit Application and connected to the shallow injection well overflow header;

2) Annual injections into the existing eleven shallow hydraulically fractured SVE wells as shown on Figure 9. An injection event record, which included all fracture data and well construction records, was submitted to the NCDENR Underground Injection Control (UIC) Program on behalf of Golder on June 25, 2012 and is included in Appendix I. Since the wells were completed using direct push technology, the injections in the SVE wells will be performed by gravity using procedures typically used with temporary well injection points. The injection into the SVE wells will replace contingent injection well IW-15 and as presented on revised Table S-1 from the Permit Application included in

Appendix I, the injection quantities to the SVE wells will not exceed the permitted quantities for contingent injection well IW-15; and,

3) To provide flexibility it is requested that P-6 be included as an optional injection location for injections currently performed in IW-08D. Since injections would be performed in either IW-08D or P-6, as presented on revised Table S-1 from the Permit Application included in Appendix I, the total quantity of injected material would not exceed that permitted for IW-08D.

As presented on revised Table S-1 from the Permit Application included in Appendix I of the Report, with reductions to injection quantities for wells with low concentrations of c-VOCs (i.e. IW-01 and IW-03) the injection quantities for SWMU 13 will not change with this additional injection points. As presented on Figure 9, all proposed injection points for SWMU 13 (relocated IW-07, P-6 and hydraulically fractured SVE wells) are within the permitted Target Injection Zone for use of extracted and treated groundwater. Since the area of injections is not changing, there are no proposed changes to the review and compliance boundary presented in the Permit Application or the permit monitoring program. As described above the SWMU 13 and 15/16 compliance monitoring wells will continue to be monitored quarterly during the Year 3 monitoring period.

It is proposed that IW-17/BNP-1 be permitted as a contingent extraction well EW-5. The VOC concentrations at IW-17/BNP-1 are similar to the design concentrations for the granular activated treatment system for SWMU-13. The existing treatment system will provide sufficient treatment for groundwater extracted from IW-17/BNP-1 (future extraction well EW-5) should it be converted to an extraction well. The total extraction volume from the SWMU 13 shallow extraction wells (EW-1, EW-2, EW-3 and proposed contingent extraction well EW-5) will not increase since as discussed above the total quantity of injection slurry for future injections will not change. With the addition of contingent extraction well EW-5 the permit limit of 9,999 gpd of extracted groundwater will not change. The extraction system for EW-5 will be constructed as presented in the permit application for extraction wells EW-1 through EW-3 including dedicated totalizers, sampling points and automated shutdown controls.

At AOC W-1, to provide flexibility it is requested that W-1 be included as an optional injection location for injections currently performed in IW-36. Since injections would be performed in either IW-36 or W-1, as presented on revised Table S-1 from the Permit Application included in Appendix I, the total quantity of material injected would not exceed that permitted for IW-36.

It is requested that sodium bicarbonate and persulfate be included as injectants in the Permit. Sodium bicarbonate would be added to the injection slurry to buffer the groundwater in the vicinity of select injection wells to a target pH of 6.5. The volume of persulfate to be added will be determined analytically by testing a sample for the oxidant demand (sum of contaminant oxidant demand and natural oxidant demand of aquifer). Alkaline activated persulfate will be injected at a 10-20% by weight concentration. In addition, as previously approved by NCDEQ in an email dated July 22, 2015, it is requested that sodium lactate (ABC Lactate) and RTB-1 (TCA-20) bacteria be added to the permit listed injectants. Persulfate, sodium bicarbonate, sodium lactate (ABC lactate) and RTB-1 (TCA-20) bacteria are all included on the list of NCDEQ approved injectants.for in situ remediation systems.

GSK also requests that the Permit language be revised to include the use of GW-32S at AOC GW-6 as an injection well as approved by NCDEQ with the July 22, 2015 email. Modification of the Permit to include IW-02 and IW-04 (GW-4) is not required since they are listed as injection wells in the existing Permit.

4.0 CLOSING

Should you have any questions or comments regarding the Permit Application or require additional information, please do not hesitate to contact Lindsey Walata of GSK at (919) 483-4640 or Brian Eichlin at (336) 852-4903.

Sincerely,
GOLDER ASSOCIATES NC, INC.

Daniel A. Childress, CEP-IT
Staff Environmental Scientist

Brian J. Eichlin, P.E.
Principal

Attachments:
Non-Discharge Permit Renewal Form
Second Annual Assessment Report April 2015-March 2016 Reporting Period - 2 copies

cc: Lindsey Walata, GlaxoSmithKline – 1 copy
Robert McDaniel, NCDEQ, Hazardous Waste Section – electronic copy

\\greensboro\data\Projects\GSK RTP Operations\Annual Report\2016\FINAL\Final Cover Letter 06-29-16.docx

North Carolina Department of Environmental Quality - Division of Water Resources (DWR)

Non-Discharge Groundwater Remediation Permit Application Form

THIS APPLICATION PACKAGE WILL NOT BE ACCEPTED UNLESS ALL APPLICABLE ITEMS ARE INCLUDED

APPLICATION INFORMATION

Application Date:	6/30/2016
Application Type:	Renewal (with modification)
*New Projects – DWR to assign application #	
**Renewals/Modifications – Enter Permit #	WQ0034465
Fee Submitted: (*refer to fee schedule at* http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/ground-water-protection/groundwater-remediation)	Choose an item.(no fee for minor modification or renewal)

*For New Projects: complete this page, signature page, and supply all attachments.
**For Renewals: complete this page and signature page.
**For Modifications: complete this page, signature page, and supply relevant attachments.

Applicant's Name (*specify the name of the municipality, corporation, individual, etc.*):	GlaxoSmithKline
Owner or Signing Official's Name and Title (*person legally responsible for the facility and its compliance*):	Tracy Vincent Howe, Site Directions Operator
Mailing Address:	P.O. Box 13398, Five Moore Drive, Mailcode 54826
Telephone Number:	(919) 315-2891
Email Address:	Tracy.v.howe@gsk.com
Facility Name (*name of the project site; be consistent throughout application package*):	GlaxoSmithKline, South Campus, North Complex
Physical Address:	3030 Cornwallis Road
County:	Durham
Geographic Coordinates:	35.912064; -78.865933
Contact Person (*who can answer questions about application*):	Lindsey Walata, GlaxoSmithKline
Telephone Number:	(919) 483-4640
Email Address:	Lindsey.c.walata@gsk.com

Professional Engineer's Certification:

Name & Lic. No. of Professional Engineer: Brian J. Eichlin

Name of Engineering Firm: Golder Associates NC, Inc.

Mailing Address: 5-B Oak Branch Drive

City: Greensboro State: North Carolina Zip: 27407

Telephone Number: (336) 852-4903 Fax Number: (336) 852-4903

Email Address: beichlin@golder.com

I, Brian Eichlin, attest that this application for GlaxoSmithKline, South Campus, North Complex has been reviewed by me and is accurate and complete to the best of my knowledge. I further attest that to the best of my knowledge the proposed design has been prepared in accordance with the applicable regulations. Although certain portions of this submittal package may have been developed by other professionals, inclusion of these materials under my signature and seal signifies that I have reviewed this material and have judged it to be consistent with the proposed design.

North Carolina Professional Engineer's Seal, Signature, and Date: 6/30/2016

NC PE 031665

Applicant's Certification (signing authority must be in compliance with 15A NCAC 2T .0106(b) and (c)):

I, TRACY V. HOWE, attest that this application for

GlaxoSmithKline, South Campus, North Complex has been reviewed by me and is accurate and complete to the best of my knowledge. I understand that if all required parts of this application are not completed and that if all required supporting information and attachments are not included, this application package will be returned to me as incomplete.

Signature and Title: Tracy Howe Date: JUNE 22, 2016

SEND TWO COPIES OF THE COMPLETE APPLICATION PACKAGE, INCLUDING ALL SUPPORTING INFORMATION AND MATERIALS, TO THE FOLLOWING ADDRESS:

DIVISION OF WATER RESOURCES – UIC PROGRAM
1636 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1636

TELEPHONE NUMBER: (919) 807-6496

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1.0 INTRODUCTION

On behalf of GlaxoSmithKline (GSK), Golder Associates NC, Inc. (Golder) has prepared this Second Annual Assessment Report (Report) for submission to the North Carolina Department of Environmental Quality (NCDEQ), formerly the North Carolina Department of Environmental and Natural Resources (NCDENR), Division of Waste Management (DWM) and Division of Water Resources (DWR).

1.1 Site Background

GSK is conducting Resource Conservation and Recovery Act (RCRA) corrective actions at its South Campus, North Complex facility located in Research Triangle Park (RTP), North Carolina (Site), in accordance with the requirements of the facility's RCRA Hazardous Waste Management Permit (Permit No. NCD052547635) issued by the DWM. Corrective actions in soil and groundwater were required to remediate site impacts at several Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) attributed to a previous property owner as shown on Figure 1. GSK has vacated the property, ceased permitted RCRA activities, and demolished a number of building structures. The Hazardous Waste Management Permit has been closed; the site currently is registered as a small-quantity generator of hazardous waste for incidental activities associated with remediation.

The corrective measures are based on the DWM-approved Corrective Measures Study (CMS)—South Campus, North Complex, GlaxoSmithKline Facility, RTP, NC, July 2003, Revised February 2004. The proposed zero valent iron (NZVI) groundwater remedy design was submitted to NCDENR's DWM as part of the Phase II PDI and Groundwater and SVE Corrective Measure Design Report (CM Design) (Golder Associates, February 2009). DWM approved the ZVI remedy as part of corrective measures for the Site.

Injections are being performed at the Site in accordance with Groundwater Remediation Permit #WQ0034465 (Permit) issued by DWR on December 10, 2013 and expiring on December 31, 2016. The Permit was issued for the injection of zero-valent iron (ZVI) and other additives, including Soy powder, to facilitate in-situ groundwater remediation at the Site. The Permit was issued to GSK in response to a Non-Discharge Permit Application Form for Groundwater Remediation System (Permit Application) submitted by Golder Associates in October of 2009, revised in August and November of 2010. The Permit included approval for installation of six (6) extraction wells and two granular activated carbon (GAC) treatment systems for the injection of ZVI mixed with extracted groundwater at SWMUs 13 and 15/16. The Permit also included the injection of ZVI mixed with potable water at AOCs GW-6, AOC GW-6 Strike and AOC W-1.

The Permit includes a Phase I and supplemental Phase II system. On January 24, 2012 GSK submitted documentation that the compliance boundary easement with the neighboring property owner required to construct the Phase II system had been implemented. NCDENR approved the construction of the Phase II system on January 24, 2012. The permitted Phase I and Phase II wells were installed during the period

of October 26, 2011 through March 29, 2012. On May 25, 2012, Golder on behalf of GSK submitted scaled site maps to DWR as required by Permit Condition III.10. Initiation of system operations and injections was delayed until excavation activities at the Site, as described below in Section 1.2, were substantially completed. In December of 2013, Golder on behalf of GlaxoSmithKline (GSK) submitted to DWR two copies of the professional engineer's certification page included with the permit as required by Permit Condition I.1.

In May of 2015 Golder, on-behalf of GSK, submitted the *First Annual Assessment Report December 2013-March 2015 Reporting Period (Golder Associates, May 15, 2015)* (2015 Annual Report) for submission to the North Carolina Department of Environmental Quality (NCDEQ). The 2015 Annual Report summarized groundwater monitoring and O&M activities completed during the first year of operations and recommended the following enhancements to the remedy:

- The AOC GW-6 injection well network be expanded to include injection up-gradient of GW-6 at monitoring well GW-32S;
- Injections in GW-4 (Injection well IW-04) are recommended to enhance remediation in the SWMU 13 shallow zone down-gradient of the BNP-1/IW-17 area as well as down-gradient of GW-4;
- The installation of a new injection well (IW-02) is proposed to the east of IW-16 to improve the radius of influence within the SWMU 13 shallow injection network; and,
- Completion of a microcosm study in the SWMU 15/16 (GW-16S), SWMU 13 shallow (GW-4) and SWMU 13 deep (GW-4I or P-6) treatment zone to evaluate if an inoculation of micro-bacteria and alternative carbon sources to soy and propylene glycol, such as sodium lactate, are needed to enhance bioremediation of the c-VOCs.

The enhancements were implemented during the second annual reporting period as summarized in this Report.

1.2 Soil Remediation Activities

The approved CMS Remedy for SMWU 4, Former Wastewater Aeration Basin, is source removal of VOC, Semi-VOC and PCB impacted soils and Monitored Natural Attenuation (MNA) of groundwater. Soil excavation activities were completed at SWMU 4, AOC Fermentation Building and AOC Stormwater Channel in 2004 to 2005 under the oversight of DWM as documented in the Report of Interim Measures Implementation (IM Report) (MACTEC, July 28, 2006). The MNA groundwater remedy for SWMU 4 included the installation of a monitoring well, GW-53S, at SMWU 4 in 2011 to 2012 during construction of the ZVI remedy.

In accordance with the Soil Excavation and PCB Remediation Work Plan and related Addenda (PCB Work Plan) (Golder Associates, September 2011) soil excavation for PCB remediation and RCRA Corrective Action for the Site was completed during July 2013 to September 2014. Soil contaminants removed included both PCBs regulated by USEPA and Volatile Organic Compounds (VOCs), regulated by HWS

NCDENR through RCRA corrective actions. A *Construction Completion Report- Soil Remediation for PCB Remediation and RCRA Corrective Action* (CCR) (Golder Associates, September, 2015), summarizing these activities was submitted to DWM and USEPA for review in September of 2015. On April 22, 2016, the HWS of NCDEQ issued a letter stating that the HWS had reviewed the CCR and issued a No Further Action Letter for VOCs in soils with the exception of ongoing remediation of SWMU 13 soils via soil vapor extraction (SVE). As summarized in email correspondence with USEPA on April 19, 2016, documenting verbal input from USEPA, USEPA review and/or approval of the Construction Completion Report (CCR) is not required and GSK has fulfilled the regulatory obligations of the USEPA August 8, 2013 approval letter and the approved work plans. A summary of VOC remediation via soil excavation, as detailed in the CCR, is provided below.

The Inactive Hazardous Sites Branch (IHSB) Preliminary Soil Remediation Goals (PSRGs) were used as clean-up standards for RCRA Corrective Action of VOCs in soils. Synthetic Precipitation Leaching Procedure (SPLP) testing was performed for VOCs on soils exceeding the Groundwater PSRGs to evaluate Site specific leachability concentrations as allowed under the IHSB Guidelines. All locations were excavated to below the January 2014 Residential and Industrial PSRGs. At several locations SPLP testing was used to support leaving soil concentrations that exceeded the Groundwater PSRGs in place. All excavations were completed until post excavation VOC sampling results were below either the Groundwater PSRGs or a Site specific soil concentration based on SPLP testing.

The majority of soil excavations were impacted only by PCBs; however, remediation of both PCB and VOC impacted soils occurred at the following Site locations as shown on Figure 2.

- SWMU 15 Former Gravel/Burn Pit (Area WS-7) was excavated and excavation extensions completed to address exceedances of the IHSB PSRGs for chloroform, Tetrachloroethene (PCE), 1,1-Dichloroethene (1,1-DCE), and benzene; and,

- SWMU 16 Monitoring Well GW-41S/Storm Water Pipe Repair Area (Area WS-8) was excavated to address exceedances of the IHSB PSRGs of PCE, Trichloroethylene (TCE) and Vinyl Chloride (VC). The excavation extended beneath the concrete pad for the Former Hazardous Waste Storage Area.

The majority of the excavations completed at WS-7 and WS-8 included the removal of existing concrete and asphalt surfaces. The excavations were backfilled with rock fines from the DWM approved backfill source. The areas were seeded to establish erosion control vegetation and new storm water control channels were constructed to redirect storm water flow. The permeable material used for backfill will increase infiltrations rates at these locations. To address the inflow of water from precipitation likely with high dissolved oxygen (DO) and maintain a reducing environment favorable for the chlorinated VOC degradation, granular ZVI was mixed with the excavation backfill as further described below.

Portions of the WS-7 and WS-8 excavations were completed to bedrock to remove VOC exceedances of the PSRGs. ZVI was placed at the bedrock interface at both locations in the vicinity of the highest reported concentrations of VOCs in soils. Prior to placement of the ZVI, the ZVI was mixed with sand at approximately a 12% by volume ratio and placed at the bedrock interface of the excavation at a thickness of approximately 1 foot using an excavator bucket. A layer of poorly graded 3 to 4-inch self-compacting aggregate (ballast stone) was added above the ZVI mixture in approximately two 2-foot thick lifts. The remainder of the excavation was backfilled with approved backfill material and mechanically compacted using the excavator bucket.

RCRA corrective actions for groundwater remediation and remediation of VOC-impacted soils at SWMU 13 by SVE are ongoing. Through March of 2016 a total of approximately 8.4 lbs of VOCs, predominately chlorinated VOCs (c-VOCs) have been removed by the SVE system. A summary of operations of the SWMU 13 SVE system for the reporting period is included in Appendix A. As described in Appendix A, c-VOC concentration in the SVE vapors have declined since the initiation of operations and the system is currently operating in a pulsed mode of operation.

1.3 Summary of Activities for the Reporting Period

A total of four (4) quarterly groundwater monitoring events were completed during Year 2 between April 2015 and March 2016 (monitoring events Y2Q1 through Y2Q4, events 5 through 8). As presented on Figure 2, the annual monitoring event was completed in March 2016 which included sampling of all of the monitoring wells. Following the fourth injection event completed in January 2015, two rounds of injections (May 2015 and December 2015) were performed on a semi-annual basis using ZVI slurry at injection wells across the site. Injections were completed on a semi-annual basis to evaluate rebounding of groundwater concentrations to assess whether continued quarterly injections are required at all locations. The December 2015 injection was supplemented with sodium lactate and an inoculation of RTB-1 (TCA-20) microbes. A timeline of the activities for the Reporting period is provided in Table 1.

2.0 REGULATORY INTERACTION DURING THE REPORTING PERIOD

Prior to and during the reporting period DWR was contacted with respect to Permit conditions as summarized on Table 2. Clarifications of note included:

- Golder requested DWR approve the recommendations made in the 2015 Annual Report (Injection in monitoring well GW-32, GW-4 and new injection well IW-02; the addition of sodium lactate as a permitted injectant material) in an email dated July 1, 2015. As presented in Appendix B, WR approved the request by email on July 22, 2015;
- November 20, 2015 approval of the use of ABC Lactate and inoculation of RTB-1 (TCA-20) bacteria at SWMU 13 injections and submittal of the WR requested injection event record (Appendix B);
- As described in Section 5.2, GSK surveyed and inspected all wells located on the Site property in January 2015. As documented in Appendix B, four wells installed for previous investigations could not be located and seven monitoring wells were abandoned due to damage. None of the abandoned or missing wells were part of the monitoring program for the Site.

3.0 INJECTION OVERVIEW

3.1 Procedures

Injections were performed using the procedures presented in the Permit Application and described below. Due to the tight spacing of the injection wells, the injection wells at SWMU 13 and SWMU 15/16 are equipped with overflow valves and piping that drain to overflow sumps.

3.2 Quarterly Event Summaries

The following subsections summarize the injection activities from the two injection events performed during the Year 2 operations period (May and December 2015). Event highlights and procedural modifications are noted. Tables 3-1 and 3-2 summarize ZVI slurry injection quantities for each of the events. The total quantity of iron injection was 22,410 gallons of ZVI slurry and a total of 3,625 lbs of ZVI which were both less than the requested values of 79,800 gallons/year of ZVI slurry and 16,620 lbs/year (7,540 kg/year) of ZVI as presented in Table 4 of the Permit Application. The December 2015 injection event included the injection of 1,000 lbs of sodium lactate, 400 lbs of soy powder and 19 liters of TCA-20 bacteria to facilitate biodegradation of cVOCs.

3.2.1 Fifth Injection Event – May 2015

The fifth quarterly injection event, and first injection event of the Year 2 operations period was conducted May 11-29, 2015. A total of 34 wells of the 35 constructed injection wells (all wells except IW-03D) were injected with iron slurry to treat c-VOCs in the groundwater. Mass rates for the slurry mixture, as detailed in Table 3-1, were determined based on permit guidelines and VOC concentrations from groundwater samples collected between December 2013 and March 2015. As presented in the Permit Application, for the first injection event the ZVI slurry was mixed at a concentration of 25 gm/l. The fifth round of injections incorporated a modified product similar to the mZVI iron powder used during the first year of injections (Hepure H-200 PLUS™). No other amendments such as a carbon source were added to the slurry during this injection event.

Wells were injected beginning with areas AOC GW-6 and AOC W-1, where c-VOC concentrations have historically been lower, using potable water obtained from the on-site hydrant connection. Sodium bisulfite was added to de-chlorinate the potable water and a pool chemical test strip was used to confirm de-chlorination of the water prior to injections.

The total iron rate was increased by 40 pounds each in IW-25 and IW-26 compared to historical injections. As recommended in the 2015 Annual Report, transducers were placed in W-1 and MW-9 to monitor water levels during injections at IW-36 and all of the SWMU-15/16 wells. Plots showing the transducer data are included in Appendix H.

The GAC drums at the SWMU 13 treatment facility were sampled for TCLP in March 2015. The two lead GAC drums were disposed of as hazardous waste based on concentrations of vinyl chloride and were removed from the Site on April 9, 2015. Waste disposal documentation and associated analytical results are provided in Appendix C. The two lag drums were cycled to the lead positions in the system and were replaced by two new GAC drums. Source water for the injection wells in SWMU 13 was pumped from the shallow (EW-1, EW-2, EW-3, GW-4) and deep (EW-4D) aquifers.

In response to the January 16, 2015 surfacing of groundwater at IW-17/BNP-1, it was recommended that injection pressures be reduced at IW-16 to less than 1 psi per foot of overburden material (i.e. depth of the packer placement) plus the groundwater hydraulic head (i.e. 0.43 psi per foot of water above the packer). These procedural changes were successfully implemented at IW-16 and IW-17 during the fifth injection event. Injection flow rates were reduced five-fold and peak pressures did not exceed 35 psi in either well. Overall, the average injection pressures (40 psi) and flow rates (5.5 gpm) were considerably lower during the May 2015 injection event.

3.2.2 Sixth Injection Event – December 2015

Several modifications were made to the injection network in October 2015, prior to the sixth injection event. The changes are detailed below:

- Installation of a new injection well (IW-02) at SWMU-13. Well construction documentation is provided in Appendix B;
- Conversion of two (2) existing Type II monitoring wells to Class 5I (GW-32S) and 5L (GW-4) injection wells; and,
- Extension of the open borehole at IW-36 an additional 20 feet to a total depth of approximately 118 feet below top of casing.

The sixth injection event was completed December 7-22, 2015, with injections in 31 of 38 permitted injection wells. Due to declining c-VOC concentrations which did not rebound when reducing injection frequency to semi-annual, injections were not performed in the following injection wells:

- IW-22 and IW-23 at SWMU 15/16;
- IW-03D and IW-10D in the SWMU 13 Deep Zone;
- IW-22 and IW-23 in the SWMU 13 Shallow Zone; and;
- IW-35 at AOC GW-6 was not injected to allow for use as a monitoring well.

Injection amendments were determined based on groundwater sampling results and trends between December 2013 and September 2015. Amendments, provided by Redox Tech, included mZVI powder, Anaerobic Biochem (ABC®) lactate, dehalococcoides (DHC) microbial consortium (TCA-20), and soy powder. Ratios for the slurry mixture in each well are detailed in Table 3-2.

Transducers were used to measure the influence from nearby injections at eleven (11) wells across the site during the December 2015 injection event. Graphs depicting the fluctuations in groundwater elevations are provided in Appendix H. During the injection at IW-26, transducers were placed in GW-41SR and GW-16S to the north and northwest of the injection well. At the end of the 250-gallon injection at IW-26, overflow of approximately 3 gallons of groundwater occurred from GW-41SR. The pressure cap which typically seals the wellhead had been removed to install the transducer. The impacted soils were excavated and placed in three 5-gallon buckets. Soil samples collected from the bottom of the excavation and from the excavated soils, as presented in Appendix C, were non-detect for all RCRA Appendix IX VOCs. The soils were disposed of as solid waste by A&D Environmental at the Republic Uwharrie Landfill in Mt. Gilead, NC.

Injections at the former Type II monitoring wells were gravity fed with ABC lactate as the only slurry addition in GW-32S and ABC lactate plus TCA-20 bacteria in GW-4/IW-04. All other injections consisted of mZVI, lactate, and soy powder. In addition to GW-4/IW-04, nine (9) shallow-zone injection wells at SWMU-13 also included the TCA-20 bacteria. Average flow rates (5.2 gpm) and injection pressures (32 psi) during the December 2015 injection event were nearly equivalent to the previous injection event; however, a surfacing event occurred at IW-17 in the same location as a previous incident during the fourth injection event in January 2015. The injection was immediately stopped and the packer was reset below the casing. It was determined that a pathway, created by over pressurization, existed in or along the grout used to seal the well casing. The injection was resumed and no further surfacing occurred. To prevent the potential for the infiltration of stormwater, IW-17/BNP-1 was repaired on April 19-20, 2016 by SAEDECCO, a licensed well driller, by excavating around the well casing and sealing the exterior of the well casing with a four-foot wide by three-foot thick concrete plug. The area above the plug was backfilled using the excavated soils, tamped, seeded, and covered with straw.

4.0 GROUNDWATER TREATMENT SYSTEM OVERVIEW

4.1 Groundwater Extraction

A summary of extracted groundwater volumes is presented in Table 4 as recorded by totalizers located at each extraction well vault. Table 4 includes the estimated volume pumped to the SWMU 13 system from monitoring well GW-4 via the sample port at EW-2. Samples were periodically collected from the sample ports inside the extraction well vaults during the injection events and the results are presented on Figures 4 through 7 and in Appendix D. The samples were submitted to CompuChem for RCRA Appendix IX VOC analysis.

4.2 Groundwater Treatment

As presented in Table 5, a total of 17,966 gallons of extracted groundwater was processed through the SWMU 13 and SWMU 15/16 treatment systems during Year 2. The volume of extracted groundwater decreased with each injection event in Year 2 of operation, with an average of nearly 9,000 gallons collected during each event. As presented on Tables 6-1 and 6-2, the highest average daily extraction rate during an injection event was approximately 780 gallons per day (GPD) for SWMU 13 during the sixth injection event, which is significantly less than the Permit limit of 9,999 gallon per day (maximum monthly average permit limit).

As required by the Permit, during each injection event (quarterly when the system was operating), samples were collected from the treatment system influent between the bag filter and LGAC units, the mid-fluent (between the two sets of carbon units), and the effluent. As presented in the Permit Application, groundwater modeling demonstrated that injection of ZVI slurries containing up to 1,000 times the NC2L standard for VOCs would not cause a violation of the NC2L standards associated with the injected treated groundwater at the Compliance Boundary. A summary of the analytical results from the quarterly treatment system sampling events compared to the 1,000 times the NC2L standard is provided in Tables 6-1 and 6-2. The effluent from the treatment systems were below the treatment goals for each of the sampling events.

As presented on Table 4, the lead LGAC units were replaced at SWMU-13 prior to the fifth injection event after treatment of 21,180 gallons of groundwater. As done for previous carbon change-outs, the lag LGAC units were cycled to the lead position as described in the Permit Application. Bag filters were used to remove excess sediment from the groundwater ahead of the LGAC units. As presented in the 2015 Annual Report, the bag filters were analyzed for TCLP and determined to be non-hazardous. Used bag filters are placed in a drum for future disposal at a solid waste landfill when the drum is full.

5.0 GROUNDWATER MONITORING RESULTS

5.1 Overview of Hydrogeology and Groundwater Level

Shallow groundwater flow is controlled by topography, dominated by the ridge that parallels the regional strike of the Triassic Basin sediments. Site infrastructure, man-made drainage features, and backfill areas may also influence the shallow groundwater flow in the overburden, possibly providing preferential groundwater migration pathways (above the injection zone).

Hydrogeologic cross sections, presented in the CSM, were constructed approximately perpendicular and parallel to bedrock strike and show that the vertical hydraulic gradients are downward and groundwater from overburden and upper weathered bedrock recharges deeper groundwater within the bedrock layers. Only a few slug tests show results higher than 10^{-4} centimeters per second (cm/s). The remaining results indicate low (i.e., 10^{-5} cm/s) to very low (i.e., less than 10^{-6} cm/s) hydraulic conductivity values. The literature values reported for specific yield range from 0.01 to 0.3 (Freeze and Cherry, 1979, Groundwater, pg. 61) with estimated higher end values for unconsolidated overburden materials (as a result of higher porosity), and lower end values for bedrock materials (as a result of lower porosity).

Deeper in the bedrock, groundwater flow is dominated by geologic structures. Based on the evaluation of the bedrock discontinuities collected with the down-hole tele-viewer, the most abundant discontinuities in the bedrock are the low angle bedding planes. Bedrock discontinuities with a different dip direction than the bedding planes appear with somewhat higher frequency within the siltstone packages. Review of hydraulic conductivity data with respect to geologic structural data indicates that bedding plane partings are probably the most permeable features at the Site. In addition, it is estimated that the groundwater flow along the bedding planes is likely influenced by the changing nature of the bedding plane hydraulic conductivity. A decrease of hydraulic conductivity with depth is also expected.

In general, within the deeper bedrock, most of the groundwater flows through rock discontinuities including bedding plane partings and to a lesser extent through the rock matrix. Based on the noted frequency of the low angle discontinuities, it is estimated that the groundwater flow would display an anisotropic pattern that would show higher groundwater velocities and implicitly higher groundwater fluxes along the strike of the bedding planes, and lower groundwater velocities/fluxes perpendicular to the strike of the bedding planes. Based on this observation it is estimated that, although the vertical hydraulic gradients at the Site are consistently downward, the actual downward groundwater flow is minimal in competent (deep) bedrock.

The groundwater levels collected at the Site were used to generate groundwater contours for the annual monitoring event completed in March 2016 (Y2Q4) as shown on Figure 3. Tables 7-1 and 7-2 include a summary of well construction data and historic water levels measured at the Site. The March 2016

groundwater flow directions and gradients are consistent with representations presented in the CSM and the 2015 Annual Report.

5.2 Groundwater Monitoring Program Overview

The CM Design submitted to the HWS of NCDENR provided the details of the ZVI groundwater remedy which was later permitted by the DWR of NCDENR. The CM Design outlined a proposed groundwater monitoring program to evaluate the effectiveness of the ZVI remedy. The CM Design groundwater monitoring program included quarterly monitoring of 32 groundwater monitoring wells for two years followed by semiannual monitoring for Volatile Organic Compounds (VOCs).

The Permit issued in December of 2010 included requirements for the monitoring of fourteen (14) groundwater wells (compliance monitoring wells) for VOCs, total iron and field parameters quarterly for two years followed by semiannual monitoring for the Permit listed parameters. The March 2016 (Y2Q4) monitoring event completes the second year of annual monitoring and under the Permit semiannual monitoring of compliance monitoring wells can be initiated with the Year 3 reporting period.

On behalf of GSK, on April 25, 2013, Golder sent a letter to the NCDENR HWS requesting to modify the CM Design groundwater monitoring program to incorporate the Permit-required monitoring wells. The proposed changes to the CM Design were approved by the NCDENR HWS in a letter dated June 25, 2013.

The 2015 Annual Report recommends routine monitoring for methane/ethane/ethene and TOC on a quarterly basis to evaluate the presence of biological degradation processes. In addition as recommended in the 2015 Annual Report the frequency of sampling in select injection wells was expanded for Year 2 to provide additional data regarding performance of the remedy. The current monitoring plan for the remedy is presented on Figure 2.

An annual inspection of all 122 monitoring and injections wells present on the Site property was conducted January 19 through 27, 2016. As a result of the inspections, fourteen (14) wells were found to be inadequate, damaged, or in need of repair. SAEDACCO completed the repairs and abandonments March 9 and 10, 2016. New concrete pads were poured at GW-4D, GW-14S, GW-18S, and MW-1. Gravel was placed beneath the concrete pad at GW-40I to stabilize the structure where soil had been undercut. Repairs to the outer protective well casing were also completed at two wells installed in 1985, W-1 and W-2. Seven (7) wells which are not part of either the CM Design or Permit monitoring programs presented on Figure 2 identified with damage during the annual inspection requiring repair were abandoned: GW-8SB, GW-10S, GW-37S, MW-3, RFI-4-B18, RFI-4-B19, and W-3. The existing PVC well was grouted in place and the surface completions were removed before the areas were regraded with onsite soil. MW-3, which was located in a former roadway, was filled with concrete at the surface. Inspection logs and well abandonment records are provided in Appendix B-5.

In addition to the sampling of the monitoring wells required by the CM Design and Permit for VOCs and total iron, the injection wells were sampled during the annual monitoring event completed in March 2016 (Y2Q4). A subset of Monitored Natural Attenuation (MNA) parameters, which included ethene, ethane, methane, and total organic carbon (TOC), were collected from select wells during each quarterly event of Year 2. The sample collected from P-5 also included analysis for sulfate during the January 2016 (Y2Q3) monitoring event. A full suite of MNA parameters was collected from thirty (30) selected wells during the annual monitoring event Y2Q4. Additional wells in the SWMU 13 shallow zone were periodically sampled for VOCs.

Tables 8-1 through 8-6 compare the maximum VOC concentrations reported by area during the reporting period compared to maximum historical concentrations for parameters as reported in the Permit Application. As presented on Tables 8-1 through 8-6, TCE is the primary c-VOC at the Site. TCE concentrations and related breakdown compounds were reviewed to evaluate the performance of the remedy. Figures 4A and 4B through Figures 6A and 6B present the TCE and related breakdown compounds cis-1,2-dichloroethylene (cis-1,2-DCE) and vinyl chloride (VC). Figures 4A, 5A, and 6A present the data for the shallow groundwater zone at SWMU 13 and Site wide wells. Figures 4B, 5B, and 6B present the data for the deeper groundwater zone which is represented by the lower portion of the H2SS and deeper geologic units such as the H1SLT unit. GW-3 and MW-13 which are screened in the upper section of the H2SS formation are represented on the SWMU 13 shallow groundwater zone map. The figures include the following information:

- The compliance and review boundary established in the Permit for the constituents of the injectant slurry (extracted groundwater, ZVI);
- Chemistry data for the reporting period and trend lines for select monitoring wells;
- The extent of groundwater impacts exceeding the NC2L standards projected at the time of the Permit Application; and,
- The extent of groundwater impacts as reported for the Y2Q4 monitoring event. Exceedances are shaded to reflect general concentration trends over the reporting period. Green denotes a declining or stable concentration trend and red denotes an increasing trend; and

Tabular VOC data reported for the monitoring events is presented in Appendix D. Laboratory analytical results, chain of custodies and laboratory data reviews are provided electronically in Appendix E. Groundwater sampling logs are presented electronically in Appendix F.

5.3 Groundwater Sampling Procedures

As summarized in Appendix G, groundwater samples were collected from groundwater monitoring wells following low flow procedures as presented in the Permit Application. Groundwater samples were collected from the injection wells by bailing methods except low flow purge procedures were followed when collecting MNA samples. Groundwater levels were collected from each well prior to sampling and field parameters

were collected from each well during sampling. Groundwater sampling logs are presented in Appendix F and field parameters collected during sampling are summarized in Table 9.

5.4 Review of Permit Compliance Monitoring Results

Section IV of the Permit identified compliance monitoring wells to be sampled for Total Iron, VOCs and field parameters to detect the potential migration of injectants or existing contamination into undesired areas. Permit Condition VIII (4) allows for the use of long term trends of groundwater monitoring results to evaluate compliance. This section reviews the data trends for the compliance monitoring wells and evaluates if adjustments to the injection program is warranted to address the potential for migration of injectants or existing groundwater contamination.

5.4.1 AOC GW-6 and AOC GW-6 Strike

Since potable water is used to mix the injectant slurry, AOC GW-6 and AOC GW-6 Strike do not have a Compliance or Review Boundary. The Permit identified three monitoring wells (GW-7, GW-8 and MW-11) to assess the potential migration of injectants and spread of the existing contamination as a result of injection activities.

As presented on Figure 4A through 6A, the reported concentrations for TCE, cis-1,2-DCE, and VC for AOC GW-6 compliance monitoring wells GW-7 and GW-8 for each of the four monitoring events for the Year 2 period were reported to be less than the NC2L standards of 3 ug/l, 70 ug/l, and 0.03 ug/l, respectively, and concentration trends during the reporting period were stable or declining.

TCE concentrations at compliance monitoring well MW-11 was reported to be 42 ug/l for the baseline monitoring event. TCE concentrations have been stable at MW-11 since the baseline monitoring event. Cis-1,2-DCE and VC were reported to be present in monitoring well MW-11 for the baseline monitoring event with overall stable concentration trends during the reporting period. As summarized in Section 5.5.1, declined ORP values and slight declines in TCE at MW-11 indicate that the injections at AOC GW-6 and AOC GW-6 Strike may be providing treatment at MW-11. These VOC data trends demonstrate that the injectant slurry of potable groundwater at AOC GW-6 and AOC GW-6 Strike is not causing migration of existing contamination into undesired areas.

As presented in the Permit Application, the total iron concentration Site-wide arithmetic mean of 2,077 ug/l reported for the January 2002 baseline sampling event conducted as part of the CMS field investigations is considered indicative of naturally occurring concentrations for the Site.

As presented on Figure 7, the reported concentrations for total iron in the AOC GW-6 compliance monitoring wells MW-11 and GW-7 have fluctuated since the baseline monitoring event without exhibiting a pronounced increasing trend. The baseline monitoring event total iron concentrations for offsite monitoring

well GW-7 was non-detect (< 69.4 ug/l). As presented in the Permit Application, the naturally occurring total iron concentration of 2,280 ug/l was reported for GW-7 during the 2002 CMS Site-Wide sampling event and the high for the Year 2 period was 1,670 ug/l for the January 2016 (Y2Q3) monitoring event. This wide fluctuation of greater than an order of magnitude in total iron concentrations is indicative of Site-wide iron concentration fluctuations. These large fluctuations in total iron concentrations are attributed to the geology of the area as well as seasonal changes in groundwater levels and flow velocities. As presented on Figure 7, reported total iron concentrations for AOC GW-6 compliance monitoring GW-8 show a fluctuating trend throughout the Year 2 reporting period. A spike in iron concentrations to 2,060 ug/l occurred for the January 2016 (Y2Q3) monitoring event at GW-8 following the December 2016 injection event. However, all of the reported concentrations for GW-8 were less than the 2,077 ug/l Site wide arithmetic mean and the reported iron concentrations for the March 2016 (Y2Q3) event was 370 ug/l indicating any short term influence at GW-8 from injections is limited.

In summary, the compliance well monitoring results at AOC GW-6 and AOC GW-6 Strike for the reporting period do not indicate migration of injectants or the spread of the existing contamination as a result of injection activities. As allowed under the Permit monitoring of compliance monitoring wells for AOC GW-6 and GW-6 Strike will be reduced to semiannual monitoring during the Y3Q2 and Y3Q4 monitoring events.

5.4.2 AOC W-1

Since potable water is used to mix the injectant slurry AOC W-1 does not have a Compliance or Review Boundary. The Permit identified three monitoring wells (MW-9, GW-49I and GW-40I) to assess the potential migration of injectants and spread of the existing contamination as a result of injection activities.

As presented on Figure 4A and 5A, the reported concentrations for TCE and cis-1,2-DCE in the AOC W-1 compliance monitoring wells were reported to be less than the NC2L standards of 3 ug/l and 70 ug/l, respectively, for each event and concentration trends during the monitoring period were stable or declining.

As presented in the 2015 Annual Report, fluctuating VC concentrations were reported for compliance monitoring well GW-49I during the Year 1 monitoring period with a maximum reported concentration of 2.6 ug/l. During the Year 2 monitoring period VC was reported to be non-detect in compliance monitoring well GW-49I and upgradient monitoring well MW-9 for each of the monitoring events. VC concentrations were reported at GW-40I for the January 2016 (Y2Q3) and March 2016 (Y2Q4) monitoring events as well as in up-gradient injection well IW-36. As described in Section 5.5.4, VC concentrations are temporarily increasing at SWMU 15/16 Area as a result of the bio-degradation of TCE. The temporary presence of VC at GW-49I is a result of up-gradient increases of VC due to the effectiveness of the injection remedy at treating c-VOCs and not the spread of existing contamination as a result of injections. Due to the presence of VC in monitoring well GW-40I, the AOC W-1 compliance monitoring wells will continue to be monitored quarterly during the Year 3 monitoring period.

As presented on Figure 7, the reported concentrations for total iron in the off-site AOC W-1 compliance monitoring wells GW-49I and GW-40I have fluctuated since the baseline monitoring event without exhibiting an increasing trend and were less than the 2,077 ug/l Site wide arithmetic mean for each of the Year 2 monitoring events. Up-gradient monitoring well MW-9 total iron concentrations also fluctuated during the Year 2 reporting period with iron concentrations generally less than the Year 1 monitoring period.

In summary, the compliance well monitoring results at AOC W-1 for the reporting period do not indicate migration of injectants or the spread of the existing contamination as a result of injection activities. However, the AOC W-1 compliance monitoring wells will continue to be monitored quarterly during the Year 3 monitoring period to confirm that the presence of VC in monitoring well GW-49I is temporary and a result of the effectiveness of the injection remedy at treating c-VOCs and not the spread of contamination as a result of injections.

5.4.3 SWMU 13 and SWMU 15/16 Compliance Boundary Review

The Permit established a Compliance and Review Boundary around the combined Area of Influence/Waste Boundary for the SWMU 13 and SWMU 15/16 target injection zones. As specified by Permit Condition VIII (3) the Compliance Boundary applies only to the constituents of the injectant slurry (i.e. extracted groundwater and ZVI) and does not apply to existing groundwater impacts. The Permit identified eight monitoring wells (GW-1A, GW-1A-D, GW-18S, MW-10, MW-12, GW-30S, GW-30I and MW-13) to be monitored to assess the potential migration of injectants and spread of the existing contamination as a result of injection activities.

As presented on Figure 4A and Figure 4B, the trends for reported concentrations for TCE in the SWMU 13 and SWMU 15/16 compliance monitoring include:

- GW-30S, GW-30I, MW-10, MW-12 and GW-1A TCE concentrations were reported to be less than the NC2L standard for all four quarterly monitoring events;
- MW-13 TCE concentrations were reported to be greater than the NC2L standard for the baseline monitoring event (20 ug/l) as presented in the 2015 Annual Report. TCE concentrations at MW-13 continued to fluctuate during the Year 2 monitoring period with the reported results for the Y2Q2 through Y2Q4 results ranging from 21 to 28 ug/l. Historical trends prior to the baseline event do not exist for MW-13 since it was installed in 2012 as part of the remedy construction;
- GW-18S TCE concentrations were reported to be above the NC2L standard for the baseline event (27 ug/l). TCE concentrations at GW-18S were similar to the baseline concentrations ranging between 20 to 22 ug/l; and,
- GW-1A-D TCE concentrations were reported to be above the NC2L standard (8 ug/l) for the baseline event. TCE concentrations at GW-1A-D were less than the baseline concentrations ranging 2.2 to 3 ug/l at or below the NC2L standard of 3 ug/l during the Year 2 monitoring period.

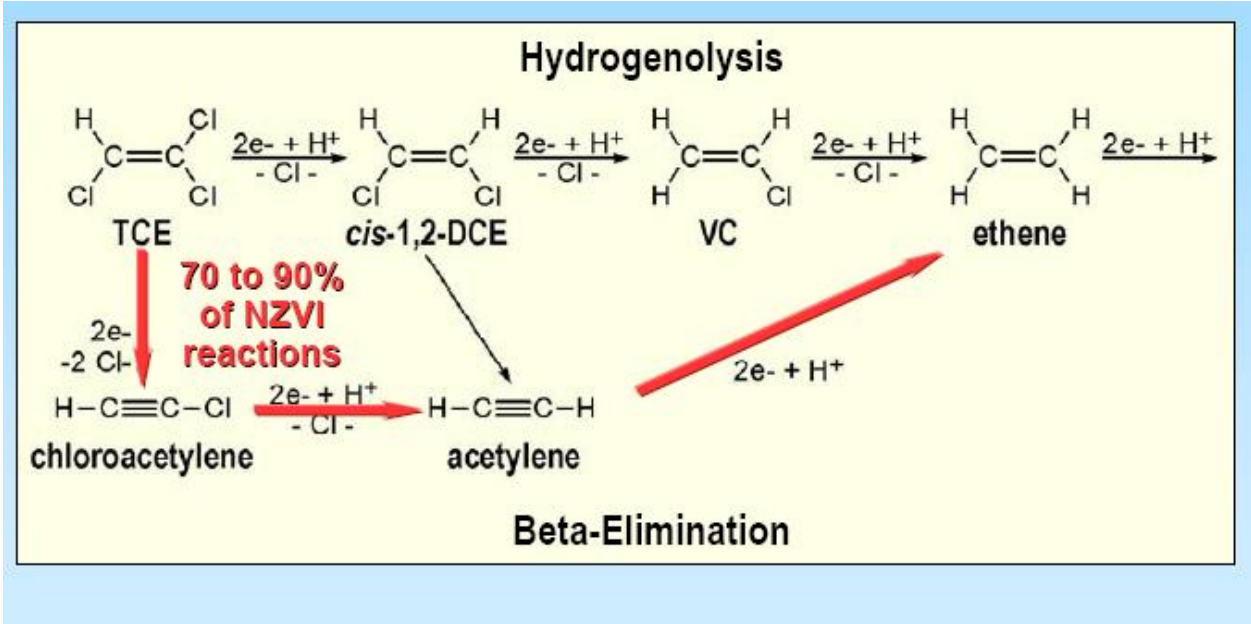
Similar trends to TCE exist for breakdown compounds cis-1,2-DCE as presented on Figures 5A and 5B. Increases in VC for the Year 2 monitoring period compared to the Year 1 monitoring period were observed downgradient to SWMU 13 in shallow monitoring well MW-13, downgradient deep compliance monitoring well GW-30I and side-gradient to SWMU 13 in deep compliance monitoring well GW-1AD. C-VOCs have historically been detected at each of these wells as a result of existing contamination at SWMU 13. As described above these compliance monitoring wells are showing slight declines in parent compounds TCE (GW-30I, MW-19 and GW-1AD) and it's breakdown product cis-1,2-DCE in select wells (GW-30I and GW-1AD). The temporary increases in VC correspond are a result of the biodegradation of TCE and other c-VOCs due to the effectiveness of the remedy and not the spread of contamination as a result of injection activities. Due to these increases in VC, the SWMU 13 and 15/16 compliance monitoring wells will continue to be monitored quarterly during the Year 3 monitoring period.

As presented on Figure 7, the reported concentrations for total iron in the SWMU 13 and SWMU 15/16 compliance monitoring wells fluctuated during the Year 2 monitoring period without exhibiting significantly increasing trends. GW-1A and GW-1A-D showed a decline in iron concentrations from the Year 1 annual monitoring event most likely as a result of well development performed at these wells as recommended in the 2015 Annual Report. With the exception of MW-12 (2,830 ug/l) the reported iron results for the March 2016 (Y2Q4) monitoring event were less than the Site-wide arithmetic mean of 2,077 ug/l.

In summary, a review of the Compliance Boundary monitoring results for the reporting period do not indicate migration of injectants or the spread of the existing contamination as a result of injection activities. However, the SWMU 13 and SWMU 15/16 compliance monitoring wells will continue to be monitored quarterly during the Year 3 monitoring period to confirm that the increase of VC in monitoring wells MW-13, GW-30I and GW-1AD is temporary and a result of the effectiveness of the injection remedy at treating c-VOCs and not the spread of contamination as a result of injections.

5.5 Review of Remedy Performance

The ZVI remedy was selected based on its demonstrated ability to treat c-VOCs such as TCE, the primary c-VOC at the Site. Based on extensive testing and field scale implementation of ZVI remedies the breakdown pathways for TCE are presented in the graph below:



As presented above, anaerobic biodegradation of TCE proceeds in a stepwise removal of chlorine atoms until degradation is complete resulting in ethene. Intermediate steps during bio-degradation of TCE include cis-1,2-dichloroethene (cis-1,2-DCE) and VC, whereas, nZVI or ZVI reactions proceed predominately along a degradation pathway that does not produce VC but also ends in the production of ethene.

5.5.1 AOC GW-6

As presented in the 2015 Annual Report, TCE is the primary c-VOC targeted for treatment at the AOC GW-6 Area. Monitoring well GW-32S is located up-gradient of AOC GW-6 injection wells and TCE concentrations were unaffected by injections completed during the injections completed during the Year 1 period. As recommended in the 2015 Annual Report, injections were initiated at GW-32S during the sixth injection event completed in December 2015.

As presented on Figure 4A, TCE concentrations continued to decline during the Year 2 monitoring period. At GW-6 TCE concentrations have declined from the baseline monitoring result for TCE of 47 ug/l to below the NC2L standard of 3 ug/l as reported for the Y2Q3 and Y2Q4 monitoring events. GW-32S and MW-11 have shown slower declines in TCE concentrations while the remaining wells within the monitoring network were less than the NC2L standard for TCE. The decline in TCE concentrations in the AOC GW-6 Area can be attributed to the stimulation of anaerobic biodegradation as a result of the injection of sodium lactate at AOC GW-6, including the first injection at GW-32S, in December 2015 during the sixth injection event based on the following observations:

- An increase in the presence of breakdown compounds cis-1,2 DCE at GW-6, GW-32S and MW-11 and VC at GW-6 and MW-11. The concentrations of VC at GW-6 increased during the monitoring period from 1.6 ug/l during the second monitoring event to 23 ug/l during the fourth monitoring event. Injections were not performed in IW-35 during the sixth

injection event and IW-35 was sampled during the third and fourth monitoring event to evaluate the potential migration of VC downgradient in the offsite direction. As presented on Figure 6A, reported VC concentrations at GW-6 for the third and fourth monitoring event were consistent with historical concentrations;

- Post injection event TOC concentrations for the third and fourth monitoring event of the period for GW-32S were 660 mg/l and 22 mg/l, which are substantially elevated compared to historic values for the AOC GW-6 monitoring well network of below 5 mg/l. Increases of TOC were not observed at GW-6 or MW-11;
- Negative ORP values at GW-32S, GW-6 and MW-11 compared to historic positive values; and,
- Low concentrations of ethene (IW-35) and ethane (GW-32S, IW-35 and MW-11) were observed during the third monitoring event of the period.

5.5.2 AOC GW-6 Strike

As presented in the Permit Application, TCE is the primary c-VOC targeted for treatment at the AOC GW-6 Strike Area. The baseline monitoring TCE results for IW-30 (23 ug/l) were the highest reported for AOC GW-6 Strike. Declines in TCE concentrations at IW-30 have occurred to less than the detection limit of 0.15 mg/l for the Y2Q4 monitoring event.

TCE concentrations at monitoring wells GW-36S (14 ug/l) and MW-B111 (6.7 ug/l) were above the NC2L standard of 3 ug/l for the Y2Q4 monitoring event. Slight increases in TCE breakdown compounds cis-1,2-DCE and VC in GW-36S and MW-B111 indicate degradation is occurring at these locations. ORP trend graphs presented in Appendix H show fluctuating ORP values in GW-36S and MW-B-111 with an overall negative trend from the injections. TOC concentrations at GW-36S (3.6 mg/l for Y2Q4) were less than the target concentration of 20 mg/l.

It is recommended that semi-annual injections of sodium lactate be continued at the AOC GW-6 Strike Area.

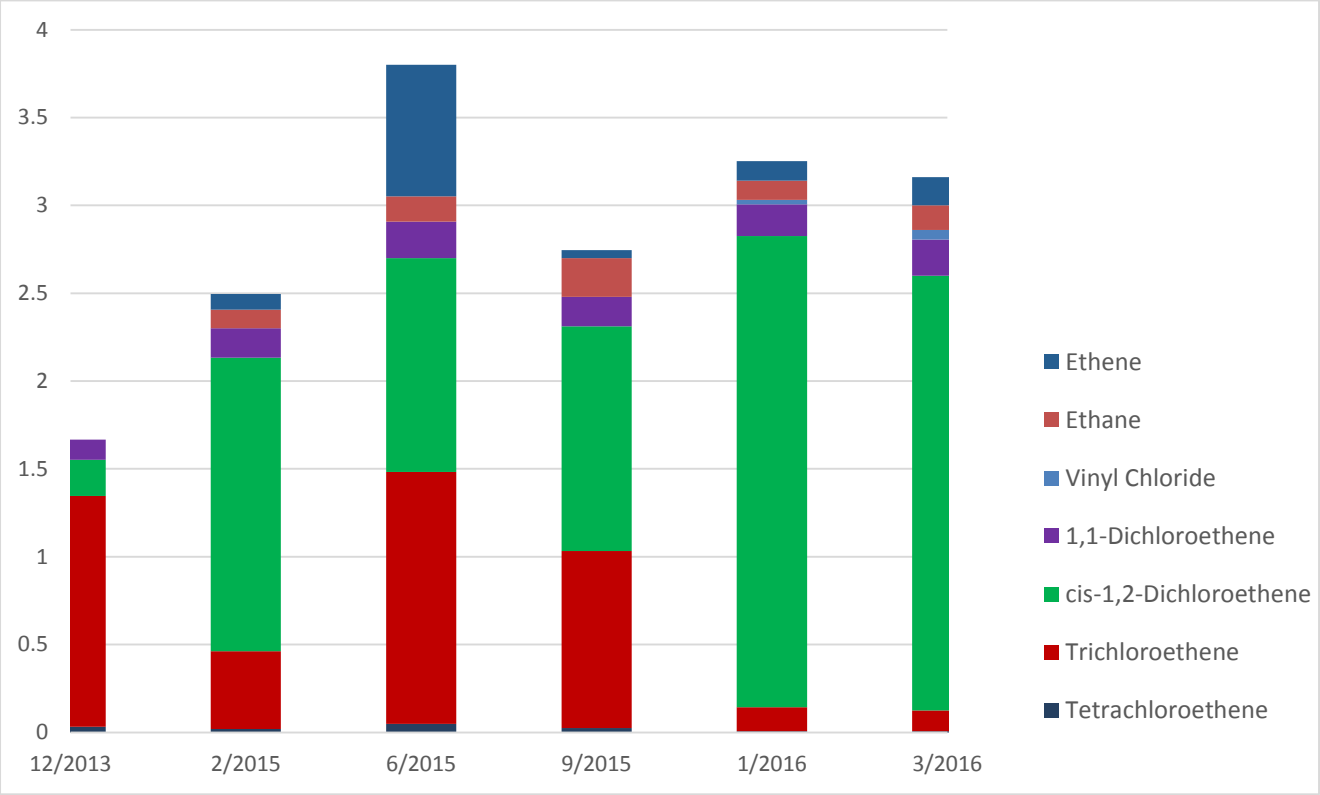
5.5.3 AOC W-1

As presented in the Permit Application, TCE is the primary c-VOC targeted for treatment at the AOC W-1 Area. The baseline monitoring result for TCE at W-1 (170 ug/l) was higher than the historical maximum reported result of 110 ug/l. The baseline concentration for TCE at IW-36 was reported to be 86 ug/l.

TCE concentrations at IW-36 declined during the Year 2 monitoring period from 94 ug/l (Y2Q1) to 7.7 ug/l (Y2Q4). While concentrations for TCE declined at W-1 from 160 ug/l (Y2Q1) to 130 ug/l (Y2Q4) the decline in TCE lagged that of the nearby injection well IW-36. As presented on Figure 5A, corresponding increases in cis-1,2-DCE were reported for IW-36 as a result of bio-degradation of TCE. While TCE concentrations declined at W-1, concentrations for cis-1,2-DCE at W-1 were constant during the Year 2 monitoring period. As presented in Appendix H, ORP trends at both IW-36 and W-1 continued to decline from baseline ORP values.

As recommended in the 2015 Annual Report, pressure transducers were temporarily installed in monitoring wells MW-9 and W-1 during the March 2015 injection event. As presented in H, observed water level fluctuations at W-1 during and following injection at IW-36 confirmed the presence of a hydraulic connection between IW-36 and W-1.

IW-36 c-VOC Carbon Molar Trend (micro-mole/liter)



TOC concentrations at IW-36 and W-1 were less than 5 mg/l and below the target concentration of 20 mg/l for sustained biodegradation. Increases of methane concentrations in IW-36 from 0.22 to 1.88 mg/l throughout the Year 2 period indicate that the availability of a carbon source in the treatment area is increasing and being consumed.

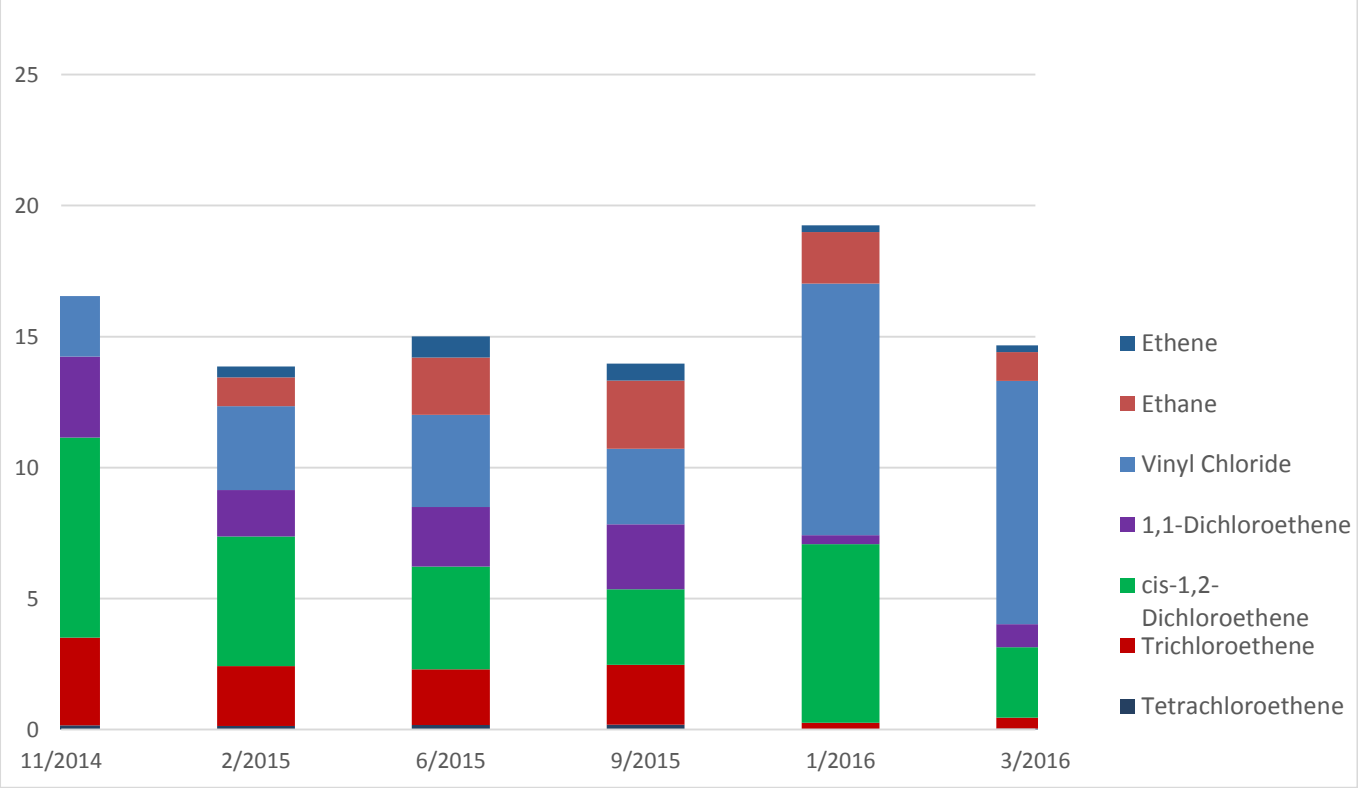
Based on the monitoring results for AOC W-1 it is recommended that semi-annual injections at IW-36 be continued to provide additional carbon source for continued treatment of the AOC W-1 Area. While pressure transducers installed during injection events during Year 2 indicate a hydraulic connection between W-1 and IW-36 during injections, the lag in treatment results may indicate that W-1 has a greater hydraulic connection via fractures to the upgradient contamination than IW-36. If IW-36 concentrations achieve cleanup standards and declines in W-1 continue to lag, the benefits of injecting in W-1 with the use of IW-36 as a monitoring well should be evaluated during future reporting periods.

5.5.4 SWMU 15/16

As presented in the Permit Application, TCE is the primary c-VOC targeted for treatment at the SWMU 15/16 Area. As presented in the 2015 Annual Report, the maximum reported baseline monitoring results for TCE at the SWMU 15/16 area were 820 ug/l and 810 ug/l respectively for IW-28 and GW-16S. c-VOCs continue to decline at SWMU 15/16 area as a result of injections with the greatest reductions noted below.

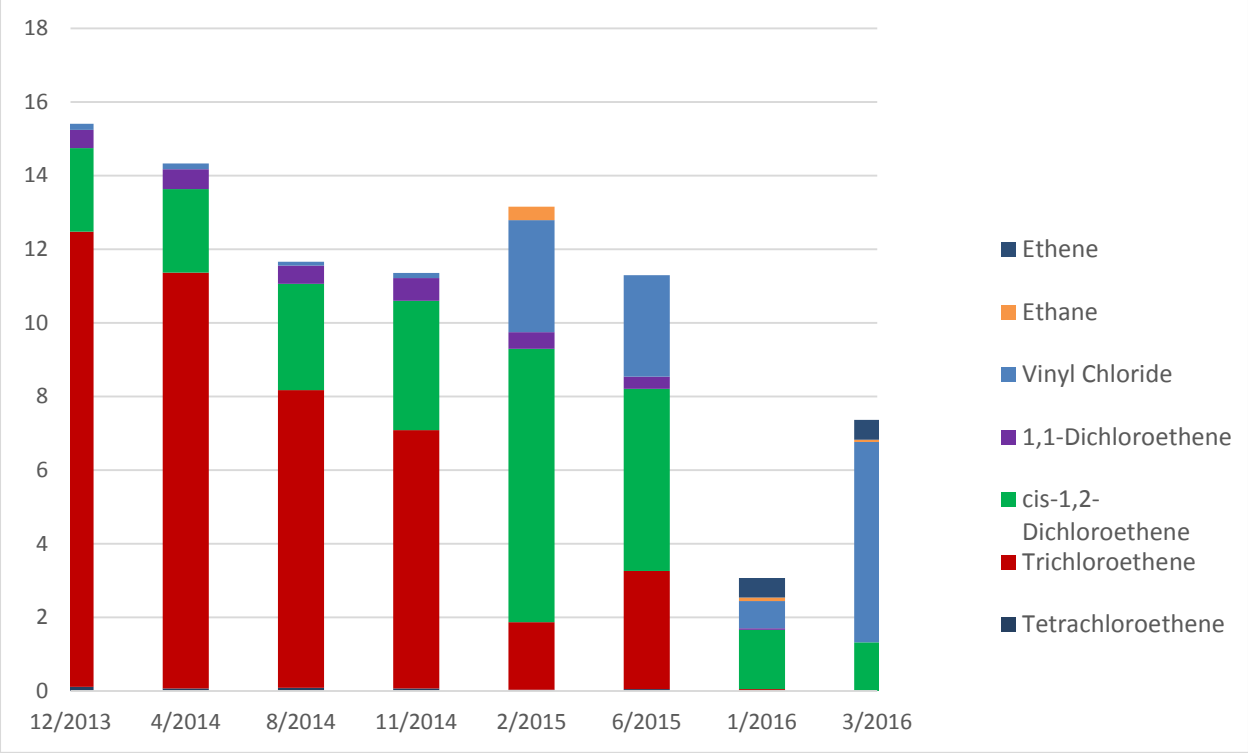
TCE concentrations at GW-41SR continued to decline from initial sampling in November 2014 of 220 ug/l to 28 ug/l for the March 2016 (Y2Q4) monitoring event. As presented on Figures 5A and 6A, after initial increase following injections, cis-1,2-DCE has started to decline while VC concentrations have increased at GW-41SR as presented below:

GW-41SR c-VOC Carbon Molar Trend (micro-mole/liter)



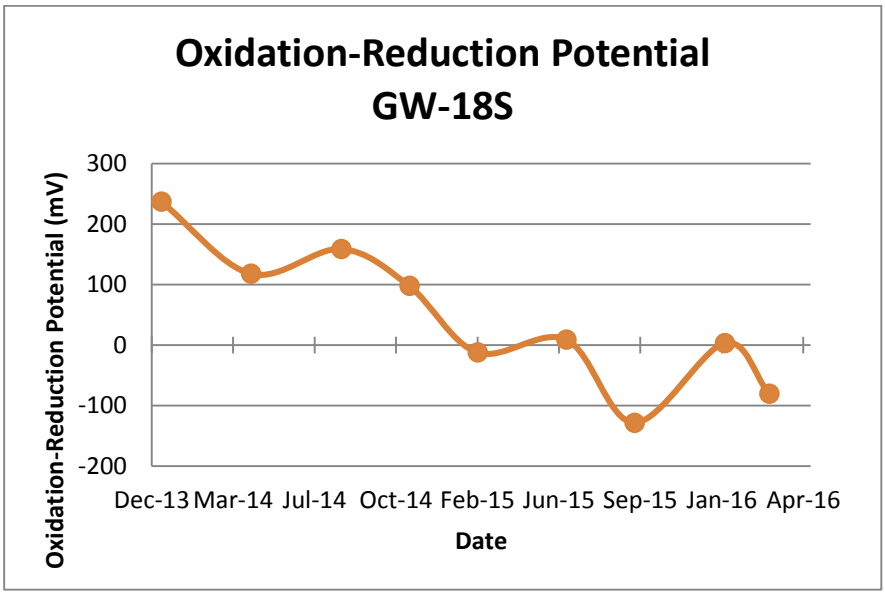
TCE concentrations at GW-16S continued to decline from the baseline concentration of 810 ug/l to a reported concentration of 12 ug/l for the March 2016 (Y2Q4) monitoring event. As presented on the graph below, after initial increase following injections, cis-1,2-DCE concentrations have started to decline while VC concentrations have continued to increase and c-VOCs have declined overall.

GW-16S c-VOC Carbon Molar Trend (micro-mole/liter)



TCE concentrations at IW-25 for the February 2015 monitoring event of 240 ug/l declined to 130 ug/l for the March 2016 (Y2Q4) monitoring event. As presented on Figure 4A, IW-25 is located adjacent to the limits of the SWMU 15/16 excavation activities. As presented on Figures 5A and 6A, after initial increases following injections, cis-1,2-DCE and VC have started to decline at IW-25.

TCE concentration in downgradient monitoring well GW-18S have remained relatively stable at around 20 ug/l. However, the presence of low concentrations of 1,2-DCE (approximately 5 ug/l) and declining ORP at GW-18S as presented below indicate that biodegradation is occurring, although at a reduced rate compared to up-gradient locations.



As recommended in the 2015 Annual Report, a microcosm study was completed at SWMU 15/16 (GW-16S) to evaluate if an inoculation of micro-organisms and injections of sodium lactate are needed to enhance bioremediation of the c-VOCs. As presented in Table 10, the results of the microcosm study indicated that additional sources of carbon should increase the rate of biodegradation of c-VOCs and that the existing micro-organism population should be sufficient and injections of micro-organisms may not be required at this time.

TOC concentrations, presented in Appendix D, were above the target of 20 mg/l for GW-16S following the December 2015 injection event with reported concentrations of 890 mg/l and 80 mg/l for the January (Y2Q3) and March 2016 (Y2Q4) monitoring events. TOC concentrations at GW-41SR and GW-18S remained below the target of 20 mg/l with negligible increases of TOC occurring following the December injection event indicating that bio-degradation rates could be limited by the availability of carbon.

Based on the available data the SWMU 15/16 injection well network is sufficient and continued injections are recommended. Quarterly injections of sodium lactate should be continued at SWMU 15/16 with adjustments made to the quantity of sodium lactate as needed until TOC concentrations are consistently maintained at concentrations above the target of 20 mg/l.

5.5.5 SWMU 13 Shallow Treatment Zone

As presented in the Permit Application, TCE is the primary c-VOC targeted for treatment at the Site and historically was reported to be present at concentrations exceeding 160,000 ug/l at SWMU 13.

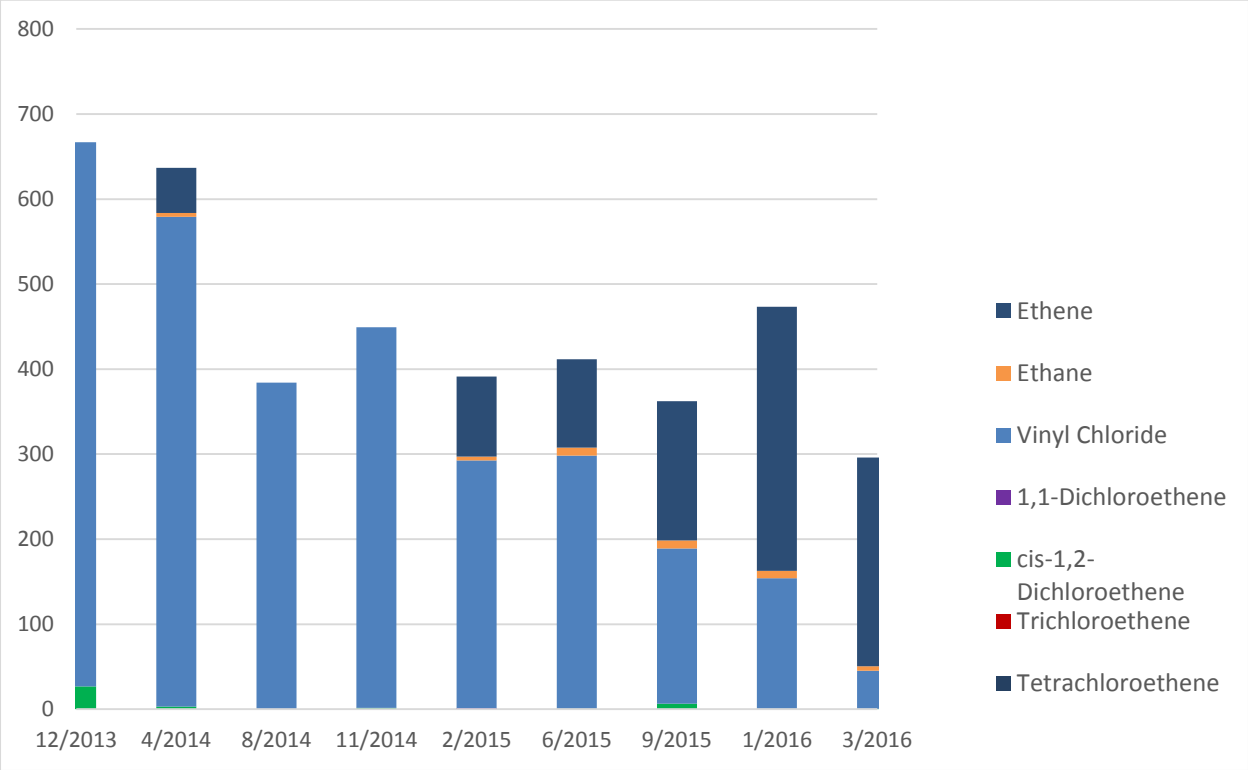
As presented on Figure 4A, the TCE concentrations in the SWMU 13 shallow groundwater zone are declining as a result of injections, and the extent of exceedances of the NC2L standard of 3.0 ug/l is

shrinking, both BR-1 and BR-2 reported for the March 2016 (Y2Q4) monitoring event to be less than the NC2L. Since the initiation of injections, an order of magnitude or greater decline in TCE concentrations were reported for wells within (BR-1, BR-2, BR-3) and immediately down-gradient to the north (IW-10, IW-11 and IW-18), west (IW-06 and GW-14S), and east (IW-14) of the former disposal trenches. As presented in the 2015 Annual Report, concentrations of TCE at IW-12 were stable during the first year of monitoring. As presented on Figure 4A, TCE concentrations declined at IW-12 by approximately an order of magnitude during the second year of injections as reductions in c-VOC mass in the vicinity of the former disposal trenches continues.

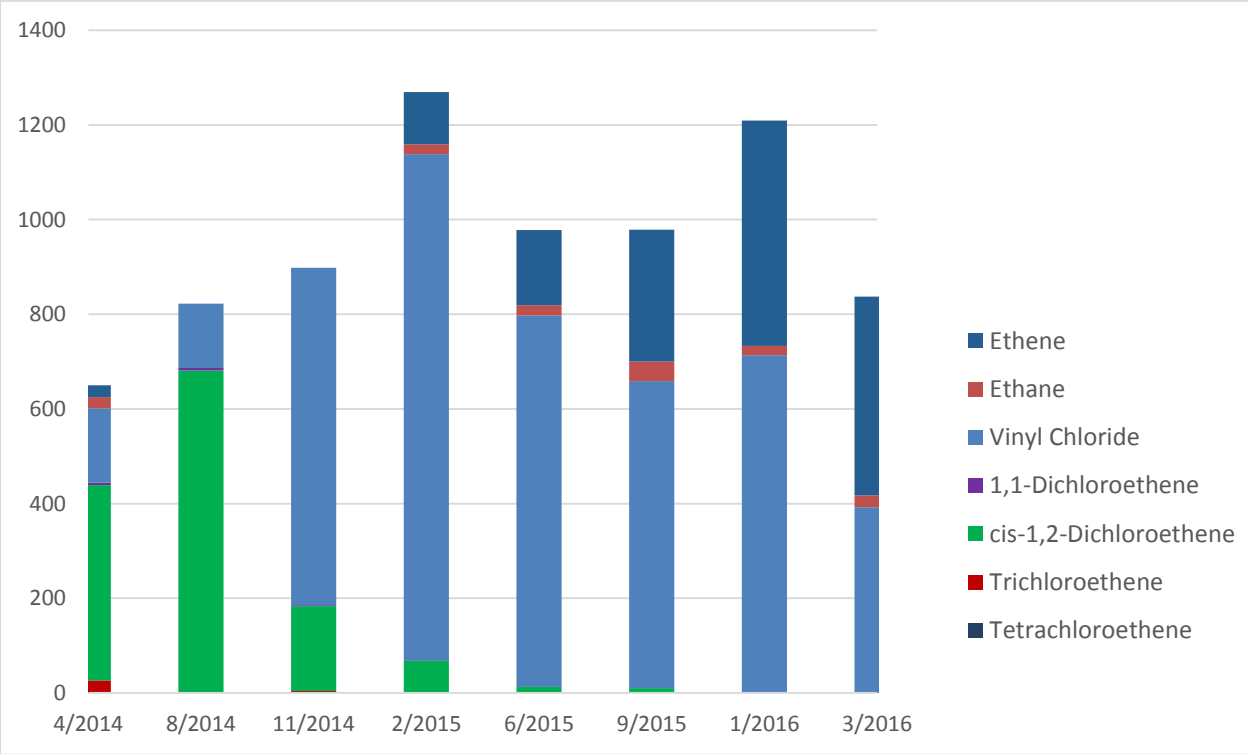
As presented in the 2015 Annual Report, for the baseline monitoring event the greatest TCE groundwater concentrations in the SWMU 13 shallow zone were reported further down-gradient to the northeast within the vicinity of BNP-1/IW-17, GW-4, BNP-2 and IW-16. As presented on Figure 4A, during the second year of injections, TCE concentrations at IW-16 declined by an order of magnitude (39,000 ug/l to 3,100 ug/l) and BNP-2, located downgradient of IW-16, declined by 20,000 ug/l (38,000 ug/l to 18,000 ug/l). These declines at IW-16 and BNP-2 correspond with continued declines in TCE in downgradient well BNP-4 and side gradient well IW-18. As presented on Figures 5A and 6A, corresponding increases in concentrations of TCE breakdown product cis-1,2-DCE occurred at IW-16 and BNP-2 as a result of biodegradation of TCE. As presented on Figure 5A, with the exception of the increase of cis-1,2-DCE at IW-16 and BNP-2, the concentrations of the first breakdown product of TCE in the SWMU 13 shallow zone are declining as a result of the reduced concentrations of TCE.

Increases in ethene gases were observed in wells GW-22S (see graph below), IW-16, and BNP-4 as a result of the availability of carbon sources from the injection of sodium lactate. TOC concentrations, presented in Appendix D, were above the target of 20 mg/l for the majority of the SWM-13 wells including GW-22S, IW-16 and BNP-4. TOC concentrations at wells GW-20S and GW-4 were below the target of 20 mg/l. With continued injections of sodium lactate at GW-4/IW-04 and IW-02, located up-gradient of GW-20S, it is expected that increased TOC concentrations, ethane gases, and bio-degradation will be observed during the next reporting period. As represented below by GW-22S and BNP-4, an overall decline in c-VOCs was observed for the reporting period.

GW-22S c-VOC Carbon Molar Trend (micro-mole/liter)

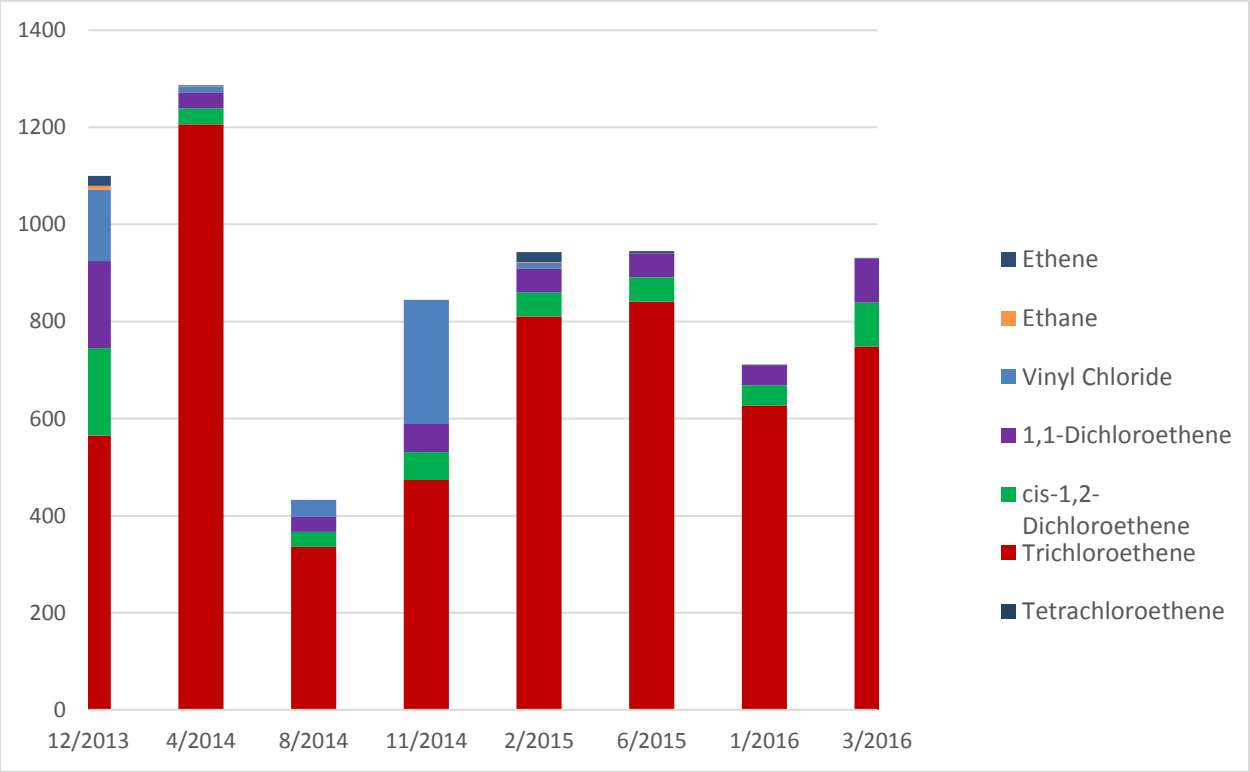


BNP-4 c-VOC Carbon Molar Trend (micro-mole/liter)



During the first year of injections, the most notable decline in total mass of TCE was at BNP-1/IW-17 with a decline from a baseline concentration of 110,000 ug/l to 39,000 ug/l reported. However, during the second year of injections concentrations of TCE at BNP-1/IW-17 rebounded with the reported concentrations for the March 2016 (Y2Q4) monitoring event of 82,000 ug/l. As presented below, TCE concentrations in GW-4 showed a fluctuating but stable c-VOC molar trend as a result of pumping in nearby EW-2 and temporary pumping from GW-4.

GW-4 - c-VOC Carbon Molar Trend (micro-mole/liter)

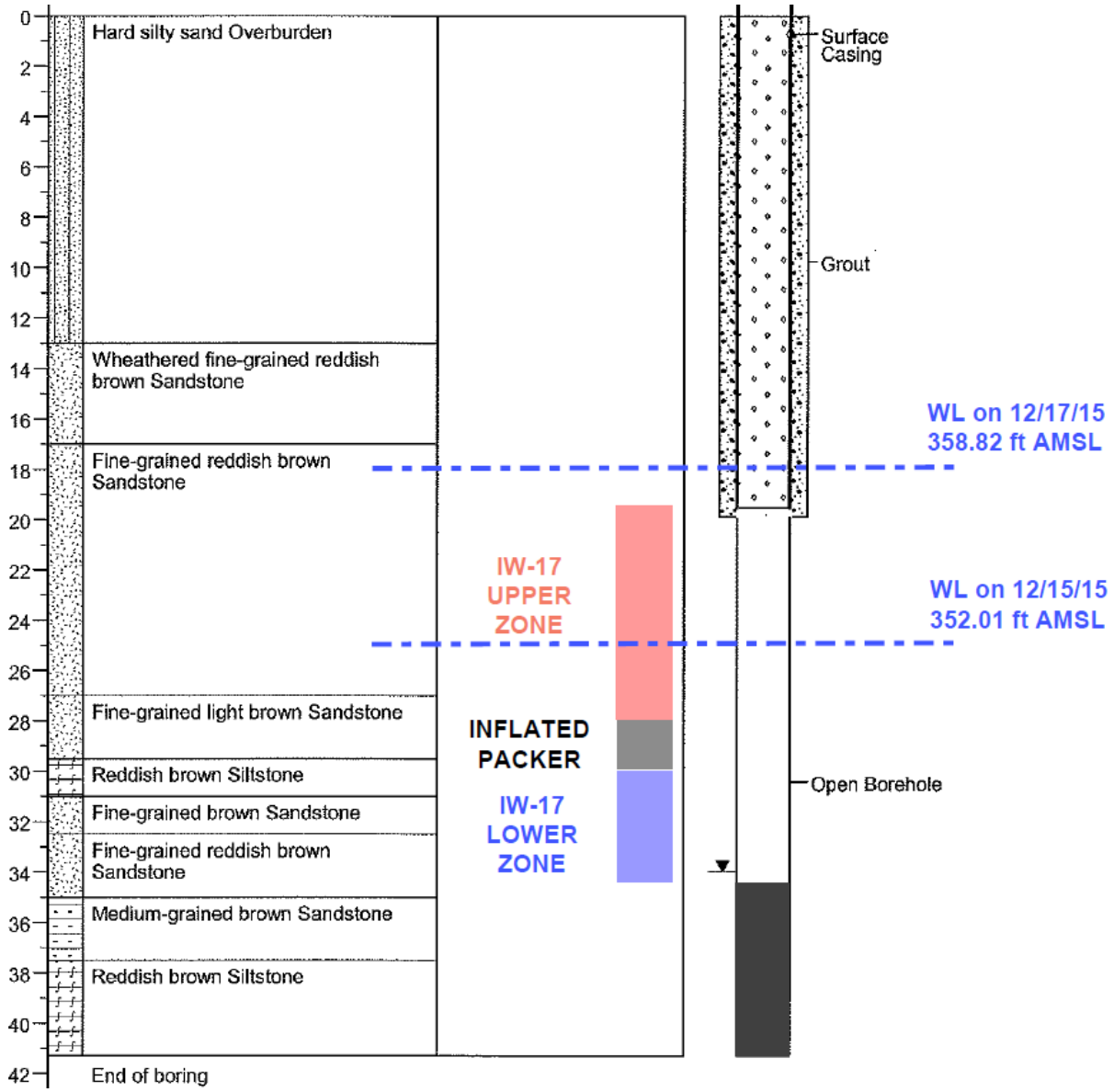


The potential causes of the rebounding of TCE concentrations at IW-17/BNP-1 and generally constant TCE concentrations at GW-4 were evaluated for potential improvements to the remedy. As presented on Figure 4 of the Permit Application, the targeted injection zone in this area is the H3SS sandstone and the H2SLT siltstone located beneath the H3SS sandstone. As presented on Figure 4 of the Permit Application, monitoring well P-5, located up-gradient to IW-17/BNP-1 and GW-4, located downgradient to IW-17/BNP-1, are located in the H3SS sandstone and has historically had elevated concentrations of c-VOCs.

As presented in the CM Design, gravity feed injections at IW-17/BNP-1 completed during the August 2008 pilot test were completed over a two day period. During the August 2008 pilot test influences were observed at P-5 including visual evidence of iron particles and reductions in ORP following the second day of

injections. Transport slurry times to P-5 during the 2008 pilot test were significantly longer than times to other wells likely due to low hydraulic conductivity. The initial full scale injection at IW-17/BNP-1 completed in February of 2014, similar to the 2008 pilot test, was completed by gravity feed. As discussed above a significant decline in c-VOC concentrations were observed at IW-17/BNP-1 following the gravity feed injection. Since February 2014, the injections at IW-17/BNP-1 have been completed under pressure using a packer located within the open borehole.

As presented below, in December of 2015 the packer was installed at the depth the packer was placed for the majority of the injection events completed since February of 2014. The packer remained in IW-17/BNP-1 for two days prior to collecting samples for VOCs from above and below the packer. As presented below and in Table 11, TCE concentrations above the packer (97,000 ug/l) were an order of magnitude greater than below the packer (4,100 ug/l) and similar to TCE concentrations measured at P-5 during the January 2016 monitoring event (64,000 ug/l). As presented below and in Table 11, concentrations of TCE below the packer are similar to reported concentrations in IW-16 of 560 ug/l for the January 2016 (Y2Q3) groundwater monitoring event, which is consistent with injection influences observed between the two wells during injection events. As presented in Table 11, a comparison of the concentrations of breakdown products cis-1,2-DCE and vinyl chloride above (upper zone) and below (lower zone) the packer indicate that treatment in the lower zone is occurring at a greater rate than the upper zone. Based on these monitoring results, it is believed there is a low hydraulic connection between P-5, IW-17/BNP-1, and GW-4 in an upper sandstone that is connected to the contamination underlying the former disposal trenches. This connection should be targeted for treatment of this mass by injections and, if needed, mass removal by groundwater extraction. As presented on Figure 9, shallow injection well (unconstructed contingent well IW-07) should be installed within this zone at a location up-gradient to IW-17/BNP-1. If additional treatment is needed at this location, contingent well IW-13 should also be installed. Injections at proposed IW-07 should initially include micro-ZVI to address the elevated concentrations of c-VOCs in this unit. IW-17/BNP-1 should be permitted as a contingent extraction well (EW-5) to facilitate mass removal if warranted based on future monitoring results.



Analytes	Concentration (ug/L)			
	IW-17 Upper 12/17/2015	IW-17 Lower 12/17/2015	P-5 1/25/2016	GW-4 1/26/2016
Vinyl Chloride	450	3,400	3,200	8.6
1,1-DCE	980	260	ND	140
cis-1,2-DCE	51,000	29,000	60,000	2,000
Chloroform	19,000	2,500	10,000	1,700
1,2-DCA	11,000	3,700	14,000	1,200
TCE	97,000	4,100	64,000	41,000
PCE	170	ND	490	120

As described in Appendix A, an SVE system is operated within the former disposal trenches for the remediation of VOCs at the bedrock interface using fracture enhanced Soil Vapor Extraction (SVE) wells to remove VOCs at the bedrock interface. Shallow hydraulic fractures were created at 11 SVE well locations in and around the SWMU-13 cap (HF-1 through HF-11 as shown on Figure 9). The SVE wells were constructed in accordance with a Class 5Z Application Permit to Construct Enhanced Soil Vapor Extraction Wells (Golder Associates, August 2011) and the approved Injection Permit WI0500421 issued by the NCDENR Aquifer Protection Section, UIC Injection Control Program on September 26, 2011. As discussed in Appendix A, the performance of the SVE system during the late fall to early spring months is limited due to the accumulation of perched water in the bedrock interface and the hydraulic fractures. It is proposed that the Permit be modified to include an annual injection of sodium lactate be performed in the SVE wells in the late fall to introduce a carbon source to the residual underlying contamination.

As recommended in the 2015 Annual Report, a microcosm study was completed at SWMU 13 shallow (GW-4) to evaluate if an inoculation of micro-bacteria and injections of sodium lactate are needed to enhance bioremediation of the c-VOCs. As presented on Table 10, the results of microcosm indicated that additional sources of carbon should increase the rate of biodegradation of c-VOCs and that the existing micro-organism population should be sufficient, thus injections of micro-bacteria may not be required.

As presented in Appendix D, ethane gases are present side-gradient (IW-18 and IW-16) and down-gradient (BNP-4, GW-20S and GW-22S) of GW-4 and IW-17/BNP-1 indicating that degradation of chlorinated alkanes is occurring. However, concentrations of chloroform are present at IW-17/BNP-1 and GW-4 which may inhibit existing micro-organisms as shown by the relatively low concentrations of ethane and ethene gases present at GW-4 and IW-17/BNP-1. With NCDEQ's November 20, 2015 approval, an inoculation of RTB-1 (TCA-20) bacteria was performed at SWMU 13 during the December 2015 injection event. The TCA-20 bacteria includes bacteria for targeting chlorinated alkanes including 1,1,2,2-Tetrachloroethane (PCA), 1,1-DCA and chloroform. While the groundwater monitoring data demonstrates that the injections of sodium lactate are stimulating biological degradation processes in the SMWU 13 shallow zone, the inoculation of TCA-20 did not enhance degradation of chloroform at IW-17/BNP-1 or GW-4.

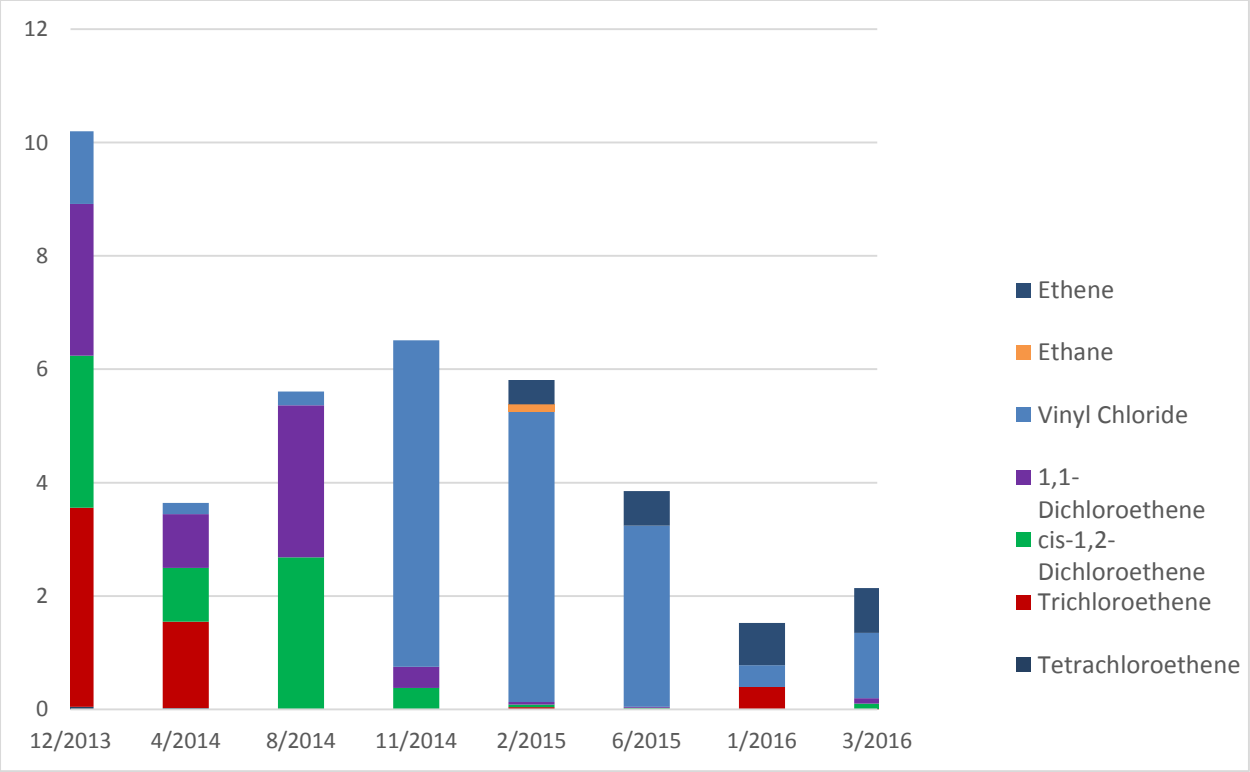
In summary, groundwater monitoring trends demonstrate that the injections are effectively reducing the c-VOC mass downgradient of the former disposal trenches. Sodium lactate injections should be continued to maintain TOC concentrations and micro-scale ZVI should periodically be injected at IW-17/BNP-1 and the proposed shallow injection well IW-07. Annual injections in the hydraulically fractured SVE wells should be performed to introduce available carbon to any residual contamination underlying the former disposal trenches. Additional injections for micro-organisms to enhance chlorinated alkane biodegradation in the SWMU 13 shallow zone maybe required.

5.5.6 SWMU 13 Deep Treatment Zone

As presented on Figure 4B, TCE concentrations in the SWMU 13 deep groundwater zone are declining as a result of injections. The greatest remaining concentration of TCE in the SWMU 13 deep zone was reported for the Y2Q4 monitoring event at well P-6 (91 ug/l). P-6 is located down-gradient of the former disposal trenches and has shown a decline in TCE concentrations but is lagging other locations such as GW-4I which declined from a baseline concentration of 230 ug/l to 0.4 ug/l for the Y2Q4 monitoring event. As presented on Figure 5B and the molar trend for GW-4I below, TCE breakdown products cis-1,2-DCE declined during the Year 2 period after showing increasing concentrations during the Year 1 period. These reductions in breakdown concentrations is an expected result of the overall reduction of TCE in the SWMU 13 deep zone. As presented on Figure 6B, VC concentrations were observed down-gradient of the former disposal trenches with the greatest concentrations in the vicinity of GW-4I and IW-12D with VC concentrations increasing at IW-12D. VC concentrations at GW-4I declined during the Year 2 monitoring period (36 ug/l for Y2Q4) compared to peak concentrations during the Year 1 monitoring period (180 ug/l for Y1Q3).

In summary, as represented by GW-4I below, c-VOCs at GW-4I are showing a declining trend in the SWMU 13 deep zone.

GW-4I c-VOC Carbon Molar Trend (micro-mole/liter)



TOC concentrations at P-6 and GW-4I for the Y2Q3 and Y2Q4 event were less than 5 mg/l and below the target concentration of 20 mg/l for sustained biodegradation. The presence of methane in P-6 and GW-4I throughout the Year 2 period indicate the availability of a carbon source in the treatment area that is being consumed.

As recommended in the 2015 Annual Report, a microcosm study was completed at SWMU 13 Deep (GW-4I) to evaluate if an inoculation of micro-bacteria and injections of sodium lactate are needed to enhance bioremediation of the c-VOCs. As presented on Table 10, the results of the microcosm study indicated that additional sources of carbon should increase the rate of biodegradation of c-VOCs and that the existing micro-organism population should be sufficient such that injections of micro-organisms is not required.

If concentration reductions of TCE continue to lag at P-6 and IW-36 concentrations achieve the NC2L the benefits of injecting in P-6 should be evaluated during future reporting periods. It is recommended that the permit renewal incorporate the flexibility for future injections at P-6. If injections are to be performed at P-6, IW-08D can be used to evaluate the performance of the remedy as a replacement to P-6 as part of the CM Design monitoring well program.

Based on the available data, the SWMU 13 deep groundwater zone injection well network is sufficient as currently configured and injections of sodium lactate will be continued on a semi-annual basis.

5.5.7 SWMU 4 (GW-53S)

The CMS approved remedy for SWMU 4 was excavation of soils (previously completed) and MNA for groundwater. Monitoring well GW-53S was sampled during the four quarterly monitoring events for Year 2. The following exceedances of the NC2L standard were reported:

- Benzene exceeded the NC2L standard of 1 ug/l during the June 2015 [Y2Q1] and March 2016 [Y2Q4] events with reported concentrations of 1.9 ug/L and 3.6 ug/L, respectively. The reported concentration was below the 2L standard during Y2Q2 and was not detected in the Y2Q3 monitoring event;

GW-53S will continue to be monitored for VOCs in accordance with CM Design.

5.6 Non-Chlorinated VOC's and Semi-VOCs

5.6.1 BETX Compounds

As presented in the 2015 Annual Report benzene exceedances of the NC2L standard of 1 ug/l are reported for onsite monitoring wells within the areas of c-VOC groundwater impacts. Appendix H presents benzene concentration trends for wells with exceedances of the NC2L standard at the SWMU 13, SWMU 15/16 and SWMU 4 areas.

Benzene concentrations for SWMU 13 throughout the reporting period remained either stable with appreciable declines in several wells (IW-12, IW-14, IW-18 and BNP-2). While these trends indicate that some form of biodegradation of benzene is occurring as part of the reductive de-chlorination processes, benzene is typically treated using aerobic biological processes. Polishing for benzene will likely be required following the completion of long term treatment for c-VOCs. It is recommended that the permit be modified to allow for the future injection of activated persulfate to treat benzene. The benefit of using persulfate is that a byproduct of the initial abiotic reaction (benzene oxidation) is sulfate, which can then be utilized as an electron acceptor by indigenous microbes capable of coupling sulfate reduction to benzene oxidation.

5.6.2 Methyl Ethyl Ketone (2-Butanone)

As discussed in the 2015 Annual Report, Methyl Ethyl Ketone (MEK) or 2-butanone was reported at concentrations above the NC 2L Standards in injection wells IW-10D and IW-30 for the baseline sampling event. It is suspected that the presence of MEK was the result of glues used to make repairs to PVC piping associated with the injection well heads. MEK concentrations in IW-30 and IW-10D have remained below the NC2L standards since the July 2014 monitoring event.

5.6.3 Semi-VOCs

As presented on Figure 2, GW-4 was sampled for Semi-Volatile Organic Compounds (SVOCs) during the Year 2 annual sampling event in March 2016 (Y2Q4). As presented in Appendix D, the reported SVOC results for GW-4 for the Year 2 annual sampling event were below the NC2L standards with the exception of naphthalene (7.1 ug/l). Naphthalene was reported below the NC2L standard of 6 ug/l at GW-4 for the baseline (5.6 ug/l) and slightly above the standard for the Year 1 annual (Y1Q4) monitoring event (6.2 ug/l).

Continued annual sampling of GW-4 for SVOCs is proposed at this time.

6.0 SUMMARY AND RECOMMENDATIONS

6.1 Recommendations

As discussed in this report the following recommendations are made for the next operational period:

AOC GW-6 and AOC GW-6 Strike

With the exception of IW-35, it is recommended to continue semi-annual injections of sodium lactate at AOC GW-6 and AOC GW-6 strike with, as presented in the CM Design and Permit, semi-annual monitoring (Y3Q2 and Y3Q4 monitoring periods) of the monitoring wells. It is recommended that injection well IW-35 be monitored on a quarterly basis for Year 3 to evaluate the performance of the injection remedy. No additional injection wells are proposed for this location at this time.

AOC W-1

It is recommended that continued semi-annual injections of sodium lactate be performed at AOC W-1.

As presented in the 2015 Annual Report, fluctuating VC concentrations were reported for compliance monitoring well GW-49I during the Year 1 monitoring period. During the Year 2 monitoring period VC was reported to be non-detect in compliance monitoring well GW-49I but present in compliance monitoring well GW-40I. Due to the historical presence of VC in monitoring well GW-40I and GW-49I, the AOC W-1 compliance monitoring wells will continue to be monitored quarterly during the Year 3 monitoring period.

TCE concentrations are declining at W-1 but are lagging the decline observed in neighboring injection well IW-36. While pressure transducers installed during injection events during Year 2 indicate a hydraulic connection between W-1 and IW-36 during injections, the lag in treatment results may indicate that W-1 has a greater hydraulic connection via fractures to the upgradient contamination than IW-36. If IW-36 achieves NC2L standards, the benefit of injecting nZVI and/or sodium lactate in W-1 as an alternative to IW-36, should be evaluated during future reporting periods. Injecting at W-1 would provide greater influence on the fracture flow impacting this location. It is recommended that the permit renewal incorporate the flexibility for future injections at W-1. If injections are to be performed at W-1, IW-36 can be used to evaluate the performance of the remedy as a replacement to W-1 as part of the CM Design monitoring program.

SWMU 15/16

Based on the available data, the SWMU 15/16 injection well network is sufficient and continued injections are recommended with adjustments made to the quantity of sodium lactate as needed until TOC concentrations are consistently maintained at concentrations above the target of 20 mg/l. No additional injection wells are proposed for this location at this time.

SWMU 13 Shallow Zone

As discussed in Section 5.5.5, TCE concentrations at SWMU 13 have declined by an order of magnitude or greater as the result of injections, with the exception of IW-17/BNP-1 where concentrations of TCE rebounded during the March 2016 monitoring event. Using a packer, shallow zone and deeper zone groundwater samples were collected from IW-17/BNP-1 in December of 2015. As presented on Table 11, TCE concentrations in the shallow zone sample above the packer (97,000 ug/l) were an order of magnitude greater than the deeper zone sample below the packer and similar to TCE concentrations measured at P-5 during the January 2016 (Y2Q3) monitoring event. Concentrations of TCE below the packer are similar to reported concentrations in IW-16 from the January 2016 (Y2Q3) groundwater monitoring event, which is consistent with injection influences observed between the two wells during injection events. Based on these monitoring results, it is believed that there is a low-level hydraulic connection between the contamination underlying the former disposal trenches, P-5, IW-17/BNP-1, and GW-4 in an upper sandstone that should be targeted for treatment. Permit modifications are proposed below that will target treatment of this connection via injection and potential mass removal via groundwater extraction. As presented on Figure 9, shallow injection well (unconstructed contingent well IW-07) should be installed within this zone at a location up-gradient to IW-17/BNP-1.

As described in Appendix A, an SVE system is operated within the former disposal trenches using eleven shallow hydraulically fractured SVE wells as shown on Figure 9. The SVE wells were constructed in accordance with a Class 5Z Application Permit to Construct Enhanced Soil Vapor Extraction Wells (Golder Associates, August 2011) and the approved Injection Permit WI0500421 issued by the NCDENR Aquifer Protection Section, UIC Injection Control Program on September 26, 2011. It is proposed that the Permit be modified to include an annual injection of sodium lactate be performed in the SVE wells in the late fall to introduce a carbon source to the residual underlying contamination. The injections in the SVE wells will be performed by gravity using procedures typically used with temporary well injection points.

It is also recommended that IW-17/BNP-1 be permitted for use as an extraction well to supplement the existing extraction wells, if warranted based on future monitoring events.

SWMU 13 Deep Zone

TCE concentrations in the SWMU 13 deep groundwater zone are declining as a result of injections. The greatest remaining concentration of TCE in the SWMU 13 deep zone was reported for the Y2Q4 monitoring event at well P-6 (91 ug/l). P-6, located down-gradient of the former disposal trenches, has shown a decline in TCE concentrations but is lagging other locations including neighboring injection well IW-08D. IW-08D was reported to have concentrations of TCE below the NC2L standard of 3 ug/l.

The benefits of injecting in P-6 should be evaluated during future reporting periods. It is recommended that the permit renewal incorporate the flexibility for future injections at P-6. If injections are to be performed at

P-6, IW-08D can be used to evaluate the performance of the remedy as a replacement to P-6 as part of the CM Design monitoring well program.

Based on the available data, the SWMU 13 deep groundwater zone injection well network is sufficient as currently configured and injections of sodium lactate will be continued on a semi-annual basis.

SWMU 13 and SWMU 15/16 Monitoring Program

Increases in VC for the Year 2 monitoring period compared to the Year 1 monitoring period were observed in compliance monitoring wells located near SWMU 13. The wells were downgradient shallow compliance monitoring wells MW-13, downgradient deep compliance monitoring well GW-30I and side-gradient to SWMU 13 in deep monitoring well GW-1AD. C-VOCs have historically been detected at each of these wells as a result of existing contamination at SWMU 13. As described above these compliance monitoring wells are showing declines in parent compounds TCE and cis-1,2-DCE. The corresponding increases in VC are a result of the biodegradation of TCE and other c-VOCs. Due to these increases in VC, the SWMU 13 and 15/16 compliance monitoring wells will continue to be monitored quarterly during the Year 3 monitoring period.

Injectants

The current approved injectants (ZVI, sodium lactate and soy powder) are providing effective treatment. Periodic injections of micro-organisms at select injection wells maybe required to enhance the microbial population.

In addition to biodegradation of c-VOCs, methanogenesis is occurring as shown by the production of methane gases at a number of locations. Methanogenic reactions produce volatile fatty acids and acetic acid which can lower groundwater pH. Low groundwater pH's can inhibit micro-organisms that bio-degrade c-VOCs. In the event groundwater pH's decline, it is recommended that the permit be modified to allow the addition of sodium bicarbonate to buffer the pH effects of methanogenesis.

Benzene concentrations for SWMU 13 throughout the reporting period remained stable at a number of well locations. While some biodegradation of benzene is occurring as part of the reductive de-chlorination processes, benzene is typically treated using aerobic biological processes. Polishing for benzene will likely be required following the completion of long term treatment for c-VOCs. It is recommended that the permit be modified to allow for the future injection of activated persulfate to treat benzene. The benefit of using persulfate is that a byproduct of the initial abiotic reaction (benzene oxidation) is sulfate, which can then be utilized as an electron acceptor by indigenous microbes capable of coupling sulfate reduction to benzene oxidation.

6.2 Proposed Permit Changes

The Permit Application included six contingent injection wells (IW-02, IW-04, IW-7, IW-9, IW-13 and IW-15) for the SWMU 13 shallow treatment zone that were not constructed prior to initial injection events during Year 1. One contingent injection, IW-02, was constructed during the Year 2 operational period and monitoring well GW-4 was permitted as contingent injection well IW-04. As presented on Figure 9 and described in the Report, the following modifications to the permitted injection points at SWMU 13 are requested with the permit renewal:

- Relocation of contingent injection well IW-07 to a location up-gradient of IW-17/BNP-1. Injection IW-07 will be constructed as detailed in the Permit Application and connected to the shallow injection well overflow header;
- Annual injections into the existing eleven shallow hydraulically fractured SVE wells as shown on Figure 9. The SVE wells were constructed in accordance with a Class 5Z Application Permit to Construct Enhanced Soil Vapor Extraction Wells (Golder Associates, August 2011) and the approved Injection Permit WI0500421 issued by the NCDENR Aquifer Protection Section, UIC Injection Control Program on September 26, 2011. An SVE injection event record, which included all fracture data and well construction records, was also completed as required by the permit and was submitted to the NCDENR Underground Injection Control (UIC) Program on behalf of Golder on June 25, 2012 and is included in Appendix I. Since the wells were completed using direct push technology, the injections in the SVE wells will be performed by gravity using procedures typically used with temporary well injection points. The injection into the SVE wells will replace contingent injection well IW-15 and as presented on revised Table S-1 from the Permit Application included in Appendix I-1, the injection quantities to the SVE wells will not exceed the permitted quantities for contingent injection well IW-15; and,
- To provide flexibility it is requested that P-6 be included as an optional injection location for injections currently performed in IW-08D. Since injections would be performed in either IW-08D or P-6, as presented on revised Table S-1 from the Permit Application included in Appendix I-1, the total quantity of injected material would not exceed that permitted for IW-08D.

As presented on revised Table S-1 from the Permit Application included in Appendix I-1 of the Report, with reductions to injection quantities for wells with low concentrations of c-VOCs (i.e. IW-01 and IW-03) the injection quantities for SWMU 13 will not change with this additional injection points. As presented on Figure 9, all proposed injection points for SWMU 13 (relocated IW-07, P-6 and hydraulically fractured SVE wells) are within the permitted Target Injection Zone for use of extracted and treated groundwater. Since the area of injections is not changing, there are no proposed changes to the review and compliance boundary presented in the Permit Application or the permit monitoring program. As described in Section 5.4.3, the SWMU 13 and 15/16 compliance monitoring wells will continue to be monitored quarterly during the Year 3 monitoring period.

No changes to the injection locations are proposed for SWMU 15/16, AOC GW-6 or AOC GW-6 Strike. At AOC W-1, to provide flexibility it is requested that W-1 be included as an optional injection location for injections currently performed in IW-36. Since injections would be performed in either IW-36 or W-1, as

presented on revised Table S-1 from the Permit Application included in Appendix I-1, the total quantity of material injected would not exceed that permitted for IW-36.

It is proposed that IW-17/BNP-1 be permitted as a contingent extraction well EW-5. The VOC concentrations at IW-17/BNP-1 are similar to the design concentrations for the granular activated treatment system for SWMU-13. The existing treatment system will provide sufficient treatment for groundwater extracted from IW-17/BNP-1 (future extraction well EW-5) should it be converted to an extraction well. The total extraction volume from the SWMU 13 shallow extraction wells (EW-1, EW-2, EW-3 and proposed contingent extraction well EW-5) will not increase since as discussed above the total quantity of injection slurry for future injections will not change. With the addition of contingent extraction well EW-5 the permit limit of 9,999 gpd of extracted groundwater will not change. The extraction system for EW-5 will be constructed as presented in the permit application for extraction wells EW-1 through EW-3 including dedicated totalizers, sampling points and automated shutdown controls.

As presented in the Report, it is requested that sodium bicarbonate and persulfate be listed as injectants in the Permit. Sodium bicarbonate would be added to the injection slurry to buffer the groundwater in the vicinity of select injection wells to a target pH of 6.5. The volume of persulfate to be added will be determined analytically by testing a sample for the oxidant demand (sum of contaminant oxidant demand and natural oxidant demand of aquifer). Alkaline activated persulfate will be injected at a 10-20% by weight concentration. In addition, as previously approved by NCDEQ from Michael Rogers to Brian Eichlin of Golder in an email dated July 22, 2015, it is requested that sodium lactate (ABC Lactate) and RTB-1 (TCA-20) bacteria be added to the permit listed injectants. Persulfate, sodium bicarbonate, sodium lactate (ABC lactate) and RTB-1 (TCA-20) bacteria are all included on the list of NCDEQ approved injectants.for in situ remediation systems.

7.0 CLOSING

Should you have any questions or comments regarding this Report or require additional information please do not hesitate to contact Lindsey Walata of GSK at (919) 483-4640 or Brian Eichlin at (336) 852-4903.

Sincerely,

GOLDER ASSOCIATES NC, INC.

Daniel A. Childress
Staff Environmental Scientist

Brian J. Eichlin
Principal

DAC/BJE/mjf

TABLES

Table 1

Reporting Period Timeline
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Period	Event	Begin	End	# of Wells
Year 1	Baseline Groundwater Monitoring Event	12/3/2013	12/26/2013	72
	First Injection Event	2/26/2014	3/17/2014	30
	First Quarterly Groundwater Monitoring Event [Y1Q1]	4/7/2014	4/11/2014	41
	Second Injection Event	6/9/2014	6/24/2014	32
	Second Quarterly Groundwater Monitoring Event [Y1Q2]	7/30/2014	8/7/2014	39
	Third Injection Event	10/3/2014	10/16/2014	35
	Third Quarterly Groundwater Monitoring Event [Y1Q3]	10/29/2014	11/6/2014	43
	Fourth Injection Event	1/5/2015	1/20/2015	35
	Fourth Quarterly Groundwater Monitoring Event [Y1Q4]	2/11/2015	3/4/2015	77
Year 2	Fifth Injection Event	5/11/2015	5/29/2015	34
	Fifth Quarterly Groundwater Monitoring Event [Y2Q1]	6/15/2015	6/18/2015	47
	No Injections	----	----	----
	Sixth Quarterly Groundwater Monitoring Event [Y2Q2]	9/14/2015	9/17/2015	47
	Sixth Injection Event	12/7/2015	12/22/2015	31
	Seventh Quarterly Groundwater Monitoring Event [Y2Q3]	1/19/2016	1/27/2016	53
	No Injections	----	----	----
	Eighth Quarterly Groundwater Monitoring Event [Y2Q4]	3/21/2016	3/28/2016	79

Table 2

Permit Clarifications Summary
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Date	Clarification
08/10/11	Golder submitted a letter to DWR demonstrating mechanical integrity of the injection delivery systems and injection wells as required by Permit Part III (4) and Part III (5).
05/25/12	Submission of scaled site maps to DWR showing installed well locations as required by Permit Condition III.10.
06/25/12	Submission to DWR of the SVE Well Injection Event Record as required by the facility's Injection Permit #WI0500421, Part VII (3).
08/20/13	Golder submitted a letter requesting the use of Z-loy, a premixed slurry of nZVi and palladium in propylene glycol, as an injectant material and the treatment and use of groundwater sampling purge water for injections. DWR approved the request in an email dated August 20, 2013.
12/16/13	Submission to DWR of the professional engineer's certification page included with the permit as required by Permit Condition I.1.
01/15/14	Submission of Water Pollution Control System Operator Designation Form identifying Jeremy DeVore and Pavan Puttamraju of Golder Associates as ORCs.
03/31/14	Golder requested clarification whether the GTP systems at SWMU 13 and SWMU 15/16 needed to inspected weekly by the Operator in Responsible Charge (ORC) when the systems were not in operation. DWR confirmed that it was not neccesary for the ORC to perform the weekly inspections.
04/15/14	Golder notified that metal well tag fasteners and locks were placed on injection wells and extractions wells that were identified to be missing by DWR during an inspection.
5//2014	Golder verbally requested and was granted approval from DWR to extract groundwater from GW-4 for use in injections.
07/02/14	SWMU-15/16 electrical pipes damaged during excavation, DWR notified by phone on 6/30/2014. NWR was notified that repairs were completed 07/17/14.
08/06/14	Addition of Daniel Childress as ORC to Water Pollution Control System Operator Designation Form.
08/07/14	Clarification that the first Annual Reporting Period would include the first four quarterly injections and post injection groundwater monitoring events and a proposed Report submission date of May 1, 2015. DWR approved the reporting date in an email dated 8/25/2014.
10/20/14	Golder requested in an email to remove and treat water collected in extraction vaults at SWMU 13 and SWMU 15/16 for injection water. DWR provided approval in an email dated October 20, 2014
01/16/15	Groundwater observed to surface at BNP-1/IW-17 during injection at IW-16. DWR was verbally notified of incident with details provided by Golder in an email dated January 16, 2015.
04/13/15	DWR verbally granted two-week extension on reporting date to May 15, 2015
04/28/15	Removal of Pavan Puttamraju as an ORC from Water Pollution Control System Operator Designation Form
07/22/15	Approval of the Addition of IW-02 and conversion of GW-4 and GW-32S to Injection Wells as presented in the Annual Report
11/20/15	Approval of use of ABC Lacate and innoculation of bacteria at SWMU 13
11/23/15	10-day Notification of completion of IW-02/ Requirement for inspections
12/08/15	Revised Scaled Site Map with IW-02 and injection well changes - letter to NCDEQ
12/08/15	Notification of missing wells MW-4, RFI 4 B-21, RFI 4 B-22, RFI 16 B-11 - Email to Eric Rice
12/02/15	Annual Inspection - Land Use Restrictions
01/26/16	IW-02 construction record
02/09/16	Injection Event Record for innoculation of bacteria
03/20/16	Well abandonment records completed by SAEDACCO for GW-8SB, GW-10S, GW-37S, MW-3, RFI4-B18, RFI4-B19, W-3

Table 3-1

Fifth Injection Event Summary -- May 2015
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Area	Well ID	Date	Water Level	Casing Depth (ft BGS)	Borehole Depth (ft below TOC)				Total Iron Rate[6] (lbs)	Hepure mZVI (lbs)	Z-Loy[5] nZVI +Glycol (lbs)	Soy (lbs)	Injection Volume (gal)			Water Source	Injection Pressure		Flow Rate (gpm)	Comments
					As-Built (ft BGS)	Pre-Inj.	Post-Inj.	Oct. 2014					Slurry	Flush	Total		Average (psi)	Peak (psi)		
SWMU-13 [Shallow] *Water Source: EW-1, EW-2, EW-3, GW-4*	IW-01	05/18/15	20.91	28	36.0	36.31	36.26	36.42	50	50	0	0	240	50	290	GW	50	80	4.0	
	IW-03	05/18/15	19.48	28	34.0	34.24	33.62	34.32	50	50	0	0	240	50	290	GW	10	30	4.3	
	IW-05	05/18/15	18.93	26	34.0	30.07	30.08	30.12	85	85	0	0	408	50	458	GW	40	80	5.8	
	IW-06	05/26/15	18.71	25	34.0	34.02	34.02	34.11	85	85	0	0	408	50	458	GW	20	30	5.6	
	IW-08	05/20/15	18.96	22	34.0	33.96	33.98	34.02	85	85	0	0	408	50	458	GW	30	50	7.2	
	IW-10	05/20/15	22.31	26	41.0	41.87	41.55	41.89	85	85	0	0	408	50	458	GW	60	100	3.1	
	IW-11	05/19/15	22.63	28	43.0	42.42	42.14	42.50	85	85	0	0	408	50	458	GW	60	100	4.0	
	IW-12	05/19/15	22.08	25	40.0	34.51	34.25	34.53	115	115	0	0	552	50	602	GW	40	80	5.0	
	IW-14	05/19/15	22.93	27	36.0	36.16	36.18	36.24	115	115	0	0	552	50	602	GW	60	80	4.0	
	IW-16	05/22/15	21.29	19	41.0	41.08	40.76	41.26	115	115	0	0	552	200	752	GW	35	35	1.9	Paused inj. from 1230-1340 due to rising WL at IW-17.
	IW-17	05/21/15	21.40	19.5	41.3	35.58	34.71	35.82	115	115	0	0	552	200	752	GW	35	35	3.4	
	IW-18	05/26/15	21.54	23	41.0	38.65	38.50	38.78	115	115	0	0	552	200	752	GW	20	30	5.6	
	BR-1	05/26/15	21.80	27	35.0	31.26	31.13	31.34	50	50	0	0	240	50	290	GW	20	40	4.1	
	BR-2	05/20/15	21.56	27	35.0	31.59	31.52	31.82	50	50	0	0	240	50	290	GW	0	10	4.8	
	BR-3	05/21/15	21.31	25	35.0	34.50	34.29	34.61	50	50	0	0	240	50	290	GW	0	10	3.3	
SWMU-13 [Deep] *Water Source: EW-4D*	*IW-03D*	*----*	*32.97*	*55*	*90.0*	*88.40*	*----*	*88.42*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*GW*	*----*	*----*	*----*	*Reduced iron rate (see note 7).*
	IW-06D	05/27/15	31.77	50	76.0	74.25	73.54	74.32	50	50	0	0	240	50	290	GW	80	100	1.9	
	IW-08D	05/27/15	27.91	50	74.0	74.02	74.52	74.09	65	65	0	0	312	50	362	GW	60	80	4.6	
	IW-10D	05/28/15	32.00	55	77.0	76.29	75.87	76.37	50	50	0	0	240	50	290	GW	60	80	3.4	
	IW-12D	05/28/15	36.86	55	88.0	88.03	86.65	88.14	90	90	0	0	432	50	482	GW	60	100	2.1	
	IW-14D	05/29/15	43.96	50	90.0	89.82	88.86	89.98	65	65	0	0	432	50	482	GW	60	80	3.2	Reduced iron rate (see note 7).
SWMU-15/16 *Water Source: EW-5, EW-6*	IW-22	05/14/15	19.75	38	45.0	44.19	44.24	44.29	25	25	0	0	120	50	170	GW	60	100	6.8	
	IW-23	05/14/15	16.85	37	44.0	41.56	41.43	41.59	25	25	0	0	120	50	170	GW	80	100	6.5	
	IW-25	05/13/15	10.98	22	37.0	37.73	36.76	36.81	65	65	0	0	312	50	362	GW	40	55	6.6	
	IW-26	05/14/15	10.24	22	39.0	38.94	38.92	38.98	65	65	0	0	312	50	362	GW	5	10	10.1	
	IW-27	05/13/15	10.79	20	43.0	37.71	37.80	37.83	50	50	0	0	240	50	290	GW	40	60	4.8	
	IW-28	05/15/15	14.37	20	38.0	37.60	37.63	37.70	50	50	0	0	240	50	290	GW	30	60	7.1	
	IW-29	05/14/15	10.50	20	38.0	37.48	37.49	37.56	75	75	0	0	360	50	410	GW	10	20	10.5	
AOC GW-6 / W-1 *Water Source: Potable*	IW-30	05/12/15	23.01	40	50.0	48.12	48.76	49.02	25	25	0	0	120	50	170	Potable	40	100	3.7	
	IW-31	05/12/15	19.82	22	41.0	40.51	40.30	40.71	25	25	0	0	120	50	170	Potable	20	20	12.1	
	IW-32	05/12/15	21.11	22	41.0	37.09	37.08	37.17	25	25	0	0	120	50	170	Potable	10	40	9.4	
	IW-33	05/11/15	14.90	18	40.0	39.41	39.45	39.60	25	25	0	0	120	50	170	Potable	0	60	12.1	
	IW-34	05/11/15	14.16	18	33.0	32.46	32.49	32.63	25	25	0	0	120	50	170	Potable	30	50	6.1	
	IW-35	05/11/15	8.88	10	30.0	29.62	29.68	29.68	25	25	0	0	120	50	170	Potable	5	5	8.9	
	IW-36	05/12/15	8.91	17	98.0	94.95	94.92	95.08	50	50	0	0	240	50	290	Potable	150	250	2.1	
								TOTALS	**2,200**	**2,200**	**0**	**0**	**10,320**	**2,150**	**12,470**					

Notes:
BGS = Below ground surface
BTOC = Below top of casing
GW = Treated extracted groundwater
---- = No data available

1) The following contingent wells were not constructed: IW-02, IW-04, IW-07, IW-09, IW-13 and IW-15.
2) Depths measured from top of casing (TOC).
3) Grundfos pump temporarily installed at GW-4 on 05/26/15. Approximately 100 gallons pumped to treatment system through EW-2 sample port.
4) Flow rates are representative of real-time injection activities. Periods of stoppage due to weather, influence, high water levels, and/or equipment malfunctions have been removed from calculations.
5) Z-loy is approximately 55% by weight iron.
6) Mixed at 25 gm/L (0.209 lb/gallon) except IW-16, IW-17/BNP-1 and IW-18 mixed at 50 gm/L (0.418 lb/gallon).
7) Iron rates were modified due to a measurement scale error which led to a shortage of iron at the end of the event. It is assumed that the shortage (75 lbs) was distributed uniformly across previous injections.

Table 3-2

Sixth Injection Event Summary -- December 2015
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Area	Well ID	Date	Water Level	Casing Depth (ft BGS)	Borehole Depth (ft below TOC)				LD80 ZVI (lbs)	ABC Lactate (lbs)	Soy Powder (lbs)	TCA-20 Bacteria (liters)	Injection Volume (gal)			Water Source	Injection Pressure		Flow Rate (gpm)	Comments
					As-Built (ft BGS)	Pre-Inj.	Post-Inj.	May 2015					Slurry	Flush	Total		Average (psi)	Peak (psi)		
SWMU-13 [Shallow] Water Source: EW-2, EW-3, GW-4	*IW-01*	*----*	*19.88*	*28*	*36.0*	*36.50*	*----*	*36.26*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*No Injection*
	IW-02	12/19/15	24.15	30	41.0	41.47	41.44	----	90	40	25	1.9	440	100	540	GW	50	300	2.7	Induced fracture. Reduced flush from 200 gallons.
	IW-03	*----*	*18.81*	*28*	*34.0*	*33.79*	*----*	*33.62*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*No Injection*
	IW-05	12/14/15	18.79	26	34.0	30.20	29.97	30.08	40	30	10	----	200	50	250	GW	0	30	3.3	
	IW-06	12/14/15	18.20	25	34.0	34.14	34.00	34.02	40	30	10	----	200	50	250	GW	0	10	6.3	
	IW-08	12/15/15	19.80	22	34.0	34.08	34.02	33.98	50	30	15	1.9	250	50	300	GW	0	20	10.0	
	IW-10	12/17/15	21.76	26	41.0	41.67	41.71	41.55	60	30	15	----	300	50	350	GW	30	40	5.8	
	IW-11	12/16/15	22.05	28	43.0	42.16	42.13	42.14	50	30	13	----	250	50	300	GW	40	60	3.4	
	IW-12	12/16/15	20.96	25	40.0	33.61	34.25	34.25	90	40	25	1.9	440	200	640	GW	30	40	5.4	
	IW-14	12/17/15	21.61	27	36.0	36.22	35.95	36.18	70	40	15	1.9	300	50	350	GW	40	60	3.6	
	IW-16	12/19/15	21.63	19	41.0	40.90	40.96	40.76	90	40	25	1.9	440	200	640	GW	20	60	4.4	
	IW-17	12/18/15	24.85	19.5	41.3	34.51	34.37	34.71	90	40	25	1.9	440	200	640	GW	20	40	6.5	
	IW-18	12/18/15	23.65	23	41.0	38.56	38.56	38.50	60	30	15	1.9	300	200	500	GW	10	20	6.3	
	BR-1	12/15/15	20.35	27	35.0	31.26	30.49	31.13	70	30	20	1.9	335	50	385	GW	30	40	3.1	
	BR-2	12/15/15	20.02	27	35.0	31.34	31.54	31.52	70	30	20	----	335	50	385	GW	0	10	6.0	
	BR-3	12/16/15	19.78	25	35.0	34.08	33.68	34.29	70	30	20	1.9	335	50	385	GW	0	20	5.1	
	IW-04/GW-4	12/21/15	15.02	----	----	29.10	----	----	0	40	0	1.9	200	50	250	GW	----	----	1.1	Gravity feed
SWMU-13 [Deep] Water Source: EW-4D	*IW-03D*	*----*	*36.28*	*55*	*90.0*	*88.48*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*No Injection*
	IW-06D	12/22/15	34.65	50	76.0	73.55	73.11	73.54	30	30	10	----	200	50	250	GW	100	150	2.5	
	IW-08D	12/21/15	28.84	50	74.0	73.74	74.69	74.52	40	40	13	----	200	50	250	GW	50	75	4.2	
	IW-10D	*----*	*32.03*	*55*	*77.0*	*75.94*	*----*	*75.87*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*No Injection*
	IW-12D	12/21/15	27.51	55	88.0	86.72	86.12	86.65	50	40	17	----	275	50	325	GW	50	75	3.1	
	IW-14D	12/22/15	35.87	50	90.0	88.93	88.43	88.86	40	40	13	----	200	50	250	GW	75	100	2.1	
SWMU-15/16 Water Source: EW-5, EW-6	*IW-22*	*----*	*18.91*	*38*	*45.0*	*44.38*	*----*	*44.24*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*No Injection*
	IW-23	*----*	*18.74*	*37*	*44.0*	*41.68*	*----*	*41.43*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*No Injection*
	IW-25	12/08/15	11.74	22	37.0	36.68	36.82	36.76	40	30	13	----	200	50	250	GW	40	55	6.4	
	IW-26	12/08/15	13.60	22	39.0	39.03	39.09	38.92	40	30	13	----	200	50	250	GW	20	40	8.9	
	IW-27	12/10/15	10.40	20	43.0	37.83	37.81	37.80	60	40	20	----	300	50	350	GW	40	60	4.9	
	IW-28	12/10/15	16.02	20	38.0	37.75	37.20	37.63	60	40	20	----	300	50	350	GW	30	40	3.2	
	IW-29	12/11/15	16.61	20	38.0	37.60	37.64	37.49	60	40	20	----	300	50	350	GW	0	20	10.6	
AOC GW-6 / W-1 Water Source: Potable	IW-30	12/09/15	26.39	40	50.0	48.86	48.98	48.76	20	20	7	----	100	50	150	Potable	40	80	5.6	
	IW-31	12/09/15	23.25	22	41.0	40.40	40.28	40.30	20	20	7	----	100	50	150	Potable	15	15	6.8	
	IW-32	12/09/15	24.10	22	41.0	37.18	37.22	37.08	20	20	7	----	100	50	150	Potable	20	40	6.5	
	IW-33	12/07/15	16.72	18	40.0	39.55	39.51	39.45	20	20	7	----	100	50	150	Potable	0	60	12.5	
	IW-34	12/08/15	15.28	18	33.0	32.58	32.45	32.49	20	20	7	----	100	50	150	Potable	30	50	4.8	
	IW-35	*----*	*10.73*	*10*	*30.0*	*29.80*	*----*	*29.68*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*----*	*No Injection*
	IW-36	12/11/15	13.14	17	98.0	117.06	116.11	94.92	40	40	13	----	200	50	250	Potable	150	200	1.6	
	GW-32S	12/07/15	13.75	----	----	30.88	30.91	----	0	20	0	----	100	50	150	Potable	----	----	5.0	Gravity feed
								TOTALS	**1,500**	**1,000**	**440**	**19**	**7,740**	**2,200**	**9,940**					

Notes:
BGS = Below ground surface
BTOC = Below top of casing
GW = Treated extracted groundwater
---- = No data available
1) The following contingent wells were not constructed: IW-07, IW-09, IW-13 and IW-15.
2) Depths measured from top of casing (TOC).
3) Grundfos pump temporarily installed at IW-04/GW-4 on 12/14/15. Approximately 50 gallons pumped to treatment system through EW-2 sample port.
4) Flow rates are representative of real-time injection activities. Periods of stoppage due to weather, influence, high water levels, and/or equipment malfunctions have been removed from calculations.
5) LD80 ZVI was mixed at 25 gm/l (0.209 lb/gal).
6) ABC lactate mixed at 15-25 gm/l (0.125-0.209 lb/gal).

Table 4

Extraction Well Operations Summary
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Date	Totalizer Reading (gallons)						
	SWMU-13					SWMU-15/16	
	EW-1	EW-2	EW-3	EW-4D	GW-4[1]	EW-5	EW-6
12/03/13	**BASELINE GROUNDWATER MONITORING EVENT (End: 12/26/13)**						
02/25/14	118.7	300.6	----	----	----	----	----
02/28/14	331.1	731.9	239.6	----	----	----	----
03/03/14	340.5	1263.5	1523.0	----	----	----	----
03/17/15	----	----	----	----	----	----	----
03/31/14	474.0	2462.4	6087.2	5725.6	----	----	----
04/07/14	**FIRST QUARTERLY GROUNDWATER MONITORING EVENT (End: 04/11/14)**						
06/04/14	**Carbon Change-out; Volume Treated: 14,749**					----	----
06/04/14	----	----	----	----	27	----	----
06/05/14	----	----	----	----	100	----	----
06/06/14	----	----	----	----	130	----	----
06/09/14	----	----	----	----	----	----	----
06/11/14	----	2997.7	9098.5	----	200	----	----
06/17/14	----	----	----	----	----	----	----
06/23/14	----	----	----	----	----	----	----
07/11/14	930.2	4427.7	11046.1	10686.4	----	767.2	45.5
07/30/14	**SECOND QUARTERLY GROUNDWATER MONITORING EVENT (End: 08/07/14)**						
09/25/14	**Carbon Change-out; Volume Treated: 12,541**					----	----
10/03/14	----	4437.6	----	----	300	----	----
10/06/14	----	6061.8	----	----	----	----	----
10/07/14	----	----	----	----	----	767.2	45.5
10/08/14	942.2	6370.0	11844.8	10688.7	----	1622.1	----
10/10/14	----	----	----	----	----	----	----
10/13/14	----	----	----	----	----	----	----
10/16/14	1286.4	8484.8	13195.7	13381.0	----	----	----
10/29/14	**THIRD QUARTERLY GROUNDWATER MONITORING EVENT (End: 11/06/14)**						
01/05/15	----	----	----	----	----	2136.1	45.5
01/07/15	----	----	----	----	----	----	1015.5
01/13/15	1482.7	9813.8	17817.7	----	330	----	----
01/14/15	1507.8	9843.6	18943.8	----	----	----	----
01/15/15	----	----	----	13381.0	----	----	----
01/19/15	----	----	----	17845.4	----	----	----
02/11/15	**FOURTH QUARTERLY GROUNDWATER MONITORING EVENT (End: 03/04/15)**						
03/11/15	**----**	**----**	**----**	**----**	**----**	**----**	**----**
04/09/15	**Carbon Change-out; Volume Treated: 21,180**					----	----
05/06/15	1507.8	9843.5	19071.0	17845.4	----	2136.1	1029.0
05/13/15	----	11204.2	----	----	----	2645.5	1567.2
05/14/15	----	----	----	----	----	2987.5	2061.4
05/26/15	1561.7	13357.6	20313.4	----	430	----	----
05/28/15	----	----	----	20258.7	----	----	----
05/29/15	----	----	----	----	----	----	----
06/15/15	**FIFTH QUARTERLY GROUNDWATER MONITORING EVENT (End: 06/18/15)**						
09/14/15	**SIXTH QUARTERLY GROUNDWATER MONITORING EVENT (End: 09/17/15)**						
12/08/15	----	----	----	----	----	3411.7	2479.7
12/10/15	----	13538.1	20432.9	----	----	3785.8	2896.3
12/14/15	----	----	----	----	480	----	----
12/15/15	----	13681.9	21265.2	----	----	----	----
12/16/15	----	13794.0	21955.0	----	----	----	----
12/17/15	----	13893.2	22737.6	----	----	----	----
12/18/15	----	13976.2	23483.2	20367.8	----	----	----
12/19/15	1561.7	14076.6	24157.5	20859.4	----	----	----
12/21/15	----	----	----	22630.1	----	----	----
01/19/16	**SEVENTH QUARTERLY GROUNDWATER MONITORING EVENT (End: 01/27/16)**						
03/21/16	**EIGHTH QUARTERLY GROUNDWATER MONITORING EVENT (End: 03/28/16)**						
TBD	**Carbon Change-out; Volume Treated: 14,435**					**6,682**	

Notes:

1) GW-4 pumped to treatment system through sample port at EW-2 using Grundfos pump. Values estimated based on holding tank volume calculations.
2) Injection event dates:
   1 - (02/26/14 - 03/17/14)
   2 - (06/09/14 - 06/23/14)
   3 - (10/03/14 - 10/16/14)
   4 - (01/05/15 - 01/19/15)
   5 - (05/11/15 - 05/29/15)
   6 - (12/07/15 - 12/22/15)

Table 5

Summary of Extracted Groundwater Volumes
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Injection Event	SWMU-13 Shallow				SWMU-13 Deep	SWMU-15/16		Volume (gal)
	EW-1	EW-2	EW-3	GW-4	EW-4D	EW-5	EW-6	
1st	*474.0*	*2,462.4*	*6,087.2*	*0*	*5,725.6*	*0*	*0*	
(Feb 26 - Mar 17, 2014)	**9,023.6**				**5,725.6**	**0**		**14,749.2**
2nd	*456.2*	*1,965.3*	*4,958.9*	*200*	*4,960.8*	*767.2*	*45.5*	
(Jun 9-23, 2014)	**7,580.4**				**4,960.8**	**812.7**		**13,353.9**
3rd	*356.2*	*4,057.1*	*2,149.6*	*100*	*2,694.6*	*1,368.9*	*0*	
(Oct 3-16, 2014)	**6,662.9**				**2,694.6**	**1,368.9**		**10,726.4**
4th	*221.4*	*1,358.8*	*5,748.1*	*30*	*4,464.4*	*0*	*970.0*	
(Jan 1-19, 2015)	**7,358.3**				**4,464.4**	**970.0**		**12,792.7**
							Year 1:	**51,622.2**
5th	*53.9*	*3,514.1*	*1,369.6*	*100*	*2,413.3*	*851.4*	*1,045.9*	
(May 11-29, 2015)	**5,037.6**				**2,413.3**	**1,897.3**		**9,348.2**
6th	*0.0*	*719.0*	*3,844.1*	*50*	*2,371.4*	*798.3*	*834.9*	
(Dec 7-22, 2015)	**4,613.1**				**2,371.4**	**1,633.2**		**8,617.7**
							Year 2:	**17,965.9**
TOTALS	**40,275.9**				**22,630.1**	**6,682.1**		**69,588.1**

Notes:

1) GW-4 pumped to treatment system through sample port at EW-2 using Grundfos pump. Values estimated based on holding tank volume calculations.
2) EW-5 and EW-6 non-operational during the first injection event.
3) EW-6 non-operational during the third injection event. Excavation work damaged conduit carrying electrical wires to the control panel, repairs finished 11/18/14.
4) EW-5 non-operational during the fourth injection event. Mechanical error caused by water damage/corrosion in junction box. Junction boxes to be relocated outside of well vault.
5) EW-1 non-operational during the sixth injection event.

Table 6-1

Treatment System Analytical Results -- SWMU-13
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	15A NCAC 2L.0202 Groundwater Standard (ug/L)	1,000x NC2L Standard (ug/L)	First Injection Event -- February-March 2014													
			02/25/14 - Shallow Extraction Wells at System						03/17/14 - Deep Extraction Well at System							
			Influent	Q	Midfluent	Q	Effluent	Q	Influent	Q	Midfluent A	Q	Midfluent B	Q	Weighted Average Influent Concentration	Grams Removed for Period
acetone	6,000	6,000,000	ND		10		3.1		6.5	J	2.9	J	4.3	J	2.5	0.14
acrolein (2)	4	4,000	ND		ND		ND		ND		100		61		ND	--
carbon disulfide	700	700,000	ND		ND		0.26	J	ND		ND		ND		ND	--
chloromethane	3,000	3,000,000	ND		ND		ND		ND		0.16	J	ND		ND	--
vinyl chloride	0.03	30	5,100		ND		ND		4.6		36		64		3,122	174.29
1,1-dichloroethene	7	7,000	230		ND		ND		39		0.25	J	0.7	J	156	8.70
trans-1,2-dichloroethene	100	100,000	85		ND		ND		0.36	J	ND		ND		52	2.91
methlyene chloride	5	5,000	4.2	J	ND		ND		0.66	J	0.67	J	0.96	J	2.83	0.16
1,1-dichloroethane	6	6,000	41		ND		ND		5.5		0.11	J	0.26	J	27	1.52
cis-1,2-dichloroethene	70	70,000	15,000		ND		ND		32		8.9		33		9,189	513.01
chloroform	70	70,000	370		ND		ND		2.7		0.58	J	1.9		227	12.70
1,1,1-trichloroethane	200	200,000	3	J	ND		ND		0.51	J	ND		ND		2.03	0.11
carbon tetrachloride	0.3	300	ND		ND		ND		ND		ND		ND		ND	--
1,2-dichloroethane	0.4	400	860		ND		ND		0.62	J	1.6		5.4		526	29.39
benzene	1	1,000	360		ND		ND		0.58	J	ND		ND		220	12.31
ethylbenzene	600	600,000	14	J	ND		ND		ND		ND		ND		8.57	0.48
trichloroethene	3	3,000	4,100		ND		ND		140		0.47	J	0.83	J	2,563	143.07
tetrachloroethene	0.7	700	29		ND		ND		5.7		ND		ND		20	1.11
toluene	600	600,000	72		ND		0.095	J	0.66	J	ND		ND		44	2.47
xylenes (total)	500	500,000	42		ND		ND		ND		ND		ND		26	1.43
2-butanone (MEK)	4,000	4,000,000	ND		ND		ND		ND		ND		ND		ND	--
1,4-dioxane	3	3,000	ND		ND		ND		ND		ND		ND		ND	--
hexachlorobutadiene	0.4	400	ND		ND		ND		ND		ND		ND		ND	--
1,1,2,2-tetrachloroethane	0.2	200	ND		ND		ND		ND		ND		ND		ND	--
1,2-dichlorobenzene	20.0	20,000	ND		ND		ND		ND		ND		ND		ND	--
chlorobenzene	50	50,000	28		ND		ND		0.11	J	ND		ND		17	0.96
TOTAL:			26338.2		10		3.455		239.5		152		172.35		16,206.8	**904.75**

Notes:

B = Blank-qualified laboratory result
J = Estimated laboratory result between detection limit and reporting limit
Q = Lab qualifier
ND = Analyte not detected at or above laboratory detection limit, assumed concentration is zero.

1) Data are reported in micrograms per liter (ug/L)
2) Standard for acrolein is an Interim Maximum Allowable Concentration (IMAC).
3) The shallow extraction wells consist of EW-1, EW-2, and EW-3. The lone deep extraction well is EW-4D.
4) The June 2014 mass removal calculation was found using data from the samples collected on 06/17/14.
5) GW-4 was also pumped into the treatment system at EW-2 for additional mass removal on the following dates:
   2014: June 4-6, June 11, October 3
   2015: January 13, May 26, December 14
6) Weighted average of influent concentrations is flow proportional based on total gallons from shallow and deep zone.

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Table 6-1

Treatment System Analytical Results -- SWMU-13
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	15A NCAC 2L.0202 Groundwater Standard (ug/L)	1,000x NC2L Standard (ug/L)	Second Injection Event -- June 2014																									
			06/09/14 - Shallow Extraction Wells at System								06/17/14 - Shallow Extraction Wells at System								06/23/14 - Deep Extraction Well at System									
			Influent	Q	Midfluent A	Q	Midfluent B	Q	Effluent	Q	Influent	Q	Midfluent A	Q	Midfluent B	Q	Effluent	Q	Influent	Q	Midfluent A	Q	Midfluent B	Q	Effluent	Q	Weighted Average Influent Concentration	Grams Removed for Period
acetone	6,000	6,000,000	ND		86		20		23		2300		1600		230		1.2	J	16		110		120		84		1,396.5	66.29
acrolein (2)	4	4,000	ND		ND		250		ND		4200		2400		77		ND		ND		ND		ND		ND		2,538.6	120.51
carbon disulfide	700	700,000	ND		2.1		1.9		0.86		34	J	12	J	3.3		0.026	J	0.63	J	3.7	J	2.3		4.8		20.8	0.99
chloromethane	3,000	3,000,000	ND		0.9	J	ND		0.26	J	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
vinyl chloride	0.03	30	4400		59		0.24	J	ND		2700		1900		ND		ND		6.5		630		ND		0.2	J	1,635	77.59
1,1-dichloroethene	7	7,000	ND		ND		ND		ND		180		ND		0.54	J	ND		45		ND		0.34	J	ND		127	6.01
trans-1,2-dichloroethene	100	100,000	58		ND		ND		ND		45	J	ND		ND		ND		0.38	J	ND		ND		ND		27	1.30
methlyene chloride	5	5,000	150		10		ND		ND		100	J	190		ND		ND		ND		40	B	0.39	BJ	0.7		60	2.87
1,1-dichloroethane	6	6,000	51		0.11	J	ND		ND		34	J	2	J	ND		ND		4.8		ND		ND		ND		22	1.07
cis-1,2-dichloroethene	70	70,000	12,000		2.9		ND		ND		12000		51		ND		ND		140		28		0.12	J	ND		7,309	346.93
chloroform	70	70,000	260		0.31	J	ND		ND		350		2.8	J	ND		ND		2	J	0.95		ND		ND		212	10.08
1,1,1-trichloroethane	200	200,000	ND		ND		ND		ND		ND		ND		ND		ND		0.75	J	ND		ND		ND		0.3	0.01
carbon tetrachloride	0.3	300	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,2-dichloroethane	0.4	400	590		0.84	J	ND		ND		570		18	J	ND		ND		1.5		5	J	ND		ND		345	16.38
benzene	1	1,000	300		ND		ND		ND		210		ND		ND		ND		0.91		ND		ND		ND		127	6.04
ethylbenzene	600	600,000	18	J	ND		ND		ND		15	J	ND		ND		ND		ND		ND		ND		ND		9.1	0.43
trichloroethene	3	3,000	520		ND		ND		ND		370		ND		ND		ND		91		ND		0.28	J	ND		260	12.32
tetrachloroethene	0.7	700	ND		7.2		7.5		0.24	J	ND		ND		0.88	J	ND		1.1		3.3		2.4		ND		0.4	0.02
toluene	600	600,000	63	B	0.13	BJ	0.069	BJ	0.05	BJ	63	BJ	ND		0.11	BJ	0.075	BJ	0.43	BJ	ND		ND		ND		38	1.82
xylenes (total)	500	500,000	71		ND		ND		ND		160	J	ND		ND		ND		1.5	J	ND		ND		ND		97	4.62
2-butanone (MEK)	4,000	4,000,000	ND		82		190		21		ND		ND		52		ND		ND		27		14		ND		ND	--
1,4-dioxane	3	3,000	ND		32	J	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	--
hexachlorobutadiene	0.4	400	ND		ND		ND		0.43	J	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,1,2,2-tetrachloroethane	0.2	200	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,2-dichlorobenzene	20.0	20,000	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	--
chlorobenzene	50	50,000	25	J	ND		ND		ND		ND		ND		ND		ND		0.19	J	ND		ND		ND		0.1	0.00
TOTAL:			18506.0		283		469.709		45.84		23331.0		6175.8		363.83		1.301		312.69		848.0		139.83		89.7		14,225.9	**675.28**

Notes:

B = Blank-qualified laboratory result
J = Estimated laboratory result between detection limit and reporting limit
Q = Lab qualifier
ND = Analyte not detected at or above laboratory detection limit, assumed concentration is zero.

1) Data are reported in micrograms per liter (ug/L)
2) Standard for acrolein is an Interim Maximum Allowable Concentration (IMAC).
3) The shallow extraction wells consist of EW-1, EW-2, and EW-3. The lone deep extraction well is EW-4D.
4) The June 2014 mass removal calculation was found using data from the samples collected on 06/17/14.
5) GW-4 was also pumped into the treatment system at EW-2 for additional mass removal on the following dates:
   2014: June 4-6, June 11, October 3
   2015: January 13, May 26, December 14
6) Weighted average of influent concentrations is flow proportional based on total gallons from shallow and deep zone.

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Table 6-1

Treatment System Analytical Results -- SWMU-13
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	15A NCAC 2L.0202 Groundwater Standard (ug/L)	1,000x NC2L Standard (ug/L)	Third Injection Event -- October 2014																	
			10/13/14 - Shallow Extraction Wells at System								10/16/14 - Deep Extraction Well at System									
			Influent	Q	Midfluent A	Q	Midfluent B	Q	Effluent	Q	Influent	Q	Midfluent A	Q	Midfluent B	Q	Effluent	Q	Weighted Average Influent Concentration	Grams Removed for Period
acetone	6,000	6,000,000	ND		350		55		23		15	B	290		43		21		4.3	0.15
acrolein [(2)]	4	4,000	6700		310		ND		ND		ND		ND		ND		ND		4,771	168.97
carbon disulfide	700	700,000	ND		ND		0.21	J	0.12	J	0.47	J	0.90	J	0.24	J	ND		0.14	0.00
chloromethane	3,000	3,000,000	ND		ND		ND		0.27	J	ND		ND		ND		ND		ND	--
vinyl chloride	0.03	30	9000		210		ND		ND		110		460		ND		ND		6,440	228.09
1,1-dichloroethene	7	7,000	33	J	ND		0.087	J	ND		38		ND		ND		ND		34	1.22
trans-1,2-dichloroethene	100	100,000	33	J	ND		ND		ND		0.46	J	ND		ND		ND		24	0.84
methlyene chloride	5	5,000	41	J	3.1	J	ND		ND		ND		3.5	J	ND		ND		29	1.03
1,1-dichloroethane	6	6,000	43	J	ND		ND		ND		5.3		ND		ND		ND		32	1.14
cis-1,2-dichloroethene	70	70,000	3,400		0.50	J	0.21	J	ND		80		ND		0.19	J	ND		2,444	86.56
chloroform	70	70,000	110		ND		ND		ND		ND		ND		ND		ND		78	2.77
1,1,1-trichloroethane	200	200,000	ND		ND		ND		ND		0.60	J	ND		ND		ND		0.17	0.01
carbon tetrachloride	0.3	300	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,2-dichloroethane	0.4	400	170		ND		ND		ND		ND		ND		ND		ND		121	4.29
benzene	1	1,000	300		ND		ND		ND		1.3	J	ND		ND		ND		214	7.58
ethylbenzene	600	600,000	13	J	ND		ND		ND		ND		ND		ND		ND		9.3	0.33
trichloroethene	3	3,000	160		ND		ND		ND		63		ND		ND		ND		132	4.68
tetrachloroethene	0.7	700	ND		ND		ND		ND		2.9		ND		0.082	J	ND		0.8	0.03
toluene	600	600,000	71		ND		ND		0.049	JB	0.64	J	1.9	J	0.11	BJ	0.075	BJ	51	1.80
xylenes (total)	500	500,000	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
2-butanone (MEK)	4,000	4,000,000	ND		ND		2.8		ND		ND		ND		ND		ND		ND	--
1,4-dioxane	3	3,000	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
hexachlorobutadiene	0.4	400	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,1,2,2-tetrachloroethane	0.2	200	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,2-dichlorobenzene	20.0	20,000	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
chlorobenzene	50	50,000	25	J	ND		ND		ND		0.18	J	ND		ND		ND		18	0.63
TOTAL:			20099.0		873.6		58.307		23.439		317.85		756		43.622		21.075		14,402.8	**510.12**

Notes:

B = Blank-qualified laboratory result
J = Estimated laboratory result between detection limit and reporting limit
Q = Lab qualifier
ND = Analyte not detected at or above laboratory detection limit, assumed concentration is zero.

1) Data are reported in micrograms per liter (ug/L)
2) Standard for acrolein is an Interim Maximum Allowable Concentration (IMAC).
3) The shallow extraction wells consist of EW-1, EW-2, and EW-3. The lone deep extraction well is EW-4D.
4) The June 2014 mass removal calculation was found using data from the samples collected on 06/17/14.
5) GW-4 was also pumped into the treatment system at EW-2 for additional mass removal on the following dates:
   2014: June 4-6, June 11, October 3
   2015: January 13, May 26, December 14
6) Weighted average of influent concentrations is flow proportional based on total gallons from shallow and deep zone.

Table 6-1

Treatment System Analytical Results -- SWMU-13
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	15A NCAC 2L.0202 Groundwater Standard (ug/L)	1,000x NC2L Standard (ug/L)	Fourth Injection Event -- January 2015																	
			01/13/15 - Shallow Extraction Wells at System								01/19/15 - Deep Extraction Well at System									
			Influent	Q	Midfluent A	Q	Midfluent B	Q	Effluent	Q	Influent	Q	Midfluent A	Q	Midfluent B	Q	Effluent	Q	Weighted Average Influent Concentration	Grams Removed for Period
acetone	6,000	6,000,000	300	J	200		110		37		20	J	84		41		31		194.3	8.69
acrolein (2)	4	4,000	ND		ND		ND		2.1	J	ND		ND		ND		ND		ND	--
carbon disulfide	700	700,000	ND		3.3	J	2.0		1.7		1.5	J	3.9	J	3.3		11		0.57	0.03
chloromethane	3,000	3,000,000	ND		ND		0.36	J	0.23	J	ND		ND		ND		ND		ND	--
vinyl chloride	0.03	30	5300		640		21		ND		140		480		41		ND		3,352	149.98
1,1-dichloroethene	7	7,000	43	J	ND		ND		ND		39		ND		ND		ND		41	1.86
trans-1,2-dichloroethene	100	100,000	24	J	ND		ND		ND		1.4	J	ND		ND		ND		15	0.69
methlyene chloride	5	5,000	110	B	10	BJ	1.1	B	0.049	BJ	2.8	J	6.7	J	1.6		0.045	J	70	3.11
1,1-dichloroethane	6	6,000	30	J	ND		ND		ND		6.5		ND		ND		ND		21	0.95
cis-1,2-dichloroethene	70	70,000	4,400		1.6	J	0.10	J	ND		240		1.1	J	0.085	J	ND		2,829	126.60
chloroform	70	70,000	190		ND		ND		ND		4.8		ND		ND		ND		120	5.37
1,1,1-trichloroethane	200	200,000	ND		ND		ND		ND		0.58	J	ND		ND		ND		0.22	0.01
carbon tetrachloride	0.3	300	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,2-dichloroethane	0.4	400	310		ND		ND		ND		8.1		ND		ND		ND		196	8.77
benzene	1	1,000	220		ND		ND		0.042	J	5.2		ND		ND		ND		139	6.22
ethylbenzene	600	600,000	13	J	ND		ND		ND		ND		ND		ND		ND		8.1	0.36
trichloroethene	3	3,000	110		ND		ND		ND		19		ND		ND		ND		7.2	0.32
tetrachloroethene	0.7	700	ND		ND		ND		ND		0.92	J	ND		0.21	J	ND		0.3	0.02
toluene	600	600,000	67	J	ND		0.033	J	0.039	J	1.5	J	ND		ND		ND		42	1.89
xylenes (total)	500	500,000	46	J	ND		ND		ND		0.34	J	ND		ND		ND		29	1.29
2-butanone (MEK)	4,000	4,000,000	ND		ND		1.3	J	ND		6.6	J	ND		0.68	J	ND		2.5	0.11
1,4-dioxane	3	3,000	ND		ND		31		ND		ND		ND		ND		ND		ND	--
hexachlorobutadiene	0.4	400	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,1,2,2-tetrachloroethane	0.2	200	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,2-dichlorobenzene	20.0	20,000	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
chlorobenzene	50	50,000	17	J	ND		ND		ND		ND		ND		ND		ND		11	0.47
TOTAL:			11180.0		854.9		166.893		41.16		498.24		576		87.88		42.05		7,078	**316.73**

Notes:

B = Blank-qualified laboratory result
J = Estimated laboratory result between detection limit and reporting limit
Q = Lab qualifier
ND = Analyte not detected at or above laboratory detection limit, assumed concentration is zero.

1) Data are reported in micrograms per liter (ug/L)
2) Standard for acrolein is an Interim Maximum Allowable Concentration (IMAC).
3) The shallow extraction wells consist of EW-1, EW-2, and EW-3. The lone deep extraction well is EW-4D.
4) The June 2014 mass removal calculation was found using data from the samples collected on 06/17/14.
5) GW-4 was also pumped into the treatment system at EW-2 for additional mass removal on the following dates:
   2014: June 4-6, June 11, October 3
   2015: January 13, May 26, December 14
6) Weighted average of influent concentrations is flow proportional based on total gallons from shallow and deep zone.

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Table 6-1

Treatment System Analytical Results -- SWMU-13
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	15A NCAC 2L.0202 Groundwater Standard (ug/L)	1,000x NC2L Standard (ug/L)	Fifth Injection Event -- May 2015																	
			05/26/15 - Shallow Extraction Wells at System								05/29/15 - Deep Extraction Well at System									
			Influent	Q	Midfluent A	Q	Midfluent B	Q	Effluent	Q	Influent	Q	Midfluent A	Q	Midfluent B	Q	Effluent	Q	Weighted Average Influent Concentration	Grams Removed for Period
acetone	6,000	6,000,000	340		76		140		11		6.1	JB	60	B	140		5.4	B	231.9	6.54
acrolein (2)	4	4,000	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
carbon disulfide	700	700,000	ND		0.11	JB	0.13	JB	0.2	JB	0.11	JB	2.3	B	3.5	JB	1.2	B	0.04	0.00
chloromethane	3,000	3,000,000	ND		ND		0.34	J	ND		ND		ND		ND		ND		ND	--
vinyl chloride	0.03	30	9700		ND		680		ND		85		ND		1100		ND		6,586	185.73
1,1-dichloroethene	7	7,000	24	J	ND		ND		ND		32		ND		ND		ND		27	0.75
trans-1,2-dichloroethene	100	100,000	37	J	ND		ND		ND		0.65	J	ND		ND		ND		25	0.71
methlyene chloride	5	5,000	6.7	J	0.046	JB	2.2		ND		2.6	B	0.56	B	21		0.48	JB	5.4	0.15
1,1-dichloroethane	6	6,000	61		ND		0.26	J	ND		4.7		ND		ND		ND		43	1.21
cis-1,2-dichloroethene	70	70,000	2,400		ND		2.9		ND		88		ND		3.1	J	ND		1,651	46.57
chloroform	70	70,000	72		ND		0.33	J	ND		0.41	J	ND		ND		ND		49	1.38
1,1,1-trichloroethane	200	200,000	ND		ND		ND		ND		0.25	J	ND		ND		ND		0.08	0.00
carbon tetrachloride	0.3	300	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,2-dichloroethane	0.4	400	160		ND		0.71		ND		0.89	J	ND		ND		ND		108	3.06
benzene	1	1,000	430		ND		0.18	J	ND		1.8		ND		ND		ND		291	8.22
ethylbenzene	600	600,000	30	J	ND		ND		ND		ND		ND		ND		ND		20.3	0.57
trichloroethene	3	3,000	850		ND		0.13	J	ND		53		ND		ND		ND		591.9	16.69
tetrachloroethene	0.7	700	ND		ND		ND		ND		2.3		ND		ND		ND		0.74	0.02
toluene	600	600,000	110		ND		ND		ND		0.57	J	0.056	J	1.6	J	0.063	J	75	2.10
xylenes (total)	500	500,000	130		ND		ND		ND		0.4	J	ND		ND		ND		88	2.48
2-butanone (MEK)	4,000	4,000,000	ND		ND		ND		4.8		ND		ND		ND		1.1	J	ND	--
1,4-dioxane	3	3,000	ND		ND		17	J	ND		ND		ND		ND		ND		ND	--
hexachlorobutadiene	0.4	400	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,1,2,2-tetrachloroethane	0.2	200	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,2-dichlorobenzene	20.0	20,000	ND		ND		ND		ND		0.15	J	ND		ND		ND		0.05	0.00
chlorobenzene	50	50,000	33	J	ND		ND		ND		0.21	J	ND		ND		ND		22	0.63
TOTAL:			14383.7		76.2		844.18		16.0		279.14		62.9		1269.2		8.24		9,815	**276.81**

Notes:

B = Blank-qualified laboratory result
J = Estimated laboratory result between detection limit and reporting limit
Q = Lab qualifier
ND = Analyte not detected at or above laboratory detection limit, assumed concentration is zero.

1) Data are reported in micrograms per liter (ug/L)
2) Standard for acrolein is an Interim Maximum Allowable Concentration (IMAC).
3) The shallow extraction wells consist of EW-1, EW-2, and EW-3. The lone deep extraction well is EW-4D.
4) The June 2014 mass removal calculation was found using data from the samples collected on 06/17/14.
5) GW-4 was also pumped into the treatment system at EW-2 for additional mass removal on the following dates:
   2014: June 4-6, June 11, October 3
   2015: January 13, May 26, December 14
6) Weighted average of influent concentrations is flow proportional based on total gallons from shallow and deep zone.

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Table 6-1

Treatment System Analytical Results -- SWMU-13
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	15A NCAC 2L.0202 Groundwater Standard (ug/L)	1,000x NC2L Standard (ug/L)	Sixth Injection Event -- December 2015																	
			12/18/15 - Shallow Extraction Wells at System								12/21/15 - Deep Extraction Well at System									
			Influent	Q	Midfluent A	Q	Midfluent B	Q	Effluent	Q	Influent	Q	Midfluent A	Q	Midfluent B	Q	Effluent	Q	Weighted Average Influent Concentration	Grams Removed for Period
acetone	6,000	6,000,000	160		1.9	J	ND		4.9		ND		4.1		ND		5.2		105.7	2.79
acrolein (2)	4	4,000	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
carbon disulfide	700	700,000	1.1	J	0.12	J	ND		0.046	J	ND		0.11	J	ND		ND		0.73	0.02
chloromethane	3,000	3,000,000	ND		ND		ND		ND		ND		0.11	J	ND		ND		ND	--
vinyl chloride	0.03	30	4400		0.16	J	1300		ND		570		1.9		1400		ND		3,100	81.94
1,1-dichloroethene	7	7,000	47		ND		ND		ND		47		ND		ND		ND		47	1.24
trans-1,2-dichloroethene	100	100,000	15	J	ND		ND		ND		2.4	J	ND		ND		ND		11	0.28
methlyene chloride	5	5,000	31		0.073	J	2.6	J	ND		3.1	J	ND		ND		ND		21.5	0.57
1,1-dichloroethane	6	6,000	35		ND		ND		ND		8.6	J	ND		ND		ND		26	0.69
cis-1,2-dichloroethene	70	70,000	2,300		ND		4.1	J	ND		350		ND		4.9	J	ND		1,638	43.30
chloroform	70	70,000	110		ND		ND		ND		14		ND		ND		ND		77	2.05
1,1,1-trichloroethane	200	200,000	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
carbon tetrachloride	0.3	300	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,2-dichloroethane	0.4	400	200		ND		ND		ND		27		ND		ND		ND		141	3.73
benzene	1	1,000	280		ND		ND		ND		32		ND		ND		ND		196	5.18
ethylbenzene	600	600,000	20	J	ND		ND		ND		1.5	J	ND		ND		ND		13.7	0.36
trichloroethene	3	3,000	210		ND		ND		ND		83		ND		ND		ND		166.9	4.41
tetrachloroethene	0.7	700	ND		ND		ND		ND		2.2	J	ND		ND		ND		0.75	0.02
toluene	600	600,000	89		ND		ND		ND		9.3	J	ND		ND		ND		62	1.64
xylenes (total)	500	500,000	84		ND		ND		ND		7.1	J	ND		ND		ND		58	1.53
2-butanone (MEK)	4,000	4,000,000	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,4-dioxane	3	3,000	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
hexachlorobutadiene	0.4	400	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,1,2,2-tetrachloroethane	0.2	200	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
1,2-dichlorobenzene	20.0	20,000	ND		ND		ND		ND		ND		ND		ND		ND		ND	--
chlorobenzene	50	50,000	23	J	ND		ND		ND		2.6	J	ND		ND		ND		16.1	0.42
TOTAL:			8005.1		2.3		1306.7		4.946		1159.8		6.2		1404.9		5.20		5,681	**150.18**

Notes:

B = Blank-qualified laboratory result
J = Estimated laboratory result between detection limit and reporting limit
Q = Lab qualifier
ND = Analyte not detected at or above laboratory detection limit, assumed concentration is zero.
1) Data are reported in micrograms per liter (ug/L)
2) Standard for acrolein is an Interim Maximum Allowable Concentration (IMAC).
3) The shallow extraction wells consist of EW-1, EW-2, and EW-3. The lone deep extraction well is EW-4D.
4) The June 2014 mass removal calculation was found using data from the samples collected on 06/17/14.
5) GW-4 was also pumped into the treatment system at EW-2 for additional mass removal on the following dates:
2014: June 4-6, June 11, October 3
2015: January 13, May 26, December 14
6) Weighted average of influent concentrations is flow proportional based on total gallons from shallow and deep zone.

Table 6-1

Treatment System Analytical Results -- SWMU-13
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Estimated Mass Removed for Reporting Period Years 1 & 2							
Time Period	Operational Days (4)	Total Gallons		Gallons Per Day	Grams Per Day	Grams of Mass Removed	Lbs of Mass Removed
		Shallow	Deep				
02/25/2014 to 03/17/2014	14	9,024	5,726	1054	64.63	904.75	1.997
06/04/2014 to 06/22/2014	17	7,580	4,961	738	39.72	675.28	1.491
10/03/2014 to 10/16/2014	11	6,663	2,695	851	46.37	510.12	1.126
01/06/2015 to 01/19/2015	10	7,358	4,464	1182	31.67	316.73	0.699
05/18/2015 to 05/29/2015	10	5,038	2,413	745	27.68	276.81	0.611
12/07/2015 to 12/22/2015	9	4,613	2,371	776	16.69	150.18	0.332
Total Period	**71**	**40,276**	**22,630**	**891**	**37.79**	**2,833.88**	**6.256**

Notes:

B = Blank-qualified laboratory result
J = Estimated laboratory result between detection limit and reporting limit
Q = Lab qualifier
ND = Analyte not detected at or above laboratory detection limit, assumed concentration is zero.

1) Data are reported in micrograms per liter (ug/L)
2) Assumed initial well head flow totalizer reading was zero.
3) Standard for acrolein is an Interim Maximum Allowable Concentration (IMAC).
4) Operational days reflects the number of days system is operated during the time period.
5) The shallow extraction wells consist of EW-1, EW-2, and EW-3. The lone deep extraction well is EW-4D.
6) The June 2014 mass removal calculation was found using data from the samples collected on 06/17/14.
7) GW-4 was also pumped into the treatment system at EW-2 for additional mass removal on the following dates:
   2014: June 4-6, June 11, October 3
   2015: January 13, May 26, December 14
8) Values for Total Gallons are provided in *Table 5 - Summary of Extracted Groundwater Volumes.*

Table 6-2

Treatment System Analytical Results -- SWMU-15/16
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	15A NCAC 2L.0202 Groundwater Standard (ug/L)	1,000 x's Groundwater Standard (ug/L)	Second Injection Event - June 2014 [8]							Third Injection Event - October 2014						
			06/23/14 - Extraction Wells at System						Grams Removed for Period	10/13/14 - Extraction Well EW-5 at System[6]						Grams Removed for Period
			Influent	Q	Midfluent	Q	Effluent	Q		Influent	Q	Midfluent	Q	Effluent	Q	
acetone	6,000	6,000,000	35		19		39		0.11	19	J	5.1	B	7.4	B	0.12
acrolein [3]	4	4,000	ND		ND		ND		--	ND		ND		ND		--
carbon disulfide	700	700,000	3.5		9.7		7.2		0.01	0.65	J	2.2		0.73		0.00
chloromethane	3,000	3,000,000	ND		0.29	J	ND		--	ND		ND		ND		--
vinyl chloride	0.03	30	14		0.19	J	ND		0.04	40		0.41	J	ND		0.25
1,1-dichloroethene	7	7,000	38		0.19	J	ND		0.12	72		0.36	J	ND		0.46
trans-1,2-dichloroethene	100	100,000	0.37	J	ND		ND		0.00	1.3	J	ND		ND		0.01
methlyene chloride	5	5,000	0.99	BJ	0.25	BJ	ND		0.00	ND		ND		ND		--
1,1-dichloroethane	6	6,000	12		ND		ND		0.04	16		0.14	J	ND		0.10
cis-1,2-dichloroethene	70	70,000	37		0.038	J	ND		0.11	280		0.80		ND		1.77
chloroform	70	70,000	3		0.075	J	ND		0.01	2.7	J	ND		ND		0.02
1,1,1-trichloroethane	200	200,000	2.1		ND		ND		0.01	3.4	J	ND		ND		0.02
carbon tetrachloride	0.3	300	ND		ND		0.045	J	--	ND		ND		ND		--
1,2-dichloroethane	0.4	400	0.57	J	ND		ND		0.00	ND		ND		ND		--
benzene	1	1,000	0.85	J	ND		ND		0.00	2.0	J	ND		ND		0.01
ethylbenzene	600	600,000	ND		ND		ND		--	ND		ND		ND		--
trichloroethene	3	3,000	60		ND		ND		0.18	85		0.56		ND		0.54
tetrachloroethene	0.7	700	2.2		ND		ND		0.01	3.8	J	ND		ND		0.02
toluene	600	600,000	0.22	J	0.049	J	0.037		0.00	0.37	BJ	0.031	BJ	ND		0.00
xylenes (total)	500	500,000	2		ND		ND		0.01	ND		ND		ND		--
2-butanone (MEK)	4,000	4,000,000	280		15		ND		0.86	ND		19		27		--
1,4-dioxane	3	3,000	ND		ND		ND		--	ND		ND		ND		--
hexachlorobutadiene	0.4	400	ND		ND		ND		--	ND		ND		ND		--
1,1,2,2-tetrachloroethane	0.2	200	ND		ND		ND		--	ND		ND		ND		--
1,2-dichlorobenzene	20.0	20,000	0.14		ND		ND		0.00	0.64	J	ND		ND		0.00
chlorobenzene	50	50,000	ND		ND		ND		--	0.57	J	ND		ND		0.00
TOTAL:			491.94		44.78		46		**1.51**	527.43		28.60		35		**3.33**

Notes:

B = Blank-qualified laboratory result
J = Estimated laboratory result between detection limit and reporting limit
Q = Lab qualifier
ND = Analyte not detected at or above laboratory detection limit, assumed concentration is zero.

1) Data are reported in micrograms per liter
2) Assumed initial well head flow totalizer reading was zero.
3) Standard for acrolein is a Interim Maximum Allowable Concentration (IMAC).
4) System does not operate everyday. Operational days reflects the number of days system is actually operated during the time period.
5) Concentrations for wells at wellheads are not used in calculations of mass removal and are shown only for informational and comparison purposes.
6) EW-6 was not in operation during the October 2014 injection event after underground electrical lines powering the pump were hit during excavation work.
7) EW-5 was not in operation during the January 2015 injection event due to pump malfunction.
8) The SWMU-15/16 Treatment System did not operate during the First Injection Event due to ongoing excavation activities.

Table 6-2

Treatment System Analytical Results -- SWMU-15/16
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	15A NCAC 2L.0202 Groundwater Standard (ug/L)	1,000 x's Groundwater Standard (ug/L)	Fourth Injection Event - January 2015							Fifth Injection Event - May 2015						
			03/11/15 - Extraction Well EW-6 at System[7]						Grams Removed for Period	05/14/15 - Extraction Wells at System						Grams Removed for Period
			Influent	Q	Midfluent	Q	Effluent	Q		Influent	Q	Midfluent	Q	Effluent	Q	
acetone	6,000	6,000,000	ND		ND		76		--	6.6	BJ	1.2	BJ	3.5	B	0.05
acrolein [3]	4	4,000	ND		ND		ND		--	ND		ND		ND		--
carbon disulfide	700	700,000	ND		ND		0.1	J	--	ND		0.04	J	0.078	J	--
chloromethane	3,000	3,000,000	ND		ND		ND		--	ND		ND		ND		--
vinyl chloride	0.03	30	49		0.57		ND		0.18	210		21		1.1		1.50
1,1-dichloroethene	7	7,000	5.1		ND		ND		0.02	15		2.5		0.095	J	0.11
trans-1,2-dichloroethene	100	100,000	0.29	J	ND		ND		0.00	0.97	J	0.094	J	ND		0.01
methlyene chloride	5	5,000	0.23	J	0.14	J	0.12	J	0.00	0.81		0.22	J	0.14	J	0.01
1,1-dichloroethane	6	6,000	0.62	J	ND		ND		0.00	2.5	J	1.1		0.05	J	0.02
cis-1,2-dichloroethene	70	70,000	97		0.29	J	ND		0.36	250		21		0.41	J	1.78
chloroform	70	70,000	0.76	J	ND		ND		0.00	1.6	J	0.41	J	ND		0.01
1,1,1-trichloroethane	200	200,000	ND		ND		ND		--	ND		0.26	J	ND		--
carbon tetrachloride	0.3	300	ND		ND		ND		--	ND		ND		ND		--
1,2-dichloroethane	0.4	400	ND		ND		ND		--	ND		ND		ND		--
benzene	1	1,000	ND		ND		ND		--	1.1	J	0.16	J	ND		0.01
ethylbenzene	600	600,000	ND		ND		ND		--	ND		ND		ND		--
trichloroethene	3	3,000	40		ND		ND		0.15	240		21		0.39	J	1.71
tetrachloroethene	0.7	700	0.38	J	ND		ND		0.00	2.9	J	0.75		ND		0.02
toluene	600	600,000	0.13	BJ	ND		0.054	BJ	0.00	0.49	J	0.039	J	ND		0.00
xylenes (total)	500	500,000	ND		ND		ND		--	ND		ND		ND		--
2-butanone (MEK)	4,000	4,000,000	ND		ND		52		--	ND		ND		ND		--
1,4-dioxane	3	3,000	ND		ND		ND		--	ND		ND		ND		--
hexachlorobutadiene	0.4	400	ND		ND		ND		--	ND		ND		ND		--
1,1,2,2-tetrachloroethane	0.2	200	ND		ND		ND		--	ND		ND		ND		--
1,2-dichlorobenzene	20.0	20,000	ND		ND		ND		--	ND		0.053	J	ND		--
chlorobenzene	50	50,000	ND		ND		ND		--	0.29		0.054	J	ND		0.00
TOTAL:			193.51		1		128		**0.71**	732.26		69.88		5.8		**5.22**

Notes:

B = Blank-qualified laboratory result
J = Estimated laboratory result between detection limit and reporting limit
Q = Lab qualifier
ND = Analyte not detected at or above laboratory detection limit, assumed concentration is zero.

1) Data are reported in micrograms per liter
2) Assumed initial well head flow totalizer reading was zero.
3) Standard for acrolein is a Interim Maximum Allowable Concentration (IMAC).
4) System does not operate everyday. Operational days reflects the number of days system is actually operated during the time period.
5) Concentrations for wells at wellheads are not used in calculations of mass removal and are shown only for informational and comparison purposes.
6) EW-6 was not in operation during the October 2014 injection event after underground electrical lines powering the pump were hit during excavation work.
7) EW-5 was not in operation during the January 2015 injection event due to pump malfunction.
8) The SWMU-15/16 Treatment System did not operate during the First Injection Event due to ongoing excavation activities.

Table 6-2

Treatment System Analytical Results -- SWMU-15/16
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	15A NCAC 2L.0202 Groundwater Standard (ug/L)	1,000 x's Groundwater Standard (ug/L)	Sixth Injection Event - December 2015						
			12/10/15 - Extraction Wells at System						Grams Removed for Period
			Influent	Q	Midfluent	Q	Effluent	Q	
acetone	6,000	6,000,000	ND		ND		ND		--
acrolein (3)	4	4,000	62		13	J	6.1		0.38
carbon disulfide	700	700,000	ND		ND		0.34	J	--
chloromethane	3,000	3,000,000	ND		ND		ND		--
vinyl chloride	0.03	30	150		82		3.4		0.93
1,1-dichloroethene	7	7,000	92		16		0.37	J	0.57
trans-1,2-dichloroethene	100	100,000	0.95	J	0.44	J	ND		0.01
methlyene chloride	5	5,000	0.3	J	0.19	J	0.066	J	0.00
1,1-dichloroethane	6	6,000	17		3.6		0.14	J	0.11
cis-1,2-dichloroethene	70	70,000	120		73		1.0		0.74
chloroform	70	70,000	5.1		1.2	J	ND		0.03
1,1,1-trichloroethane	200	200,000	9.8		1.3	J	ND		0.06
carbon tetrachloride	0.3	300	ND		ND		ND		--
1,2-dichloroethane	0.4	400	ND		ND		ND		--
benzene	1	1,000	2.3	J	0.62	J	ND		0.01
ethylbenzene	600	600,000	ND		ND		ND		--
trichloroethene	3	3,000	160		88		0.93		0.99
tetrachloroethene	0.7	700	21		3.8		0.072	J	0.13
toluene	600	600,000	0.19	J	ND		ND		0.00
xylenes (total)	500	500,000	ND		ND		ND		--
2-butanone (MEK)	4,000	4,000,000	ND		ND		ND		--
1,4-dioxane	3	3,000	ND		ND		ND		--
hexachlorobutadiene	0.4	400	ND		ND		ND		--
1,1,2,2-tetrachloroethane	0.2	200	ND		ND		ND		--
1,2-dichlorobenzene	20.0	20,000	0.91	J	ND		ND		0.01
chlorobenzene	50	50,000	0.94	J	0.21	J	ND		0.01
TOTAL:			642.49		283.36		12		**3.97**

Notes:
B = Blank-qualified laboratory result
J = Estimated laboratory result between detection limit and reporting limit
Q = Lab qualifier
ND = Analyte not detected at or above laboratory detection limit, assumed concentration is zero.
1) Data are reported in micrograms per liter
2) Assumed initial well head flow totalizer reading was zero.
3) Standard for acrolein is a Interim Maximum Allowable Concentration (IMAC).
4) System does not operate everyday. Operational days reflects the number of days system is actually operated during the time period.
5) Concentrations for wells at wellheads are not used in calculations of mass removal and are shown only for informational and comparison purposes.
6) EW-6 was not in operation during the October 2014 injection event after underground electrical lines powering the pump were hit during excavation work.
7) EW-5 was not in operation during the January 2015 injection event due to pump malfunction.
8) The SWMU-15/16 Treatment System did not operate during the First Injection Event due to ongoing excavation activities.

Table 6-2

Treatment System Analytical Results -- SWMU-15/16
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Estimated Mass Removed for Reporting Period						
Time Period	**Operational Days (4)**	**Total Gallons**	**Gallons Per Day**	**Grams Per Day**	**Total Mass Removed (g)**	**Total Mass Removed (lbs)**
06/18/2014 to 06/19/2014	2	813	406	0.76	1.51	0.00334
10/07/2014 to 10/10/2014	4	1,670	418	0.83	3.33	0.00736
01/05/2015 to 01/07/2015	1	970	970	0.71	0.71	0.00157
05/12/2015 to 05/14/2015	3	1,884	628	1.74	5.22	0.01153
12/08/2015 to 12/10/2015	2	1,633	817	1.99	3.97	0.00877
Total Period	**12**	**6,970**	**648**	**1.21**	**14.75**	**0.03256**

Notes:

B = Blank-qualified laboratory result
J = Estimated laboratory result between detection limit and reporting limit
Q = Lab qualifier
ND = Analyte not detected at or above laboratory detection limit, assumed concentration is zero.

1) Data are reported in micrograms per liter
2) Assumed initial well head flow totalizer reading was zero.
3) Standard for acrolein is a Interim Maximum Allowable Concentration (IMAC).
4) System does not operate everyday. Operational days reflects the number of days system is actually operated during the time period.
5) Concentrations for wells at wellheads are not used in calculations of mass removal and are shown only for informational and comparison purposes.
6) EW-6 was not in operation during the October 2014 injection event after underground electrical lines powering the pump were hit during excavation work.
7) EW-5 was not in operation during the January 2015 injection event due to pump malfunction.
8) The SWMU-15/16 Treatment System did not operate during the First Injection Event due to ongoing excavation activities.

Table 7-1

Summary of Groundwater Elevations -- Monitoring Wells
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

	SWMU-4	SWMU-13																					
	GW-53S	P-5	P-6	GW-1A	GW-1A-D	GW-3	GW-4	GW-4[5]	GW-4I	GW-12S	GW-12I	GW-14S	GW-14I	GW-20S	GW-22S	GW-27S	GW-28S	GW-30S	GW-30I	GW-44S	MW-13	BNP-2	BNP-4
TOC Elevation (ft AMSL)	375.4	379.34	376.17	388.49	384.21	365.27	373.39	367.92	371.83	369.42	369.85	373.86	373.73	371.00	363.73	330.96	366.88	365.26	365.65	329.26	337.53	374.64	378.52
Dates	**Static Water Elevation (ft AMSL)**																						
9/29-10/14/99	NI	NM	337.59	NM	NI	337.11	349.69	--	338.93	335.98	244.34	337.56	313.73	350.85	347.41	NM	NM	324.95	266.15	NI	NI	NI	NI
11/08/99	NI	359.32	337.79	NM	NI	337.23	350.05	--	338.76	335.94	246.28	337.88	316.89	351.25	347.59	323.74	334.32	325.13	268.68	NI	NI	NI	NI
11/16/99	NI	359.46	337.57	NM	NI	337.17	350.34	--	338.75	335.87	249.83	337.71	319.53	351.44	347.78	323.54	334.56	325.45	270.73	NI	NI	NI	NI
11/24/99	NI	358.85	336.96	NM	NI	336.58	349.90	--	338.32	335.29	254.13	337.01	321.34	351.02	347.39	323.25	334.32	325.40	272.07	NI	NI	NI	NI
12/01/99	NI	358.65	336.69	NM	NI	336.31	349.77	--	338.11	335.08	258.97	336.75	328.78	350.94	347.27	323.35	334.18	325.36	273.17	NI	NI	NI	NI
1/8-18/02	NI	NM	334.29	NM	NI	333.76	346.26	--	336.35	332.86	NM	333.70	NM	347.35	344.38	NM	NM	325.56	280.02	NI	NI	NI	NI
7/17-18/02	NI	NM	NM	NM	NI	NM	NM	--	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NI	NI	345.59	346.20
3/12-4/8/08	NI	NM	336.27	NM	NI	335.65	346.69	--	337.64	334.72	324.95	336.36	329.53	348.70	NM	NM	NM	325.16	299.00	NI	NI	346.66	347.07
12/5-26/13	353.90	NM	334.92	352.63	301.01	334.89	349.83	--	336.56	333.71	322.34	334.46	329.21	350.10	347.14	NM	NM	327.08	303.44	310.44	319.30	NM	NM
4/7-11/14	364.54	NM	340.72	354.17	319.34	340.35	355.75	--	342.07	337.51	322.25	340.75	325.23	355.84	352.49	323.58	334.40	328.57	303.92	313.34	324.95	355.62	356.45
7/30-8/7/14	366.00	NM	338.56	354.44	302.32	338.60	356.64	--	340.38	335.72	322.75	338.23	330.08	355.20	351.28	NM	NM	328.48	303.62	311.91	322.73	NM	355.30
10/30-11/6/14	356.01	NM	336.56	354.02	300.96	336.73	354.08	--	340.28	335.51	322.16	336.59	330.06	353.82	350.24	NM	NM	327.98	299.37	311.12	320.77	NM	354.83
2/11-3/4/15	365.57	NM	340.35	354.45	301.96	339.69	355.42	--	343.33	338.18	316.59	339.01	326.88	355.84	352.35	323.67	335.42	328.63	301.76	312.85	323.15	355.53	355.77
6/15-18/15	358.67	NM	338.50	355.79	302.67	339.05	354.50	--	343.73	337.44	321.35	338.74	328.12	354.70	351.63	NM	NM	329.59	304.20	312.03	322.52	354.66	354.95
9/14-17/15	352.54	NM	335.29	353.36	301.37	337.69	NM	--	NM	334.68	323.24	335.45	331.06	352.04	349.21	NM	NM	328.50	303.36	310.74	320.70	352.16	352.26
1/19-27/16	365.69	361.25	341.00	357.04	303.87	341.48	--	355.03	344.03	339.72	323.46	341.41	324.13	356.51	352.50	NM	NM	329.73	304.32	313.59	324.51	357.92	358.44
3/21-28/16	365.42	361.38	342.21	358.09	304.40	342.85	--	355.26	345.00	340.80	320.27	342.34	328.15	357.31	353.17	325.67	336.17	330.72	302.73	314.08	324.88	357.96	358.32

NOTES:

ft AMSL = Feet above mean sea level
-- = No data available
TOC = Top of casing
NI = Not installed
NM = Not measured
MW = Monitoring well

1) The April 2014 water level for GW-1A-D was gauged at 319.34 ft using a meter later found to be malfunctioning. The water level was re-gauged using a different meter on 4/23/14 and that value is reported above.
2) Additional wells GW-27S, GW-28S, BNP-2, and BNP-4 were sampled during the April 2014 event to monitor biodegradation effects of the March 2014 injection event.
3) Top-of-casing for GW-6I was re-surveyed on 7/2/14. The previous stick-up and current flush-mount TOC measurements are included in the table.
4) Prior to the November 2014 sampling event, replacement wells GW-41SR and UST-MW-1R were installed. Repairs were also performed at MW-1. Locations were re-surveyed on 10/03/14.
5) In October 2015, the stick-ups at GW-4 and GW-32S were converted to 2'x2' containment vaults to comply with Permit requirements for injection wells.

Table 7-1

Summary of Groundwater Elevations -- Monitoring Wells
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

	SWMU-15/16								AOC W-1				AOC GW-6											
	GW-16S	GW-18S	GW-41S	GW-41SR	MW-1	MW-1[4]	MW-10	MW-12	W-1	GW-40I	GW-49I	MW-9	GW-6	GW-6I	GW-6I[3]	GW-7	GW-8	GW-32S	GW-32S[5]	MW-B107	MW-11	GW-36S	MW-B111	GW-48S
TOC Elevation (ft AMSL)	362.40	355.26	367.48	365.90	371.54	370.80	373.90	322.85	332.65	327.11	332.84	336.87	354.24	353.78	350.23	337.13	342.63	353.33	349.26	374.11	334.95	365.81	364.47	337.24
Dates	**Static Water Elevation (ft AMSL)**																							
9/29-10/14/99	342.68	301.62	351.81	NI	353.98	--	NI	NI	318.51	NI	NI	NI	334.06	325.85	--	NM	NI	334.46	--	323.09	NI	339.44	338.29	NI
11/08/99	343.40	300.55	352.64	NI	354.75	--	NI	NI	318.85	NI	NI	NI	334.46	328.68	--	NM	NI	334.89	--	323.11	NI	339.28	338.96	NI
11/16/99	343.52	302.96	352.53	NI	354.67	--	NI	NI	319.25	NI	NI	NI	334.39	328.80	--	NM	NI	334.90	--	322.98	NI	339.47	339.17	NI
11/24/99	342.95	302.67	351.98	NI	354.24	--	NI	NI	319.45	NI	NI	NI	334.12	328.81	--	NM	NI	334.62	--	322.62	NI	339.16	338.88	NI
12/01/99	342.71	302.45	351.79	NI	354.02	--	NI	NI	319.37	NI	NI	NI	334.21	328.87	--	NM	NI	334.72	--	322.60	NI	339.06	338.79	NI
1/8-18/02	340.70	NM	350.65	NI	353.66	--	NI	NI	317.82	NI	NI	NI	331.82	NM	--	NM	NI	332.17	--	320.87	NI	336.08	335.84	NI
7/17-18/02	NM	NM	NM	NI	NM	--	NI	NI	NM	NI	NI	NI	NM	NM	--	NM	NI	NM	--	NM	NI	NM	NM	316.83
3/12-4/8/08	343.12	301.62	352.31	NI	356.44	--	NI	NI	319.43	NI	NI	NI	333.59	328.58	--	NM	NI	334.05	--	335.96	NI	338.06	336.96	319.24
12/5-26/13	340.20	332.21	NM	NI	354.12	--	334.14	307.53	315.18	307.38	309.86	309.09	332.20	329.20	--	324.31	329.85	332.73	--	321.95	312.90	337.89	338.41	318.93
4/7-11/14	346.32	335.35	NM	NI	356.52	--	341.56	312.90	320.90	310.98	315.13	311.72	336.76	330.43	--	328.12	333.45	337.30	--	325.06	320.66	342.91	342.50	322.75
7/30-8/7/14	344.96	335.86	--	NI	355.82	--	345.40	310.07	320.25	310.03	310.02	310.15	334.75	--	329.10	326.98	333.27	335.36	--	324.33	315.85	341.70	340.55	321.59
10/30-11/6/14	342.28	335.14	--	351.75	--	354.08	336.61	308.22	319.63	310.13	314.11	311.29	333.75	--	329.06	324.97	332.92	334.38	--	324.05	315.28	340.37	339.59	321.07
2/11-3/4/15	346.02	335.56	--	353.74	--	354.67	338.30	311.28	320.68	311.55	315.58	309.57	335.78	--	330.02	328.41	333.70	336.25	--	325.07	317.05	342.99	340.36	322.53
6/15-18/15	345.00	337.65	--	354.06	--	355.40	339.22	309.28	320.87	313.86	318.15	314.62	335.64	--	330.20	324.39	334.42	336.37	--	324.37	317.07	343.50	342.22	323.41
9/14-17/15	NM	334.88	--	350.82	--	352.64	335.56	307.56	318.75	309.35	314.28	311.35	333.12	--	328.74	324.42	332.19	333.75	--	323.14	314.49	339.16	338.43	320.84
1/19-27/16	349.08	337.65	--	356.81	--	357.60	341.02	311.64	322.20	309.96	315.27	313.37	336.57	--	329.94	328.05	332.82	--	336.52	325.63	317.84	344.99	342.36	323.39
3/21-28/16	349.41	338.60	--	357.89	--	358.54	342.06	312.39	321.66	313.11	316.98	312.74	338.24	--	331.05	327.95	334.68	--	338.32	325.01	319.56	347.22	344.86	325.61

NOTES:

ft AMSL = Feet above mean sea level
-- = No data available
TOC = Top of casing
NI = Not installed
NM = Not measured
MW = Monitoring well

1) The April 2014 water level for GW-1A-D was gauged at 319.34 ft using a meter later found to be malfunctioning. The water level was re-gauged using a different meter on 4/23/14 and that value is reported above.
2) Additional wells GW-27S, GW-28S, BNP-2, and BNP-4 were sampled during the April 2014 event to monitor biodegradation effects of the March 2014 injection event.
3) Top-of-casing for GW-6I was re-surveyed on 7/2/14. The previous stick-up and current flush-mount TOC measurements are included in the table.
4) Prior to the November 2014 sampling event, replacement wells GW-41SR and UST-MW-1R were installed. Repairs were also performed at MW-1. Locations were re-surveyed on 10/03/14.
5) In October 2015, the stick-ups at GW-4 and GW-32S were converted to 2'x2' containment vaults to comply with Permit requirements for injection wells.

Table 7-2

Summary of Historical Groundwater Elevations -- Injection Wells
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

	SWMU-13 Shallow																SWMU-13 Deep					
	IW-01	**IW-02**	**IW-03**	**IW-05**	**IW-06**	**IW-08**	**IW-10**	**IW-11**	**IW-12**	**IW-14**	**IW-16**	**IW-17**	**IW-18**	**BR-1**	**BR-2**	**BR-3**	**IW-03D**	**IW-06D**	**IW-08D**	**IW-10D**	**IW-12D**	**IW-14D**
TOC Elevation (ft AMSL)	378.8	373.6	377.7	377.8	377.2	374.3	376.6	377.3	379.2	380.2	375.8	376.4	375.8	380.9	380.3	379.9	377.8	377.0	373.8	376.7	379.4	380.0
Dates	**Static Water Elevation (ft AMSL)**																					
Jul-02	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	350.2	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Nov 2011 -- Feb 2012	354.6	NI	354.1	354.7	354.7	355.2	353.8	351.7	352.6	353.8	350.7	--	349.6	357.7	357.6	353.9	339.0	335.9	341.5	335.5	339.6	324.9
Dec-13	355.3	NI	354.9	356.1	360.9	356.6	355.7	354.6	355.0	362.3	351.6	352.2	351.4	359.9	363.4	355.7	338.9	335.6	341.4	335.5	337.8	325.6
Mar-14	357.0	NI	356.7	357.0	362.7	357.7	359.8	355.2	355.5	364.7	353.7	360.1	351.3	363.2	367.4	362.1	348.4	332.8	343.8	336.5	339.3	325.6
Jun-14	360.4	NI	366.4	359.6	359.6	354.1	352.9	353.0	358.5	358.5	352.5	356.9	352.4	359.3	359.4	359.3	343.3	332.6	343.7	333.5	350.5	341.3
Jul-14	--	NI	--	--	--	352.8	351.7	--	--	--	--	356.1	--	358.4	358.5	358.4	--	--	--	--	--	--
Oct-14	367.8	NI	359.7	360.3	363.9	358.3	--	360.8	353.0	363.7	347.2	350.8	346.8	365.2	372.7	361.9	368.6	356.8	342.7	340.8	367.2	337.7
Jan-15	--	NI	--	355.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Feb-15	358.6	NI	358.0	358.6	358.4	354.3	354.4	354.3	357.9	358.3	355.2	355.7	355.1	359.5	359.4	359.4	347.2	343.7	344.9	343.9	343.2	349.5
May-15	357.9	NI	358.2	358.9	358.5	355.3	354.3	354.7	357.1	357.3	354.5	355.0	354.3	359.1	358.7	358.6	344.8	345.2	345.9	344.7	342.5	336.0
Jun-15	--	NI	--	--	--	--	--	--	357.4	358.6	354.5	354.9	353.9	--	--	--	--	--	--	--	351.0	--
Sep-15	--	NI	--	--	--	--	--	--	355.4	355.6	352.5	352.3	351.5	--	--	--	--	--	--	--	350.1	--
Dec-15	358.9	349.4	358.9	359.0	359.0	354.5	354.8	355.3	358.2	358.6	354.2	351.6	352.2	360.6	360.3	360.1	341.5	342.4	345.0	344.7	351.9	344.1
Jan-16	362.8	357.3	362.2	--	--	--	--	--	363.2	362.6	358.5	360.3	358.5	--	--	--	--	--	--	--	353.1	--
Mar-16	363.1	357.6	363.1	364.5	363.1	359.5	358.3	359.1	362.9	362.5	358.7	361.9	357.7	364.2	364.0	364.3	340.8	346.7	347.4	343.9	346.3	334.9

NOTES:

ft AMSL = Feet above mean sea level
-- = No data available
TOC = Top of casing
NI = Not installed
IW = Injection well
BR = Bedrock well

Golder Associates

Table 7-2

Summary of Historical Groundwater Elevations -- Injection Wells
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

	SWMU-15/16							AOCs						
	IW-22	**IW-23**	**IW-25**	**IW-26**	**IW-27**	**IW-28**	**IW-29**	**IW-30**	**IW-31**	**IW-32**	**IW-33**	**IW-34**	**IW-35**	**IW-36**
TOC Elevation (ft AMSL)	372.5	372.5	364.4	366.0	360.3	371.7	357.2	367.3	364.0	364.3	350.2	349.7	345.3	333.2
Dates	**Static Water Elevation (ft AMSL)**													
Jul-02	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Nov 2011 -- Feb 2012	347.1	352.9	351.4	352.9	345.8	356.2	341.9	334.4	340.1	339.9	334.2	333.2	333.7	320.9
Dec-13	--	--	--	--	344.2	--	339.4	338.9	336.4	339.7	320.2	328.6	331.4	317.6
Mar-14	--	--	--	--	--	--	--	--	--	--	--	--	334.5	--
Jun-14	352.0	355.2	352.2	356.2	347.4	356.5	344.3	--	--	--	339.3	335.1	330.4	322.0
Jul-14	--	--	--	--	--	--	--	339.5	--	--	--	--	--	--
Oct-14	350.7	351.2	349.7	350.3	344.9	354.0	340.9	338.6	339.6	341.0	333.2	333.2	333.1	321.2
Jan-15	350.6	351.7	349.8	353.4	345.6	353.9	342.1	339.9	338.6	338.1	333.5	333.4	333.4	320.6
Feb-15	351.3	353.0	351.7	354.9	351.0	356.0	346.2	340.7	339.8	340.3	333.5	334.3	334.6	321.8
May-15	352.8	355.7	353.4	355.8	349.5	357.3	346.7	344.3	344.2	343.2	335.3	335.5	336.4	324.3
Jun-15	--	--	--	--	--	--	--	--	--	--	--	--	--	322.4
Sep-15	--	--	--	--	--	--	--	--	--	--	--	--	--	321.4
Dec-15	353.6	353.8	352.7	352.4	349.9	355.7	340.6	340.9	340.8	340.2	333.5	334.4	334.6	320.1
Jan-16	--	356.6	--	--	--	--	--	--	--	--	--	--	335.5	321.3
Mar-16	355.8	357.6	355.4	357.3	358.3	359.3	348.4	346.1	345.5	345.6	337.4	335.3	337.4	323.8

NOTES:

ft AMSL = Feet above mean sea level
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TOC = Top of casing
NI = Not installed
IW = Injection well
BR = Bedrock well

Table 8-1

Maximum Detected VOCs
SWMU 13 Shallow Treatment Zone
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

SWMU 13 Shallow Treatment Zone	Maximum Detected Prior to Dec 2013 Baseline		Maximum Detected Year 1		Maximum Detected Year 2		NC 2L Standard [ug/L]
	Result [ug/L]	Well	Result [ug/L]	Well	Result [ug/L]	Well	
Chlorinated Ethenes							
1,1-Dichloroethene	2700	P-5	1,400	BNP-1/IW-17	3,501	BNP-1/IW-17	350
cis-1,2-Dichloroethene	130,000	BNP-1	120,000	BNP-1/IW-17	140,000	BNP-1/IW-17	70
Tetrachloroethene	2,100	P-5	340	IW-12	490	P-5	0.7
trans-1,2-Dichloroethene	1,500	P-5	250	IW-16	980	P-5	100
Trichloroethene	160,000	P-5	110,000	BNP-1/IW-17	82,000	BNP-1/IW-17	3
Vinyl Chloride	210	BNP-4	20,000	GW-22S	14,000	EW-2	0.03
Chlorinated ethanes and methanes							
1,1,1-Trichloroethane	22	BNP-2	66	GW-4	200	BNP-1/IW-17	200
1,1,2,2-Tetrachloroethane	31	BNP-4	240	BNP-1/IW-17	230	BNP-1/IW-17	0.2
1,1,2-Trichloroethane	8	BNP-2	34	BNP-1/IW-17	67	P-5	0.6*
1,1-Dichloroethane	170	BNP-4	360	BNP-1/IW-17	370	BNP-1/IW-17	6
1,2-Dichloroethane	29,000	BNP-1	15,000	BNP-1/IW-17	15,000	P-5	0.4
Carbon Tetrachloride	820	P-5	280	GW-4	210	GW-4	0.3
Chloroethane	3	BNP-4	0.73	GW-22S	21	IW-18	3,000
Chloroform	39,000	BNP-1	23,000	BNP-1/IW-17	22,000	BNP-1/IW-17	70
Chloromethane	29	BNP-4	0.34	IW-14	2.4	IW-06	3
Methylene Chloride	9,600	BNP-1	3,300	BNP-1/IW-17	3,500	BNP-1/IW-17	5
BTEX							
Benzene	3,700	P-5	1,900	BNP-1/IW-17	1,900	BNP-1/IW-17, P-5	1
Ethylbenzene	160	BNP-3	200	BNP-1/IW-17	240	BNP-1/IW-17	600
Toluene	1,400	P-5	770	BNP-1/IW-17	750	BNP-1/IW-17	600
Xylenes, Total	660	BNP-3, BNP-4	1,100	BNP-1/IW-17	1,200	BNP-1/IW-17	500
Remaining VOCs							
1,4-Dioxane	43	GW-22S	190	IW-11	1,800	P-5	3
2-Butanone (MEK)	17	BNP-4	42	BNP-4	1500	BNP-1/IW-17	4,000
2-Chloro-1,3-butadiene	19	BNP-2	ND	n/a	ND	n/a	--
2-Hexanone	3	BNP-3	ND	n/a	5	P-5	40*
4-Methyl-2-pentanone	330	BNP-4	45	BNP-4	350	BNP-1/IW-17	100*
Acetone	12	BNP-4	5,300	BNP-1/IW-17	1,700	BNP-1/IW-17	6,000
Bromomethane	7	BNP-4	ND	n/a	ND	n/a	10*
Carbon Disulfide	27	BNP-2	3	GW-4	3.6	GW-4	700
Chlorobenzene	780	P-5	160	IW-12	150	IW-12	50
Dichlorodifluoromethane	2,400	P-5	0.24	IW-12	0.28	BNP-4	1,000
Styrene	470	P-5	ND	n/a	0.9	GW-4	70
Trichlorofluoromethane	1,000	P-5	85	BNP-1/IW-17	76	BNP-1/IW-17	2,000

Notes:
highlighted = exceeds NC 2L Groundwater Standard
* = IMAC standard
-- = no standard
ND = not detected in site area (detection limits vary but are less than 2L Standard)
n/a = constituent not detected in any site area well

Table 8-2

Maximum Detected VOCs
SWMU 13 Deep Treatment Zone
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

SWMU 13 Deep Treatment Zone	Maximum Detected Prior to Dec 2013 Baseline		Maximum Detected Year 1		Maximum Detected Year 2		NC 2L Standard [ug/L]
	Result [ug/L]	Well	Result [ug/L]	Well	Result [ug/L]	Well	
Chlorinated Ethenes							
1,1-Dichloroethene	200	GW-3	100	GW-4I	48	P-6	350
cis-1,2-Dichloroethene	110	P-6	2,300	IW-12D	390	IW-12D	70
Tetrachloroethene	13	GW-14S	30	IW-12D	2.7	P-6	0.7
trans-1,2-Dichloroethene	0.44	GW-30I	130	IW-12D	14	IW-12D	100
Trichloroethene	750	GW-14S	9,200	IW-12D	100	P-6	3
Vinyl Chloride	7.5	P-6	180	GW-4I	890	IW-12D	0.03
Chlorinated ethanes and methanes							
1,1,1-Trichloroethane	5	GW-3	1.5	IW-08D	0.87	GW-3	200
1,1-Dichloroethane	11	P-6	9	IW-12D	5.1	EW-4D	6
1,2-Dichloroethane	19	GW-30I	2,000	IW-12D	78	IW-12D	0.4
Carbon Tetrachloride	0.6	GW-3	0.063	P-6	0.13	GW-3	0.3
Methylene Chloride	ND	ND	340	IW-12D	5.3	IW-12D	5
Chloroform	12	GW-30I	320	IW-12D	2.6	GW-3	70
BTEX							
Benzene	2.3	GW-30I	240	IW-12D	41	IW-12D	1
Ethylbenzene	0.42	GW-30I	8.9	IW-12D	0.81	IW-12D	600
Toluene	1.2	GW-30I	59	IW-12D	22	IW-12D	600
Xylenes, Total	0.61	GW-30I	32	IW-12D	1.7	IW-12D	500
Remaining VOCs							
Acetone	14	GW-30I	2,600	IW-10D	41	IW-12D	6,000
2-Butanone (MEK)	ND	ND	7,300	IW-10D	1,300	IW-12D	4,000
Acrolein	ND	ND	1,300	EW-4D	ND	n/a	4*

Notes:
highlighted = exceeds NC 2L Groundwater Standard
* = IMAC standard
-- = no standard
ND = not detected in site area (detection limits vary but are less than 2L Standard)
n/a = constituent not detected in any site area well

Table 8-3

Maximum Detected VOCs
SWMUs 15 and 16
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

SWMUs 15 & 16	Maximum Detected Prior to Dec 2013 Baseline		Maximum Detected Year 1		Maximum Detected Year 2		NC 2L Standard [ug/L]
	Result [ug/L]	Well	Result [ug/L]	Well	Result [ug/L]	Well	
Chlorinated Ethenes							
1,1-Dichloroethene	230	GW-41S, MW-5	220	IW-28	120	GW-41SR	350
cis-1,2-Dichloroethene	540	GW-41S	820	IW-25	540	IW-25	70
Tetrachloroethene	250	RFI-16-B7	17	IW-28	19	EW-5	0.7
trans-1,2-Dichloroethene	3	RFI-16-B7	3.2	IW-25	2.6	IW-25	100
Trichloroethene	4300	GW-41S	820	IW-29	310	EW-5	3
Vinyl Chloride	88	GW-41S	290	IW-29	300	GW-41SR	0.03
Chlorinated ethanes and methanes							
1,1,1-Trichloroethane	12	GW-41S	27	IW-28	14	GW-41SR	200
1,1,2-Trichloroethane	0.4	GW-41S	0.35	GW-41SR	ND	n/a	0.6*
1,1-Dichloroethane	17	GW-41S	35	IW-28	24	GW-41SR	6
1,2-Dichloroethane	1	GW-41S	3.1	IW-28	1.4	GW-41SR	0.4
Carbon Tetrachloride	0.3	GW-41S	0.42	IW-28	ND	n/a	0.3
Methylene Chloride	ND	ND	5.7	IW-29	2.8	IW-28	5
Chloroform	43	GW-41S	14	IW-28	12	IW-25	70
BTEX							
Benzene	7	GW-41S	3.5	IW-25	3.2	IW-28	1
Ethylbenzene	0.06	GW-18S	0.42	IW-22	1.3	GW-16S	600
Toluene	0.2	MW-4, MW-1, GW-41S	3.8	IW-22	6400	GW-16S	600
Xylenes, Total	0.4	MW-5	0.75	IW-22	0.56	IW-26	500
Remaining VOCs							
1,4-Dioxane	36	MW-4	40	GW-41SR	ND	n/a	3
Acetone	72	RFI-16-B7	620	IW-22	1000	GW-16S	6,000
Carbon Disulfide	0.2	MW-5	0.53	MW-1	0.062	MW-12	10*
Chlorobenzene	0.9	GW-41S	1.3	IW-25	1.9	IW-25	50
Isobutanol	9	GW-18S	ND	n/a	ND	n/a	--
Trichlorofluoromethane	0.9	RFI-16-B7	ND	n/a	ND	n/a	2,000

Notes:
highlighted = exceeds NC 2L Groundwater Standard
* = IMAC standard
-- = no standard
ND = not detected in site area (detection limits vary but are less than 2L Standard)
n/a = constituent not detected in any site area well
1) GW-41SR replacement for GW-41S.

Table 8-4

Maximum Detected VOCs
AOC W-1
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

AOC-W1	Maximum Detected Prior to Dec 2013 Baseline		Maximum Detected Year 1		Maximum Detected Year 2		NC 2L Standard [ug/L]
	Result [ug/L]	Well	Result [ug/L]	Well	Result [ug/L]	Well	
Chlorinated Ethenes							
1,1-Dichloroethene	11	W-1	18	W-1	13	W-1	350
cis-1,2-Dichloroethene	22	W-1	81	IW-36	130	IW-36	70
Tetrachloroethene	7.4	W-1	6.3	W-1	6.2	W-1	0.7
trans-1,2-Dichloroethene	0.44	W-1	0.5	IW-36	0.68	IW-36	100
Trichloroethene	110	W-1	200	W-1	160	W-1	3
Vinyl Chloride	0.1	W-1	2.6	GW-49I	4.7	GW-40I	0.03
Chlorinated ethanes and methanes							
1,1-Dichloroethane	0.92	W-1	1.1	W-1	1	W-1	6
Chloroform	3	W-1	2.3	W-1	2.9	IW-36	70
Remaining VOCs							
Carbon Disulfide	0.1	GW-50I	0.3	W-1	0.44	IW-36	10*

Notes:
highlighted = exceeds NC 2L Groundwater Standard
* = IMAC standard
-- = no standard
ND = not detected in site area (detection limits vary but are less than 2L Standard)
n/a = constituent not detected in any site area well

Table 8-5

Maximum Detected VOCs
Area Along Strike of AOC GW-6
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Area Along Strike of AOC GW-6	Maximum Detected Prior to Dec 2013 Baseline		Maximum Detected Year 1		Maximum Detected Year 2		NC 2L Standard [ug/L]
	Result [ug/L]	Well	Result [ug/L]	Well	Result [ug/L]	Well	
Chlorinated Ethenes							
1,1-Dichloroethene	70	GW-36S	24	GW-48S	21	GW-48S	350
cis-1,2-Dichloroethene	22	GW-36S	6.6	GW-36S	11	GW-36S	70
Tetrachloroethene	11	GW-36S	0.27	IW-31	2.6	GW-36S	0.7
trans-1,2-Dichloroethene	0.1	GW-36S	0.068	GW-36S	ND	n/a	100
Trichloroethene	110	GW-36S	23	IW-30	17	GW-48S	3
Vinyl Chloride	2.4	GW-36S	1.2	GW-36S	3.7	GW-36S	0.03
Chlorinated ethanes and methanes							
1,1,1-Trichloroethane	2.7	GW-36S	0.76	GW-36S	0.39	GW-36S	200
1,1-Dichloroethane	4.2	GW-36S	1.6	GW-36S	2.4	GW-36S	6
1,2-Dichloroethane	ND	ND	0.77	GW-36S	0.11	GW-36S	0.4
Carbon Tetrachloride	0.09	GW-36S	ND	n/a	ND	n/a	0.3
Chloroethane	0.3	GW-36S	ND	n/a	ND	n/a	3,000
Chloroform	20	GW-36S	1.7	GW-48S	1.4	GW-48S	70
Methylene Chloride	0.73	GW-36S	14	IW-30	0.045	GW-48S	5
BTEX							
Benzene	1	GW-36S	0.52	IW-32	0.68	IW-32	1
Ethylbenzene	0.03	GW-36S	0.65	IW-32	ND	n/a	600
Remaining VOCs							
1,2-Dichloropropane	0.4	GW-36S	ND	n/a	ND	n/a	0.6
1,4-Dioxane	24	GW-36S	ND	n/a	ND	n/a	3
Acetone	ND	ND	6,600	IW-30	18	IW-30	6,000
2-butanone (MEK)	ND	ND	48,000	IW-30	26	IW-30	4,000
2-Hexanone	0.4	GW-36S	ND	n/a	ND	n/a	40*
4-Methyl-2-pentanone	0.09	GW-36S	ND	n/a	ND	n/a	100*
Acetonitrile	0.2	GW-36S	ND	n/a	ND	n/a	--
Isobutanol	8	GW-36S	ND	n/a	ND	n/a	--
Trichlorofluoromethane	0.8	GW-36S	0.55	GW-36S	0.12	GW-48S	2,000

Notes:
highlighted = exceeds NC 2L Groundwater Standard
* = IMAC standard
-- = no standard
ND = not detected in site area (detection limits vary but are less than 2L Standard)
n/a = constituent not detected in any site area well

Table 8-6

Maximum Detected VOCs
AOC GW-6
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

AOC GW-6	Maximum Detected Prior to Dec 2013 Baseline		Maximum Detected Year 1		Maximum Detected Year 2		NC 2L Standard [ug/L]
	Result [ug/L]	Well	Result [ug/L]	Well	Result [ug/L]	Well	
Chlorinated Ethenes							
1,1-Dichloroethene	90	GW-6	33	MW-11	37	MW-11	350
cis-1,2-Dichloroethene	31	GW-6	36	GW-6	29	GW-6	70
Tetrachloroethene	17	GW-6	4.6	GW-32S	4.6	MW-11	0.7
trans-1,2-Dichloroethene	0.2	GW-6	0.44	IW-33	0.12	MW-11	100
Trichloroethene	130	GW-6	47	GW-6	51	MW-11	3
Vinyl Chloride	1.2	GW-32S	5.1	GW-6	23	GW-6	0.03
Chlorinated ethanes and methanes							
1,1,1-Trichloroethane	3	GW-6	0.75	IW-33	0.64	GW-32S	200
1,1,2-Trichloroethane	0.1	GW-6	ND	n/a	ND	n/a	0.6*
1,1-Dichloroethane	4	GW-6	2.1	GW-6	2.4	MW-11	6
1,2-Dichloroethane	0.06	B-107	0.44	IW-34	0.19	MW-11	0.4
Carbon Tetrachloride	0.2	GW-6	ND	n/a	ND	n/a	0.3
Chloromethane	ND	ND	8	IW-34	ND	n/a	3
Chloroform	25	GW-6	3.3	IW-33	2	MW-11	70
Methylene Chloride	0.44	GW-6	2.4	IW-34	1.4	IW-33	5
BTEX							
Benzene	1	GW-6	0.51	IW-34	0.93	IW-34	1
Ethylbenzene	0.4	B-107	0.27	IW-34	0.06	GW-6	600
Xylenes, Total	2	B-107	0.37	IW-34	1.4	IW-34	500
Remaining VOCs							
1,4-Dioxane	11	GW-6	7.7	GW-6	6.8	GW-32S	3
2-Hexanone	0.5	GW-6	<0.51	n/a	4	IW-34	40*
Acetone	8.6	B-107	23	IW-34	1500	IW-33	6,000
Trichlorofluoromethane	1	GW-6	0.58	GW-6	0.12	MW-11	2,000

Notes:
highlighted = exceeds NC 2L Groundwater Standard
* = IMAC standard
-- = no standard
ND = not detected in site area (detection limits vary but are less than 2L Standard)
n/a = constituent not detected in any site area well

Table 9

Summary of Groundwater Monitoring Field Parameters
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Parameter	Units	Date	SWMU-15/16									
			GW-18S	GW-16S	GW-41SR	MW-10	MW-12	MW-1	UST-MW-1R	IW-29	IW-28	IW-27
Fe^{2+}	mg/L	Dec-13	0.4	0.6	--	0.6	0.4	0.4	--	0.4	0.0	0.6
	mg/L	Apr-14	0.0	0.0	--	0.2	0.5	0.4	--	--	--	--
	mg/L	Aug-14	0.0	0.0	--	0.0	3.0	0.5	--	--	--	--
	mg/L	Nov-14	0.0	1.5	0.5	0.0	0.0	--	1.0	--	--	--
	mg/L	Feb-15	0.0	3.0	0.5	0.0	0.5	1.0	--	2.5	1.0	0.0
	mg/L	Jun-15	0.0	1.5	0.5	0.0	0.0	0.0	--	--	--	--
	mg/L	Sep-15	0.0	--	0.5	0.0	0.2	0.5	--	--	--	--
	mg/L	Jan-16	0.0	3.0	0.5	0.0	0.6	0.5	--	--	--	--
	mg/L	Mar-16	0.0	2.0	1.4	0.0	1.0	0.5	----	1.5	0.5	4.5
pH	s.u.	Dec-13	6.94	6.85	--	8.04	7.56	7.18	--	8.09	11.03	10.48
	s.u.	Apr-14	5.75	6.86	--	7.93	7.29	7.01	--	--	--	--
	s.u.	Aug-14	6.73	7.12	--	7.46	7.40	7.15	--	--	--	--
	s.u.	Nov-14	5.86	7.15	7.05	7.65	7.00	7.02	6.81	--	--	--
	s.u.	Feb-15	6.80	7.02	6.77	8.07	7.35	7.17	--	7.59	7.40	6.98
	s.u.	Jun-15	7.07	7.08	6.56	*7.47*	*7.50*	*6.50*	--	--	--	--
	s.u.	Sep-15	6.76	--	6.94	7.85	7.36	6.83	--	--	--	--
	s.u.	Jan-16	6.92	5.81	7.20	7.86	7.47	7.01	--	--	--	--
	s.u.	Mar-16	6.93	6.45	7.10	7.79	7.51	7.11	----	6.98	7.81	6.75
Conductivity	mS/cm	Dec-13	2.280	1.299	--	1.187	0.976	1.169	--	1.179	0.772	0.435
	mS/cm	Apr-14	2.493	1.298	--	1.237	0.884	1.294	--	--	--	--
	mS/cm	Aug-14	1.974	1.134	--	1.135	1.021	1.152	--	--	--	--
	mS/cm	Nov-14	2.211	1.307	1.291	1.127	1.055	1.133	1.109	--	--	--
	mS/cm	Feb-15	2.203	1.257	1.172	1.080	0.997	1.180	--	0.969	1.123	0.827
	mS/cm	Jun-15	2.226	1.146	1.062	1.158	1.039	1.035	--	--	--	--
	mS/cm	Sep-15	2.178	--	1.163	1.098	1.055	1.160	--	--	--	--
	mS/cm	Jan-16	2.192	2.390	0.916	1.094	1.062	1.068	--	--	--	--
	mS/cm	Mar-16	2.197	1.988	1.081	1..092	1.034	1.059	----	1.143	0.787	1.751
Turbidity	NTU	Dec-13	88.5	6.14	--	47.8	236	219	--	851	208	834
	NTU	Apr-14	72.1	1.54	--	53.0	336	125	--	--	--	--
	NTU	Aug-14	86.7	3.95	--	31.4	540	408	--	--	--	--
	NTU	Nov-14	38.7	267	89.9	8.1	462	>1000	17.1	--	--	--
	NTU	Feb-15	24.0	96.7	88.3	22.7	129	93.6	--	57.4	28.2	5.19
	NTU	Jun-15	62.6	231	140	7.95	99.1	480	--	--	--	--
	NTU	Sep-15	24.7	--	135	7.97	72.1	85.8	--	--	--	--
	NTU	Jan-16	49.0	267	113	55.9	189	258	--	--	--	--
	NTU	Mar-16	14.7	62.0	33.5	9.83	97.8	97.6	----	12.4	37.5	12.9
ORP	mV	Dec-13	237.2	230.2	--	122.2	-9.9	24.4	--	193.6	32.5	126.9
	mV	Apr-14	117.7	226.7	--	-46.1	-45.7	-114.4	--	--	--	--
	mV	Aug-14	158.7	45.9	--	39.1	-50.1	-60.3	--	--	--	--
	mV	Nov-14	97.6	-118.8	-45.8	26.7	-28.1	-64.9	-25.6	--	--	--
	mV	Feb-15	-12.4	-149.1	-110.4	-17.5	-1.6	-50.2	--	-185.6	-134.7	50.7
	mV	Jun-15	9.2	-98.2	-85.3	1.3	49.2	-59.7	--	--	--	--
	mV	Sep-15	-128.5	--	-152.5	-15.5	-11.9	-150.6	--	--	--	--
	mV	Jan-16	3.3	-116.3	-180.6	-77.8	-111.5	-203.8	--	--	--	--
	mV	Mar-16	-80.5	-149.2	-94.6	-124.7	-30.8	73.5	----	-66.3	-90.9	-18.9
DO	mg/L	Dec-13	1.48	2.99	--	1.35	3.96	0.79	--	3.09	4.32	2.89
	mg/L	Apr-14	2.58	2.03	--	3.08	0.54	2.84	--	--	--	--
	mg/L	Aug-14	2.46	1.05	--	0.57	1.27	0.24	--	--	--	--
	mg/L	Nov-14	1.00	0.30	0.29	0.99	0.23	0.40	1.14	--	--	--
	mg/L	Feb-15	2.27	0.91	0.72	1.32	4.31	0.71	--	0.29	0.39	5.19
	mg/L	Jun-15	3.78	2.48	0.28	1.22	2.48	0.32	--	--	--	--
	mg/L	Sep-15	1.95	--	0.72	1.02	2.29	0.32	--	--	--	--
	mg/L	Jan-16	0.56	0.23	1.15	0.99	0.51	0.08	--	--	--	--
	mg/L	Mar-16	3.24	0.29	0.00	1.41	3.53	2.47	----	2.97	1.96	3.71

Notes:

1) YSI multimeter was used to measure pH, conductivity, turbidity, DO, and ORP.
2) Hach Ferrous Iron kit was used to measure Fe2+.

-- = No data available

Shaded = Instrument error; reported value should be considered invalid.

Golder Associates

Table 9

Summary of Groundwater Monitoring Field Parameters
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Parameter	Units	Date	SWMU-15/16				SWMU-4	AOC W-1				
			IW-26	IW-25	IW-23	IW-22	GW-53S	W-1	GW-40I	GW-49I	MW-9	IW-36
Fe^{2+}	mg/L	Dec-13	0.4	0.4	0.6	0.4	0.6	0.6	0.8	1.0	0.4	0.0
	mg/L	Apr-14	--	--	--	--	1.5	0.0	0.5	0.6	0.2	--
	mg/L	Aug-14	--	--	--	--	2.5	0.0	0.5	0.5	0.2	--
	mg/L	Nov-14	--	--	--	--	1.5	0.0	0.5	0.5	--	--
	mg/L	Feb-15	0.0	0.5	0.0	0.0	2.0	0.0	0.0	0.5	0.0	4.0
	mg/L	Jun-15	--	--	--	--	3.5	0.0	0.5	0.0	0.0	3.0
	mg/L	Sep-15	--	--	--	--	2.2	0.0	0.5	0.5	0.0	3.0
	mg/L	Jan-16	--	--	0.0	--	0.0	0.0	0.0	0.0	0.0	2.1
	mg/L	Mar-16	3.5	0.0	0.0	0.0	2.6	0.0	0.6	0.0	0.0	2.0
pH	s.u.	Dec-13	11.92	10.28	9.03	11.78	6.44	6.69	7.72	7.85	8.06	6.75
	s.u.	Apr-14	--	--	--	--	6.46	6.80	7.51	7.55	8.44	--
	s.u.	Aug-14	--	--	--	--	6.50	6.85	7.79	7.95	8.19	--
	s.u.	Nov-14	--	--	--	--	6.56	7.66	8.49	8.44	9.00	--
	s.u.	Feb-15	8.91	7.16	10.35	11.92	6.82	6.56	7.84	7.66	8.37	6.88
	s.u.	Jun-15	--	--	--	--	*5.11*	*5.71*	8.03	7.57	*6.17*	6.84
	s.u.	Sep-15	--	--	--	--	6.69	6.65	7.68	7.36	8.28	6.70
	s.u.	Jan-16	--	--	8.91	--	7.13	6.85	7.82	7.63	8.43	6.94
	s.u.	Mar-16	7.58	7.98	9.78	11.78	6.36	6.84	7.93	7.30	8.34	6.90
Conductivity	mS/cm	Dec-13	1.662	0.757	0.720	6.098	0.842	1.903	1.462	1.426	0.847	2.224
	mS/cm	Apr-14	--	--	--	--	0.499	2.106	1.676	1.355	0.855	--
	mS/cm	Aug-14	--	--	--	--	0.638	1.869	1.251	1.373	0.838	--
	mS/cm	Nov-14	--	--	--	--	0.633	1.850	1.244	1.377	0.828	--
	mS/cm	Feb-15	0.916	1.049	0.595	1.685	0.458	1.748	1.060	1.403	0.814	2.079
	mS/cm	Jun-15	--	--	--	--	0.525	1.920	1.067	1.410	0.830	2.110
	mS/cm	Sep-15	--	--	--	--	0.730	1.907	1.188	1.408	0.821	2.086
	mS/cm	Jan-16	--	--	0.726	--	0.429	1.871	1.271	1.442	0.832	2.126
	mS/cm	Mar-16	1.114	0.743	0.621	2.082	0.447	1.923	1.294	1.431	0.832	2.151
Turbidity	NTU	Dec-13	145	19.1	130	29.0	98.3	25.1	22.6	39.8	53.3	182
	NTU	Apr-14	--	--	--	--	270	48.1	28.6	23.2	471	--
	NTU	Aug-14	--	--	--	--	82.3	9.22	35.3	47.5	299	--
	NTU	Nov-14	--	--	--	--	90.4	61.5	51.8	28.1	>1000	--
	NTU	Feb-15	27.3	29.6	38.0	37.4	90.7	194	31.2	11.6	80.9	38.7
	NTU	Jun-15	--	--	--	--	38.7	18.3	34.5	9.63	73.9	18.5
	NTU	Sep-15	--	--	--	--	30.0	34.1	57.7	15.0	95.7	6.16
	NTU	Jan-16	--	--	11.2	--	127	125	39.7	36.7	214	7.53
	NTU	Mar-16	70.4	12.7	6.10	13.0	31.8	4.76	33.9	9.2	84.2	8.36
ORP	mV	Dec-13	35	87.6	96.4	5.0	6.9	203.2	-71.3	-54.6	306.2	241.9
	mV	Apr-14	--	--	--	--	6.0	47.5	-39.4	-88.4	114.4	--
	mV	Aug-14	--	--	--	--	-22.2	-1.8	-128.4	-85.4	-58.8	--
	mV	Nov-14	--	--	--	--	-34.6	-4.5	-68.3	-93.7	-56.1	--
	mV	Feb-15	-41.3	-152.4	-179.5	-251.0	-1.4	167.3	33.2	-56.5	-53.0	-99.5
	mV	Jun-15	--	--	--	--	-57.3	43.8	-127.2	25.7	-83.3	-56.2
	mV	Sep-15	--	--	--	--	-62.8	-132.6	-129.4	-136.5	-48.4	-126.8
	mV	Jan-16	--	--	-155.5	--	84.1	20.1	-171.9	-148.2	-120.0	-139.9
	mV	Mar-16	-221.9	17.9	86.2	-48.0	-131.2	38.8	-164.7	-46.1	-219.8	-124.5
DO	mg/L	Dec-13	6.67	6.79	2.38	3.65	2.57	1.08	0.57	0.96	1.86	2.47
	mg/L	Apr-14	--	--	--	--	0.51	0.60	0.96	0.86	1.27	--
	mg/L	Aug-14	--	--	--	--	0.34	0.61	0.67	0.65	0.38	--
	mg/L	Nov-14	--	--	--	--	0.40	0.46	0.64	0.36	0.24	--
	mg/L	Feb-15	2.26	0.46	0.46	0.45	3.26	0.33	0.48	0.49	1.27	1.34
	mg/L	Jun-15	--	--	--	--	1.07	1.23	0.39	1.45	0.78	3.08
	mg/L	Sep-15	--	--	--	--	3.35	1.11	0.91	1.17	1.65	0.98
	mg/L	Jan-16	--	--	0.38	--	6.54	0.83	0.96	0.58	0.47	0.88
	mg/L	Mar-16	1.67	0.86	1.07	1.11	0.57	0.74	0.47	0.95	0.47	0.68

Notes:

1) YSI multimeter was used to measure pH, conductivity, turbidity, DO, and ORP.
2) Hach Ferrous Iron kit was used to measure Fe2+.

-- = No data available

Shaded = Instrument error; reported value should be considered invalid.

Golder Associates

Table 9

Summary of Groundwater Monitoring Field Parameters
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Parameter	Units	Date	AOC GW-6									
			GW-6	GW-6I	GW-7	GW-8	MW-11	GW-32S	MW-B107	IW-35	IW-34	IW-33
Fe^{2+}	mg/L	Dec-13	0.0	0.6	0.4	0.0	0.4	0.8	0.8	0.2	0.6	0.6
	mg/L	Apr-14	0.6	1.0	0.0	0.0	0.0	0.0	0.0	--	--	--
	mg/L	Aug-14	1.0	2.0	0.0	0.0	0.0	0.5	0.0	--	--	--
	mg/L	Nov-14	2.0	2.0	0.5	0.0	0.0	0.5	0.0	--	--	--
	mg/L	Feb-15	1.5	1.5	0.0	0.0	0.0	0.0	0.0	3.5	2.0	0.0
	mg/L	Jun-15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	--
	mg/L	Sep-15	0.8	0.6	0.0	0.0	0.0	0.0	0.0	--	--	--
	mg/L	Jan-16	3.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	--	--
	mg/L	Mar-16	1.8	0.4	0.0	0.6	0.0	2.0	0.0	0.0	5.0	4.5
pH	s.u.	Dec-13	6.93	8.88	7.24	9.01	6.65	6.74	7.23	8.21	9.88	9.00
	s.u.	Apr-14	7.02	5.39	6.88	6.88	7.10	6.15	6.92	--	--	--
	s.u.	Aug-14	6.79	6.78	6.80	6.92	7.20	6.88	8.75	--	--	--
	s.u.	Nov-14	7.12	7.13	7.67	6.79	6.81	6.55	8.54	--	--	--
	s.u.	Feb-15	7.30	7.58	7.28	7.14	7.32	7.07	8.30	7.19	6.13	5.57
	s.u.	Jun-15	7.11	7.68	*5.52*	6.69	6.24	*5.78*	9.63	--	--	--
	s.u.	Sep-15	5.78	7.59	6.49	6.02	7.19	6.91	9.05	--	--	--
	s.u.	Jan-16	7.09	7.74	6.90	5.91	6.97	6.90	8.72	6.96	--	--
	s.u.	Mar-16	7.15	7.85	6.98	6.66	7.16	6.80	8.84	7.12	7.39	6.71
Conductivity	mS/cm	Dec-13	1.384	0.844	1.202	2.143	1.340	1.572	0.888	1.284	1.213	1.303
	mS/cm	Apr-14	0.689	0.749	1.497	2.334	1.375	1.081	0.725	--	--	--
	mS/cm	Aug-14	1.254	1.038	1.321	2.459	1.373	1.670	0.912	--	--	--
	mS/cm	Nov-14	1.159	1.069	1.295	2.415	1.366	1.545	0.838	--	--	--
	mS/cm	Feb-15	1.232	0.982	1.273	2.318	1.325	1.398	0.858	1.269	4.830	4.987
	mS/cm	Jun-15	1.250	0.916	1.171	2.468	1.164	0.958	1.019	--	--	--
	mS/cm	Sep-15	1.396	0.887	1.322	2.384	1.351	1.493	0.914	--	--	--
	mS/cm	Jan-16	1.286	0.905	1.287	2.236	1.261	1.733	0.896	1.270	--	--
	mS/cm	Mar-16	1.270	0.888	1.298	2.608	1.350	1.499	0.905	1.255	1.453	2.289
Turbidity	NTU	Dec-13	43.5	310	8.63	30.6	135	31.0	255	142	230	303
	NTU	Apr-14	28.8	463	14.6	67.4	340	16.5	76.3	--	--	--
	NTU	Aug-14	15.2	33.2	30.9	49.9	55.8	20.2	85.6	--	--	--
	NTU	Nov-14	13.2	64.6	89.3	51.0	48.6	20.6	216	--	--	--
	NTU	Feb-15	14.3	64.2	29.0	47.3	37.4	13.7	92.6	29.4	70.1	190
	NTU	Jun-15	7.15	36.0	28.7	42.2	238	14.5	47.6	--	--	--
	NTU	Sep-15	45.0	19.8	50.8	18.5	19.7	3.28	44.5	--	--	--
	NTU	Jan-16	16.6	22.7	38.8	22.7	49.4	98.6	208	9.96	--	--
	NTU	Mar-16	10.9	12.3	24.5	10.8	25.9	8.97	262	3.68	434	343
ORP	mV	Dec-13	0.1	2.2	100.3	26.5	40.6	161.4	-17.5	40.8	19.4	33.9
	mV	Apr-14	-112.8	63.3	84.4	115.2	17.2	64.4	41.9	--	--	--
	mV	Aug-14	-76.3	-76.6	53.0	18.3	-11.5	9.2	-98.1	--	--	--
	mV	Nov-14	-119.5	-98.7	-2.8	14.0	13.0	9.7	-82.7	--	--	--
	mV	Feb-15	-83.4	-113.1	-74.7	55.8	-12.6	10.9	5.7	-244.7	-171.0	-317.0
	mV	Jun-15	114.6	79.8	75.0	92.0	37.6	98.4	-23.7	--	--	--
	mV	Sep-15	89.4	-117.9	-148.9	55.8	19.7	80.9	8.7	--	--	--
	mV	Jan-16	-132.4	-114.0	-9.2	128.4	-46.1	-148.2	-157.7	40.4	--	--
	mV	Mar-16	-101.5	-124.5	105.9	-37.9	-75.7	-157.5	-160.3	85.6	-186.2	-131.5
DO	mg/L	Dec-13	1.61	2.21	0.84	1.86	3.75	7.10	2.01	3.00	4.65	3.19
	mg/L	Apr-14	0.45	1.52	1.59	1.42	1.32	1.29	0.70	--	--	--
	mg/L	Aug-14	0.31	0.55	0.46	0.52	0.85	1.26	0.47	--	--	--
	mg/L	Nov-14	0.41	0.44	0.47	1.10	0.68	1.14	0.46	--	--	--
	mg/L	Feb-15	1.51	1.40	2.64	2.70	1.05	1.78	1.08	0.60	3.34	3.90
	mg/L	Jun-15	0.88	1.09	2.31	4.59	3.31	3.76	0.58	--	--	--
	mg/L	Sep-15	1.34	0.86	0.70	3.00	0.59	0.82	1.06	--	--	--
	mg/L	Jan-16	0.60	0.65	0.81	1.53	0.70	0.47	0.35	0.53	--	--
	mg/L	Mar-16	0.43	0.48	5.89	6.65	0.00	0.17	0.33	1.38	1.90	3.39

Notes:

1) YSI multimeter was used to measure pH, conductivity, turbidity, DO, and ORP.
2) Hach Ferrous Iron kit was used to measure Fe2+.

-- = No data available

Shaded = Instrument error; reported value should be considered invalid.

Golder Associates

Table 9

Summary of Groundwater Monitoring Field Parameters
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Parameter	Units	Date	AOC GW-6 STRIKE						SWMU-13			
			GW-36S	GW-48S	MW-B-111	IW-32	IW-31	IW-30	MW-13	GW-44S	GW-30I	GW-30S
Fe^{2+}	mg/L	Dec-13	2.4	0.8	0.6	0.6	0.4	0.6	0.2	0.0	0.4	0.6
	mg/L	Apr-14	2.5	0.0	0.0	--	--	--	0.4	0.0	0.6	0.6
	mg/L	Aug-14	0.0	0.0	0.0	--	--	0.0	0.0	0.0	0.0	0.5
	mg/L	Nov-14	0.0	0.0	0.0	--	--	--	0.0	0.0	0.0	0.0
	mg/L	Feb-15	1.5	0.0	0.5	1.5	0.5	0.0	0.0	0.0	0.0	0.0
	mg/L	Jun-15	2.0	0.0	0.0	--	--	--	0.0	0.0	0.0	0.0
	mg/L	Sep-15	0.0	0.0	0.6	--	--	--	0.0	0.0	0.0	0.0
	mg/L	Jan-16	1.9	0.0	0.0	--	--	--	0.0	3.0	0.5	0.0
	mg/L	Mar-16	1.6	0.0	1.2	2.0	2.0	2.0	0.0	1.5	0.5	0.0
pH	s.u.	Dec-13	6.78	6.57	6.45	8.15	6.60	7.60	7.17	7.26	7.94	7.70
	s.u.	Apr-14	6.93	6.88	6.75	--	--	--	6.81	6.67	6.07	7.63
	s.u.	Aug-14	6.93	6.98	6.84	--	--	9.78	6.90	6.09	7.31	7.19
	s.u.	Nov-14	6.88	7.65	6.88	--	--	--	6.69	6.78	7.50	7.42
	s.u.	Feb-15	7.09	6.91	7.00	7.90	7.20	7.98	7.08	6.74	7.71	7.81
	s.u.	Jun-15	*6.35*	6.95	*6.35*	--	--	--	*5.35*	6.88	*5.74*	5.56
	s.u.	Sep-15	7.04	6.77	6.99	--	--	--	6.73	6.74	7.62	7.41
	s.u.	Jan-16	7.10	7.04	6.86	--	--	--	6.85	6.59	7.83	7.57
	s.u.	Mar-16	6.94	6.88	6.89	7.03	7.01	7.67	6.82	6.48	7.57	7.08
Conductivity	mS/cm	Dec-13	1.494	1.865	1.822	1.071	1.416	0.698	1.822	0.436	0.774	0.587
	mS/cm	Apr-14	1.427	1.585	1.931	--	--	--	2.020	0.506	0.687	0.472
	mS/cm	Aug-14	1.563	1.914	1.848	--	--	0.591	2.078	0.488	0.730	0.572
	mS/cm	Nov-14	1.647	1.834	1.592	--	--	--	2.079	0.485	0.763	0.550
	mS/cm	Feb-15	1.538	1.818	1.671	1.022	1.582	1.002	2.035	0.491	0.720	0.541
	mS/cm	Jun-15	1.547	1.827	0.642	--	--	--	1.840	0.479	0.707	0.516
	mS/cm	Sep-15	1.529	1.829	1.195	--	--	--	2.064	0.540	0.795	0.561
	mS/cm	Jan-16	1.439	1.879	1.170	--	--	--	1.961	0.598	1.038	0.560
	mS/cm	Mar-16	1.571	1.857	1.589	1.395	1.392	0.782	2.059	0.530	0.887	0.574
Turbidity	NTU	Dec-13	18.9	97.1	7.23	>1000	240	428	58.4	17.9	34.7	17.5
	NTU	Apr-14	1.72	232	17.2	--	--	--	17.7	54.7	67.8	18.2
	NTU	Aug-14	6.25	63.0	9.82	--	--	27.1	53.8	46.7	9.17	15.3
	NTU	Nov-14	6.62	71.4	25.4	--	--	--	65.8	13.2	37.2	4.24
	NTU	Feb-15	3.19	90.0	5.31	97.6	83.5	430	61.5	52.3	8.98	5.70
	NTU	Jun-15	5.42	324	8.81	--	--	--	43.9	19.1	10.9	14.5
	NTU	Sep-15	1.22	163	5.76	--	--	--	50.1	22.1	6.46	2.76
	NTU	Jan-16	2.80	193	4.85	--	--	--	64.5	28.2	92.3	3.52
	NTU	Mar-16	10.6	159	1.78	26.4	50.0	63.2	56.1	85.2	44.1	2.42
ORP	mV	Dec-13	-8.6	8.2	-8.2	-14.7	-28.7	-11.5	11.7	19.5	-34.0	-52.4
	mV	Apr-14	-57.7	192.3	17.7	--	--	--	206.7	77.9	60.2	-28.6
	mV	Aug-14	28.7	25.9	-2.1	--	--	-25.7	-2.41	41.2	-21.2	-73.0
	mV	Nov-14	26.7	18.7	-46.7	--	--	--	75.6	0.8	-41.8	-35.3
	mV	Feb-15	-110.8	166.9	-15.9	-288.4	-103.5	-278.3	5.0	85.7	-100.1	-131.5
	mV	Jun-15	-44.9	197.4	44.9	--	--	--	54.2	24.2	-33.8	-41.6
	mV	Sep-15	12.3	-134.4	-27.7	--	--	--	-131.9	-112.6	-126.5	-119.7
	mV	Jan-16	-9.2	75.1	6.0	--	--	--	84.5	-55.1	-110.7	-74.6
	mV	Mar-16	-108.5	61.7	-64.3	-129.5	-113.2	-145.2	122.1	105.2	119.0	133.2
DO	mg/L	Dec-13	1.04	2.77	3.17	4.26	2.60	2.27	1.33	1.41	3.64	1.98
	mg/L	Apr-14	0.43	2.21	1.26	--	--	--	2.70	4.26	2.42	1.68
	mg/L	Aug-14	0.31	0.42	0.65	--	--	0.43	0.29	1.44	2.00	0.95
	mg/L	Nov-14	0.99	0.43	0.95	--	--	--	0.34	1.32	1.60	0.98
	mg/L	Feb-15	1.02	2.00	1.37	1.09	0.56	0.25	1.55	1.27	3.79	2.33
	mg/L	Jun-15	0.74	3.61	1.46	--	--	--	0.71	2.79	1.76	2.26
	mg/L	Sep-15	0.57	1.42	0.75	--	--	--	0.57	1.38	1.12	2.28
	mg/L	Jan-16	1.02	0.50	0.98	--	--	--	0.32	0.75	1.16	1.21
	mg/L	Mar-16	0.98	4.59	0.77	3.21	3.69	2.09	4.03	3.42	1.83	1.92

Notes:

1) YSI multimeter was used to measure pH, conductivity, turbidity, DO, and ORP.
2) Hach Ferrous Iron kit was used to measure Fe2+.

-- = No data available

Shaded = Instrument error; reported value should be considered invalid.

Golder Associates

Table 9

Summary of Groundwater Monitoring Field Parameters
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Parameter	Units	Date	SWMU-13									
			GW-27S	GW-1A	GW-1A-D	GW-3	GW-12S	GW-12I	GW-22S	GW-28S	GW-14S	GW-14I
Fe^{2+}	mg/L	Dec-13	--	0.4	0.6	0.4	0.4	0.0	2.2	--	0.4	0.0
	mg/L	Apr-14	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.5	1.2	0.2
	mg/L	Aug-14	--	0.0	0.0	0.0	0.5	0.0	3.0	--	2.0	0.0
	mg/L	Nov-14	--	0.5	0.0	0.0	0.5	0.0	2.5	--	2.5	0.0
	mg/L	Feb-15	0.0	0.0	0.5	0.0	0.0	0.0	3.0	1.2	1.0	0.0
	mg/L	Jun-15	--	0.0	0.0	0.0	0.0	0.5	3.0	--	0.5	0.0
	mg/L	Sep-15	--	0.0	0.0	0.0	0.0	0.0	2.5	--	0.8	0.0
	mg/L	Jan-16	--	0.0	0.0	0.0	0.0	0.0	3.0	--	1.5	0.0
	mg/L	Mar-16	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	2.0	0.0
pH	s.u.	Dec-13	--	7.72	6.83	6.82	7.43	6.77	7.67	--	6.87	10.82
	s.u.	Apr-14	6.98	8.06	5.91	6.90	6.27	6.50	6.93	7.41	6.77	10.80
	s.u.	Aug-14	--	7.82	6.87	6.98	7.18	6.91	7.27	--	7.19	10.96
	s.u.	Nov-14	--	7.81	7.07	6.70	7.23	6.95	6.88	--	7.31	11.08
	s.u.	Feb-15	8.24	8.08	8.01	6.86	7.69	9.06	6.64	4.97	7.18	11.63
	s.u.	Jun-15	--	7.96	7.40	6.91	*4.98*	*5.16*	7.31	--	*5.84*	*9.37*
	s.u.	Sep-15	--	7.88	7.50	6.93	7.50	8.81	7.21	--	7.49	11.03
	s.u.	Jan-16	--	6.31	7.90	6.54	7.63	9.00	7.26	--	6.92	10.84
	s.u.	Mar-16	7.01	7.38	7.69	6.81	7.42	7.48	7.23	6.57	6.94	10.79
Conductivity	mS/cm	Dec-13	--	0.447	1.610	1.474	0.703	1.065	0.56	--	1.151	1.050
	mS/cm	Apr-14	1.120	0.390	1.188	1.172	0.591	0.878	0.73	0.411	1.085	1.111
	mS/cm	Aug-14	--	0.480	1.687	1.239	0.683	0.787	0.942	--	0.996	1.240
	mS/cm	Nov-14	--	0.483	1.557	1.439	0.702	1.029	0.989	--	1.140	1.103
	mS/cm	Feb-15	1.082	0.469	1.659	1.449	0.706	1.072	1.046	0.508	1.010	1.090
	mS/cm	Jun-15	--	0.480	1.415	1.383	0.649	0.799	0.998	--	0.755	1.089
	mS/cm	Sep-15	--	0.482	1.373	1.382	0.717	0.939	0.871	--	0.785	1.060
	mS/cm	Jan-16	--	0.479	1.464	1.394	0.729	0.962	0.887	--	0.890	0.875
	mS/cm	Mar-16	1.107	0.565	1.362	1.357	0.728	0.829	0.921	0.677	1.024	0.961
Turbidity	NTU	Dec-13	--	64.1	57.8	25.8	52.3	54.3	2.92	--	68	23.2
	NTU	Apr-14	10.1	70.1	48.6	31.8	12.7	8.03	3.09	44.6	41.8	21.7
	NTU	Aug-14	--	87.0	86.0	81.1	66.1	22.4	13.0	--	81.4	10.6
	NTU	Nov-14	--	68.3	54.4	46.5	159	30.3	5.09	--	51.7	12.1
	NTU	Feb-15	15.3	79.1	297	15.0	13.8	61.4	2.56	43.7	47.4	10.7
	NTU	Jun-15	--	29.6	68.4	34.7	4.92	9.77	6.24	--	58.8	8.28
	NTU	Sep-15	--	5.35	36.2	16.1	1.25	11.0	2.23	--	6.83	6.44
	NTU	Jan-16	--	9.78	73.6	18.8	10.3	42.4	1.87	--	37.7	44.3
	NTU	Mar-16	6.90	9.51	21.1	21.2	7.10	15.3	1.02	30.0	17.8	12.8
ORP	mV	Dec-13	--	-132.6	188.9	42.7	-46.9	-28.9	-65.0	--	-32.1	-24.9
	mV	Apr-14	113.9	-140.9	90.1	32.1	85.9	-11.7	-120.9	-75.3	-198.8	-143.6
	mV	Aug-14	--	-55.2	37.8	-13.7	-63.9	-26.9	-135.8	--	-91	-73.2
	mV	Nov-14	--	-18.2	15.6	15.9	18.8	-14.3	-113.4	--	-113.8	-104.0
	mV	Feb-15	-143.6	-64.0	45.7	59.3	16.2	-52.8	-82.9	165.8	-50.7	-148.8
	mV	Jun-15	--	-8.6	18.4	68.3	-9.6	-63.5	-101.4	--	-93.2	-99.7
	mV	Sep-15	--	-22.7	-37.4	44.5	-34.8	-18.9	-131.1	--	-125.6	-36.5
	mV	Jan-16	--	-8.3	-55.3	64.2	-64.6	-176.4	-134.0	--	-123.5	-194.2
	mV	Mar-16	60.8	-165.6	-63.0	-32.0	-52.1	-117.8	40.4	84.8	-124.3	-97.6
DO	mg/L	Dec-13	--	1.84	1.29	0.67	1.06	1.09	0.42	--	0.67	0.91
	mg/L	Apr-14	2.74	0.50	1.68	1.38	0.61	1.13	3.66	0.68	0.43	0.88
	mg/L	Aug-14	--	1.08	0.69	0.64	0.35	2.03	0.39	--	0.27	0.39
	mg/L	Nov-14	--	0.54	0.45	0.31	1.57	1.71	0.53	--	0.20	0.48
	mg/L	Feb-15	1.70	2.24	1.84	1.83	2.53	2.20	0.34	0.68	0.82	1.19
	mg/L	Jun-15	--	1.49	0.58	1.93	2.12	1.38	0.51	--	0.74	1.04
	mg/L	Sep-15	--	1.59	0.74	0.91	1.55	1.03	0.59	--	0.49	0.82
	mg/L	Jan-16	--	2.49	0.57	0.76	0.78	0.49	0.17	--	0.31	0.83
	mg/L	Mar-16	0.94	0.95	0.17	0.54	1.24	0.75	1.50	1.28	0.99	1.71

Notes:

1) YSI multimeter was used to measure pH, conductivity, turbidity, DO, and ORP.
2) Hach Ferrous Iron kit was used to measure Fe2+.

-- = No data available

Shaded = Instrument error; reported value should be considered invalid.

Golder Associates

Table 9

Summary of Groundwater Monitoring Field Parameters
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Parameter	Units	Date	SWMU-13									
			GW-20S	P-6	P-5	BNP-2	BNP-4	GW-4	GW-4I	BR-3	BR-2	BR-1
Fe^{2+}	mg/L	Dec-13	0.8	0.4	--	--	--	0.4	0.8	--	0.4	--
	mg/L	Apr-14	0.5	0.8	--	0.5	3.8	0.5	1.0	--	--	--
	mg/L	Aug-14	1.2	0.5	--	--	0.5	1.0	3.5	--	--	--
	mg/L	Nov-14	0.5	1.0	--	--	5.5	0.5	3.5	--	--	--
	mg/L	Feb-15	2.0	1.5	--	0.0	4.0	0.5	2.5	2.5	0.5	0.5
	mg/L	Jun-15	0.5	0.5	--	0.0	4.0	0.5	2.5	--	--	--
	mg/L	Sep-15	0.4	0.2	--	0.2	4.0	--	--	--	--	--
	mg/L	Jan-16	1.5	0.0	3.5	0.5	4.0	3.5	2.5	--	--	--
	mg/L	Mar-16	0.5	0.2	5.0	0.5	2.0	2.5	2.2	2.0	3.0	2.0
pH	s.u.	Dec-13	7.39	6.69	--	--	--	6.98	6.99	8.61	11.46	11.30
	s.u.	Apr-14	6.80	6.67	--	6.09	6.95	6.83	6.73	--	--	--
	s.u.	Aug-14	7.70	6.59	--	--	6.98	5.01	7.19	--	--	--
	s.u.	Nov-14	7.16	6.87	--	--	7.03	6.79	6.93	--	--	--
	s.u.	Feb-15	5.41	7.86	--	7.07	7.08	8.21	8.24	8.05	8.70	9.62
	s.u.	Jun-15	7.39	*5.55*	--	6.96	*4.94*	*4.72*	*4.92*	--	--	--
	s.u.	Sep-15	7.30	6.99	--	7.03	7.01	--	--	--	--	--
	s.u.	Jan-16	7.22	7.08	6.80	6.87	7.07	6.92	7.10	--	--	--
	s.u.	Mar-16	6.92	6.92	6.78	6.70	6.89	6.73	7.06	7.21	7.27	7.22
Conductivity	mS/cm	Dec-13	0.520	1.486	--	--	--	0.576	1.236	0.263	0.729	0.570
	mS/cm	Apr-14	0.516	1.410	--	0.742	1.187	0.388	1.020	--	--	--
	mS/cm	Aug-14	0.429	1.078	--	--	1.349	0.579	1.288	--	--	--
	mS/cm	Nov-14	0.491	1.261	--	--	1.829	1.419	1.164	--	--	--
	mS/cm	Feb-15	0.486	1.279	--	0.446	2.082	0.463	1.067	0.801	0.744	0.363
	mS/cm	Jun-15	0.497	0.941	--	0.451	1.193	0.454	1.006	--	--	--
	mS/cm	Sep-15	0.471	1.397	--	0.503	1.182	--	--	--	--	--
	mS/cm	Jan-16	0.503	1.367	1.188	0.463	1.670	0.509	1.214	--	--	--
	mS/cm	Mar-16	0.597	1.332	1.206	0.446	1.555	0.477	1.137	1.847	2.387	2.047
Turbidity	NTU	Dec-13	11.1	139	--	--	--	6.26	6.84	>1000	29	>1000
	NTU	Apr-14	2.73	215	--	12.6	10.6	6.01	4.81	--	--	--
	NTU	Aug-14	93.3	370	--	--	67.3	29.3	24.3	--	--	--
	NTU	Nov-14	11.1	159	--	--	7.21	2.09	9.42	--	--	--
	NTU	Feb-15	21.6	129	--	25.1	17.4	7.00	6.78	159	231	382
	NTU	Jun-15	3.88	118	--	38.9	88.3	6.02	3.19	--	--	--
	NTU	Sep-15	2.06	25.5	--	7.0	36.8	--	--	--	--	--
	NTU	Jan-16	5.03	45.0	46.5	5.58	9.77	27.2	6.51	--	--	--
	NTU	Mar-16	11.2	35.0	74.7	7.40	7.32	3.33	35.8	346	176	84.2
ORP	mV	Dec-13	-113	166.5	--	--	--	-77.4	-39.9	36.1	-15.8	12.3
	mV	Apr-14	-62.1	-227.4	--	-8.4	-148.6	-25.9	-23.7	--	--	--
	mV	Aug-14	-136.8	-98.8	--	--	-161.8	56.0	-132.9	--	--	--
	mV	Nov-14	-38.1	-102.3	--	--	-126.8	-54.6	-58.8	--	--	--
	mV	Feb-15	40.4	-125.9	--	12.1	-146.5	-106.3	-135.5	-220.7	-276.2	-332.8
	mV	Jun-15	-55.9	-103.7	--	-13.0	-137.9	-18.0	-82.3	--	--	--
	mV	Sep-15	-93.6	-19.6	--	-65.1	-138.8	--	--	--	--	--
	mV	Jan-16	-105.9	-51.5	-130.9	-72.5	-159.3	-79.6	-110.8	--	--	--
	mV	Mar-16	99.3	-73.8	-105.3	-81.9	-121.9	-29.3	-101.3	-143.5	-107.6	-184.8
DO	mg/L	Dec-13	0.82	1.25	--	--	--	2.94	1.06	3.22	5.93	5.84
	mg/L	Apr-14	0.34	0.68	--	0.35	0.55	0.43	1.23	--	--	--
	mg/L	Aug-14	0.47	0.57	--	--	0.22	0.57	0.64	--	--	--
	mg/L	Nov-14	1.40	1.57	--	--	1.16	0.97	1.80	--	--	--
	mg/L	Feb-15	0.55	1.90	--	0.51	1.47	1.51	1.78	0.71	0.27	0.19
	mg/L	Jun-15	0.34	1.21	--	0.33	0.65	0.63	0.89	--	--	--
	mg/L	Sep-15	0.53	0.69	--	0.47	0.60	--	--	--	--	--
	mg/L	Jan-16	1.09	0.42	0.89	0.82	0.33	0.85	0.94	--	--	--
	mg/L	Mar-16	2.31	0.92	1.08	5.16	1.04	2.11	0.67	2.69	2.85	2.86

Notes:

1) YSI multimeter was used to measure pH, conductivity, turbidity, DO, and ORP.
2) Hach Ferrous Iron kit was used to measure Fe2+.

-- = No data available

Shaded = Instrument error; reported value should be considered invalid.

Golder Associates

Table 9

Summary of Groundwater Monitoring Field Parameters
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Parameter	Units	Date	SWMU-13									
			IW-18	IW-17	IW-16	IW-14D	IW-14	IW-12D	IW-12	IW-11	IW-10D	IW-10
Fe^{2+}	mg/L	Dec-13	0.4	0.0	0.6	0.4	0.2	0.2	--	0.4	0.0	0.6
	mg/L	Apr-14	--	--	--	--	--	--	--	--	--	--
	mg/L	Aug-14	--	3.5	--	--	--	--	--	--	--	--
	mg/L	Nov-14	--	2.5	--	--	--	--	--	--	--	--
	mg/L	Feb-15	3.0	2.5	3.0	3.0	2.0	3.0	0.0	0.0	1.5	2.0
	mg/L	Jun-15	2.5	7.0	2.5	--	1.5	1.5	1.0	--	--	--
	mg/L	Sep-15	2.5	4.0	2.5	--	1.8	0.2	0.0	--	--	--
	mg/L	Jan-16	5.0	4.0	3.0	--	4.5	2.0	3.5	--	--	--
	mg/L	Mar-16	2.6	5.0	4.5	5.0	3.0	2.0	1.4	3.0	3.0	2.5
pH	s.u.	Dec-13	7.88	6.76	7.23	7.46	10.97	10.97	8.71	9.92	9.05	9.10
	s.u.	Apr-14	--	--	--	--	--	--	--	--	--	--
	s.u.	Aug-14	--	6.58	--	--	--	--	--	--	--	--
	s.u.	Nov-14	--	6.43	--	--	--	--	--	--	--	--
	s.u.	Feb-15	8.25	6.87	8.10	7.59	7.29	7.05	9.10	8.70	7.85	7.93
	s.u.	Jun-15	*4.80*	6.43	7.27	--	7.91	8.25	5.85	--	--	--
	s.u.	Sep-15	7.18	6.08	7.02	--	7.61	8.09	6.07	--	--	--
	s.u.	Jan-16	6.77	6.37	6.61	--	5.95	5.84	6.42	--	--	--
	s.u.	Mar-16	6.88	6.31	7.02	7.00	7.02	7.27	8.09	7.11	7.17	7.43
Conductivity	mS/cm	Dec-13	0.628	2.938	0.840	0.683	0.349	0.287	0.486	0.573	0.341	0.400
	mS/cm	Apr-14	--	--	--	--	--	--	--	--	--	--
	mS/cm	Aug-14	--	0.901	--	--	--	--	--	--	--	--
	mS/cm	Nov-14	--	0.934	--	--	--	--	--	--	--	--
	mS/cm	Feb-15	0.987	1.085	0.762	1.582	0.575	1.352	0.593	0.554	0.985	0.610
	mS/cm	Jun-15	0.777	1.085	0.806	--	0.624	0.692	0.615	--	--	--
	mS/cm	Sep-15	0.795	1.014	0.799	--	0.610	0.524	0.411	--	--	--
	mS/cm	Jan-16	2.025	1.263	1.913	--	3.361	3.131	3.290	--	--	--
	mS/cm	Mar-16	1.754	1.182	1.221	3.100	3.904	2.668	1.210	1.053	1.166	0.737
Turbidity	NTU	Dec-13	>1000	142	>1000	63.8	80.8	5.72	>1000	596	17.2	506
	NTU	Apr-14	--	--	--	--	--	--	--	--	--	--
	NTU	Aug-14	--	10.8	--	--	--	--	--	--	--	--
	NTU	Nov-14	--	84.1	--	--	--	--	--	--	--	--
	NTU	Feb-15	156	79.0	33.6	147	38.1	72.6	34.4	86.9	27.7	105.0
	NTU	Jun-15	4.32	3.02	3.71	--	16.3	53.3	10.3	--	--	--
	NTU	Sep-15	8.03	1.22	2.72	--	15.4	12.4	2.14	--	--	--
	NTU	Jan-16	44.9	1.42	17.7	--	153	201	60.9	--	--	--
	NTU	Mar-16	129	1.69	9.79	> 1000	85.2	145	28.1	72.0	222	51.7
ORP	mV	Dec-13	-67.6	-241	-89.6	87.4	24.1	14.4	67.3	98.3	42.7	50.8
	mV	Apr-14	--	--	--	--	--	--	--	--	--	--
	mV	Aug-14	--	-112.4	--	--	--	--	--	--	--	--
	mV	Nov-14	--	--	--	--	--	--	--	--	--	--
	mV	Feb-15	-186.3	-88.7	-171.4	-178.6	-151.9	-160.9	-162.4	-266.3	-169.5	-174.6
	mV	Jun-15	-182.8	-79.4	-90.3	--	-182.7	-205.6	35.6	--	--	--
	mV	Sep-15	-116.5	-119.7	-94.4	--	-182.3	-175.3	-125.4	--	--	--
	mV	Jan-16	-134.0	-82.4	-121.9	--	-36.6	-79.0	-88.4	--	--	--
	mV	Mar-16	-178.9	-87.2	-131.6	-144.4	-175.2	-199.3	-226.7	-154.1	-175.6	-210.2
DO	mg/L	Dec-13	2.97	0.60	1.96	1.25	1.20	2.66	1.23	5.09	1.50	2.46
	mg/L	Apr-14	--	--	--	--	--	--	--	--	--	--
	mg/L	Aug-14	--	0.60	--	--	--	--	--	--	--	--
	mg/L	Nov-14	--	--	--	--	--	--	--	--	--	--
	mg/L	Feb-15	1.14	1.07	1.81	0.34	0.58	0.47	0.39	0.23	0.41	0.28
	mg/L	Jun-15	0.49	4.46	0.75	--	0.28	0.46	3.32	--	--	--
	mg/L	Sep-15	2.71	0.60	0.71	--	0.32	0.59	0.52	--	--	--
	mg/L	Jan-16	0.50	0.47	0.56	--	0.44	0.13	0.31	--	--	--
	mg/L	Mar-16	0.00	1.89	1.13	3.96	0.48	0.13	0.48	2.65	2.57	1.90

Notes:

1) YSI multimeter was used to measure pH, conductivity, turbidity, DO, and ORP.
2) Hach Ferrous Iron kit was used to measure Fe2+.

-- = No data available

Shaded = Instrument error; reported value should be considered invalid.

Golder Associates

Table 9

Summary of Groundwater Monitoring Field Parameters
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Parameter	Units	Date	SWMU-13								
			IW-08D	IW-08	IW-06D	IW-06	IW-05	IW-03D	IW-03	IW-02	IW-01
Fe^{2+}	mg/L	Dec-13	0.0	0.2	0.0	1.0	0.8	0.0	0.6	--	0.2
	mg/L	Apr-14	--	--	--	--	--	--	--	--	--
	mg/L	Aug-14	--	--	--	--	--	--	--	--	--
	mg/L	Nov-14	--	--	--	--	--	--	--	--	--
	mg/L	Feb-15	1.5	0.0	3.0	0.0	0.0	2.0	0.5	--	0.0
	mg/L	Jun-15	--	--	--	--	--	--	--	--	--
	mg/L	Sep-15	--	--	--	--	--	--	--	--	--
	mg/L	Jan-16	--	--	--	--	--	--	1.5	4.5	0.0
	mg/L	Mar-16	3.5	1.5	3.0	0.0	2.0	3.0	0.0	6.5	0.0
pH	s.u.	Dec-13	8.15	8.07	8.83	12.14	12.47	7.86	9.08	--	11.32
	s.u.	Apr-14	--	--	--	--	--	--	--	--	--
	s.u.	Aug-14	--	--	--	--	--	--	--	--	--
	s.u.	Nov-14	--	--	--	--	--	--	--	--	--
	s.u.	Feb-15	8.18	8.11	8.76	9.78	10.82	8.01	8.71	--	11.67
	s.u.	Jun-15	--	--	--	--	--	--	--	--	--
	s.u.	Sep-15	--	--	--	--	--	--	--	--	--
	s.u.	Jan-16	--	--	--	--	--	--	7.90	6.37	11.89
	s.u.	Mar-16	7.07	7.70	7.62	10.85	7.74	7.04	8.05	6.90	12.07
Conductivity	mS/cm	Dec-13	1.394	0.584	0.443	4.692	5.058	0.482	0.266	--	0.594
	mS/cm	Apr-14	--	--	--	--	--	--	--	--	--
	mS/cm	Aug-14	--	--	--	--	--	--	--	--	--
	mS/cm	Nov-14	--	--	--	--	--	--	--	--	--
	mS/cm	Feb-15	1.305	0.580	1.607	0.376	0.578	1.772	0.589	--	1.173
	mS/cm	Jun-15	--	--	--	--	--	--	--	--	--
	mS/cm	Sep-15	--	--	--	--	--	--	--	--	--
	mS/cm	Jan-16	--	--	--	--	--	--	0.437	2.527	2.163
	mS/cm	Mar-16	1.439	0.424	1.241	0.743	1.052	2.078	0.386	1.899	3.666
Turbidity	NTU	Dec-13	51	69.7	56.8	14.5	41.9	105	260	--	55.3
	NTU	Apr-14	--	--	--	--	--	--	--	--	--
	NTU	Aug-14	--	--	--	--	--	--	--	--	--
	NTU	Nov-14	--	--	--	--	--	--	--	--	--
	NTU	Feb-15	25.6	63.0	31.1	53.9	28.6	32.0	42.7	--	91.0
	NTU	Jun-15	--	--	--	--	--	--	--	--	--
	NTU	Sep-15	--	--	--	--	--	--	--	--	--
	NTU	Jan-16	--	--	--	--	--	--	25.2	75.0	37.3
	NTU	Mar-16	25.4	36.0	66.4	52.3	81.8	242	20.6	32.3	10.6
ORP	mV	Dec-13	24	55.9	147.3	6.4	-98.6	150.2	29.6	--	-22.3
	mV	Apr-14	--	--	--	--	--	--	--	--	--
	mV	Aug-14	--	--	--	--	--	--	--	--	--
	mV	Nov-14	--	--	--	--	--	--	--	--	--
	mV	Feb-15	-101.6	-150.4	-207.5	-19.8	-107.4	-294.2	-134.8	--	-414.3
	mV	Jun-15	--	--	--	--	--	--	--	--	--
	mV	Sep-15	--	--	--	--	--	--	--	--	--
	mV	Jan-16	--	--	--	--	--	--	-182.0	-56.8	-265.1
	mV	Mar-16	-147.1	-245.5	-188.5	-91.5	-219.6	-82.2	-203.6	-97.1	-157.3
DO	mg/L	Dec-13	1.48	3.81	4.45	5.12	7.19	3.84	4.02	--	4.33
	mg/L	Apr-14	--	--	--	--	--	--	--	--	--
	mg/L	Aug-14	--	--	--	--	--	--	--	--	--
	mg/L	Nov-14	--	--	--	--	--	--	--	--	--
	mg/L	Feb-15	2.47	1.16	0.90	1.46	0.97	0.16	0.34	--	0.62
	mg/L	Jun-15	--	--	--	--	--	--	--	--	--
	mg/L	Sep-15	--	--	--	--	--	--	--	--	--
	mg/L	Jan-16	--	--	--	--	--	--	0.45	0.93	0.45
	mg/L	Mar-16	3.18	1.82	2.18	1.74	1.51	3.97	0.96	1.32	0.52

Notes:

1) YSI multimeter was used to measure pH, conductivity, turbidity, DO, and ORP.
2) Hach Ferrous Iron kit was used to measure Fe2+.

-- = No data available

Shaded = Instrument error; reported value should be considered invalid.

Golder Associates

Table 10

In-situ Microcosm Study -- Data Summary
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

	GW-4				GW-4I				GW-16S			
Microbial Populations (cells/bead)	**GW**	**MNA**	**BioStim**	**BioAug**	**GW**	**MNA**	**BioStim**	**BioAug**	**GW**	**MNA**	**BioStim**	**BioAug**
Dehalococcoides (DHC)	--	4.63E+04	3.32E+04	5.18E+06	--	6.33E+04	7.30E+04	5.42E+07	--	1.08E+05	3.04E+05	1.44E+07
tceA Reductase (TCE)	--	1.96E+03	1.48E+03	1.54E+05	--	3.04E+03	3.04E+03	9.47E+05	--	3.16E+03	6.18E+03	3.34E+05
bvcA Reductase (BVC)	--	2.36E+02	2.02E+02	2.00E+02	--	1.39E+02	5.39E+02	1.54E+03	--	1.12E+04	6.90E+04	1.83E+04
vcrA Reductase (VCR)	--	1.12E+04	6.91E+03	2.50E+06	--	1.68E+04	8.01E+03	2.52E+07	--	1.76E+04	3.90E+04	9.50E+06
Contaminants of Concern (ug/L)												
PCE	110 J	87.2	< 10	84.1	< 0.060	< 10	< 10	< 10	4.3	< 10	< 10	< 10
TCE	55000	38800	8360	41200	0.79	< 10	< 10	< 10	210	< 10	< 10	< 10
1,1-DCE	210 J	105	30	118	< 0.040	< 10	< 10	< 10	16	< 10	< 10	< 10
cis-1,2-DCE	2400	1480	889	2000	0.73	< 1.0	< 1.0	< 1.0	240	< 1.0	< 1.0	26.7
trans-1,2-DCE	120 J	91.5	37.8	94.1	0.19 J	< 1.0	< 1.0	< 1.0	0.99 J	< 1.0	< 1.0	< 1.0
Vinyl Chloride	< 35	< 10	< 10	25.4	100	24.6	22.1	25.3	86	< 1.0	< 1.0	78.2
1,1,1,2-TCA	< 10	< 1.0	< 1.0	< 1.0	< 0.020	< 1.0	< 1.0	< 1.0	< 0.17	< 1.0	< 1.0	< 1.0
1,1,2,2-TCA	< 25	3.1	1.4	2.7	< 0.050	< 1.0	< 1.0	< 1.0	< 0.42	< 1.0	< 1.0	< 1.0
1,1,1-TCA	47 J	28.7	6.4	28.5	< 0.020	< 1.0	< 1.0	< 1.0	< 0.17	< 1.0	< 1.0	< 1.0
1,1,2-TCA	< 20	3.3	1.6	3.1	< 0.040	< 1.0	< 1.0	< 1.0	< 0.33	< 1.0	< 1.0	< 1.0
1,1-DCA	< 10	10.8	5.7	10.5	0.29 J	< 1.0	< 1.0	< 1.0	2.1 J	< 1.0	< 1.0	1.8
1,2-DCA	1400	794	615	873	0.88	< 10	< 10	< 10	< 0.25	1.1	< 1.0	< 1.0
Chloroform	1600	895	480	J 894	< 0.030	< 10	< 10	< 10	< 0.25	< 10	< 10	< 10
Benzene	620	--	--	--	0.45 J	--	--	--	1.2 J	--	--	--
Methylene Chloride	28 J	--	--	--	< 0.020	--	--	--	< 0.17	--	--	--
Carbon Tetrachloride	210 J	--	--	--	< 0.030	--	--	--	< 0.25	--	--	--
Toluene	110 J	--	--	--	0.052 J	--	--	--	3.2 J	--	--	--
Ethylbenzene	60 J	--	--	--	< 0.040	--	--	--	< 0.33	--	--	--
Xylenes	220 J	--	--	--	< 0.030	--	--	--	< 0.25	--	--	--
Chloroethane	< 100	--	--	--	1.3	--	--	--	< 1.7	--	--	--
Chlorobenzene	< 10	--	--	--	0.062 J	--	--	--	0.26 J	--	--	--
Dissolved Gases (ug/L)												
Ethene	69.1	5.8	14	16	8.54	3.2	5.0	9.8	< 0.62	66	65	70
Ethane	2.79	0.47	1.4	1.5	< 0.47	0.46	0.62	0.73	29500	4.1	3.9	9.0
Methane	120	34	53	49	4460	9700	15000	20000	313	10000	10000	15000
Volatile Fatty Acids (mg/L)												
Acetic Acid	--	< 5.0	6.6	< 5.0	--	30	22	30	--	91	55	87
Propionic Acid	--	< 5.0	7.2	< 5.0	--	11	7.9	12	--	3.2 J	3.1 J	26
Pyruvic Acid	--	< 5.0	< 5.0	< 5.0	--	< 5.0	< 5.0	< 5.0	--	< 5.0	< 5.0	< 5.0
Butyric Acid	--	< 5.0	< 5.0	< 5.0	--	< 5.0	< 5.0	< 5.0	--	< 5.0	< 5.0	< 5.0
Lactic Acid	--	< 10	< 10	< 10	--	< 10	< 10	5.2 J	--	< 10	< 10	< 10
Anions (mg/L)												
Chloride	--	16	16	21	--	100	110	110	--	97	98	94
Nitrite	--	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
Nitrate	--	< 0.50	< 0.50	< 0.50	--	0.079 J	0.10 J	< 0.50	--	< 0.50	< 0.50	< 0.50
Ortho Phosphate	--	3.8	0.93	J < 1.5	--	< 1.5	< 1.5	< 1.5	--	< 1.5	< 1.5	< 1.5
Sulfate	--	11	6.7	10	--	< 1.0	< 1.0	< 1.0	--	0.49 J	< 1.0	1.2

Notes:
GW = Analytical data from June 2015 groundwater sampling event.
ISM = In-situ microcosm
MNA = ISM unit for monitored natural attenuation parameters, contains no additional electron donor and represents current aquifer conditions.
BioStim = ISM unit baited with specified electron donor (sodium lactate) to stimulate growth of dechlorinating bacteria and enhance biodegradation.
BioAug = ISM unit pre-inoculated with a Dehalococcoides culture to evaluate bioaugmentation as a treatment technology.

Table 11

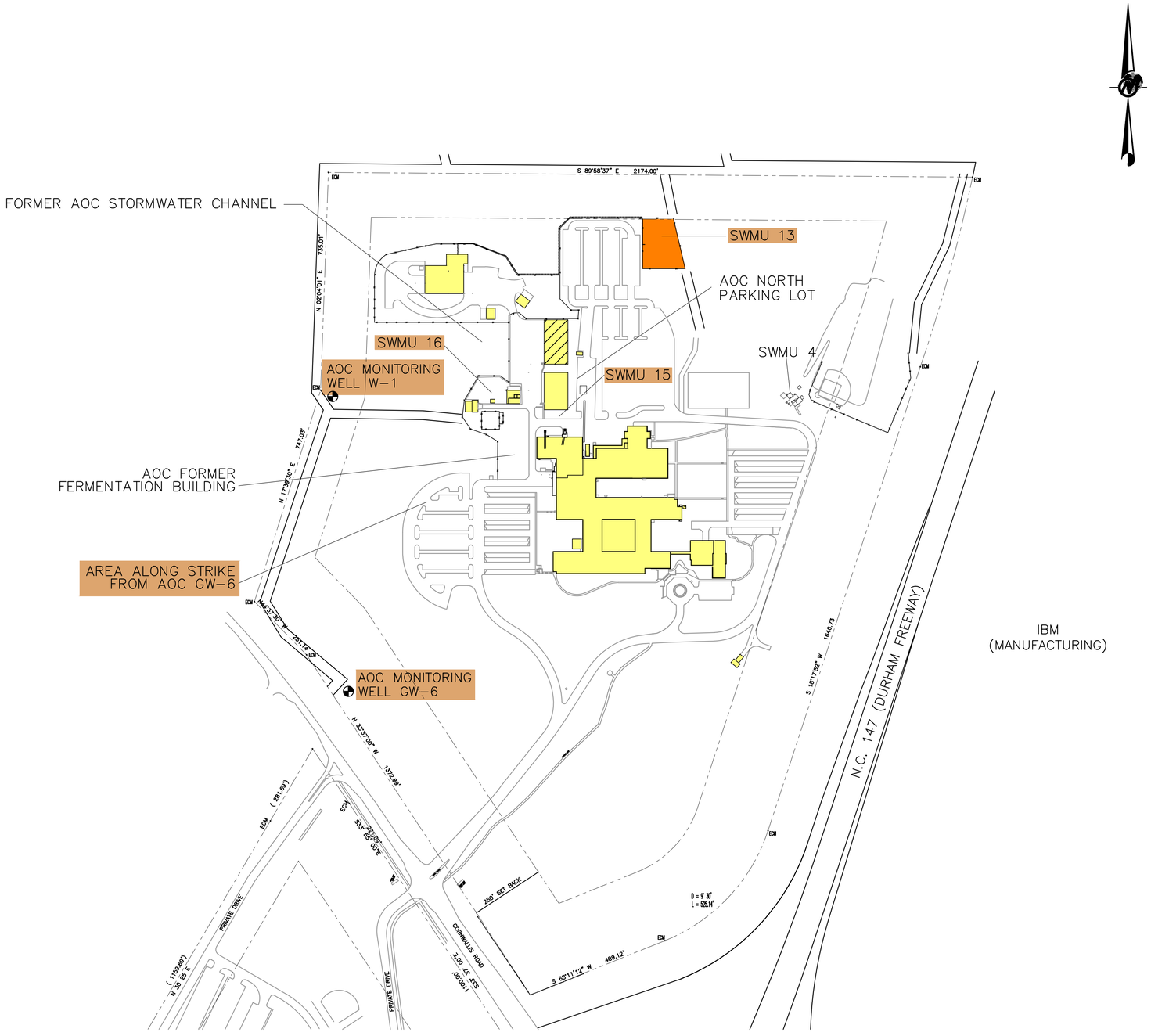
Comparison of Select VOCs at SWMU-13
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analytes	Concentration (ug/L)				
	P-5 01/25/16	**GW-4** 01/26/16	**IW-17 Upper** 12/17/15	**IW-17 Lower** 12/17/15	**IW-16** 01/26/16
Vinyl Chloride	3,200	8.6	450	3,400	3,500
1,1-Dichloroethene	ND	140	980	260	700
cis-1,2-Dichloroethene	60,000	2,000	51,000	29,000	71,000
Chloroform	10,000	1,700	19,000	2,500	4,000
1,2-Dichloroethane	14,000	1,200	11,000	3,700	7,800
Benzene	1,700	480	1,800	730	1,200
Trichloroethene	64,000	41,000	97,000	4,100	530
Tetrachloroethene	490	120	170	ND	17

Notes:

1) IW-17 Upper and Lower samples were collected prior to injection in December 2015.
2) Reported results for samples from P-5, GW-4, and IW-16 were collected during quarterly groundwater sampling in January 2016.

FIGURES



LEGEND

— · — · —	PROPERTY BOUNDARY
	HISTORICAL BUILDINGS DEMOLISHED
	EXISTING WAREHOUSE
	AREAS FOR SVE
	SWMU AND AOCs FOR NZVI INJECTION
SWMU	SOLID WASTE MANAGEMENT UNIT
AOC	AREA OF CONCERN

REFERENCES

1.) BASE MAP TAKEN FROM CADD DRAWING PREPARED BY S&ME, JOB NO. 1054-96-554, FIGURE 1-4, DATED 01/00.

2.) COORDINATE SYSTEM SHOWN IN NORTH CAROLINA STATE PLANE NAD27.

200 0 200 400
SCALE FEET

GlaxoSmithKline

CONTRACTOR FIRM ID

Golder Associates
GREENSBORO, NC

CONTRACTOR PROJ No: 073-96115

Designed By: JAD
Drawn By: LKB
Checked By: BJE
Project Manager: BRIAN EICHLIN, P.E.

GSK PROJECT INFORMATION

GSK PROJECT NO: 139535
PROJECT NAME: RCRA CORRECTIVE MEASURES
GSK PROJECT MGR: LINDSEY WALATA, P.G.

SECOND ANNUAL REPORT

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No	Revision	Date
0	ISSUED TO NCDEQ	06/30/16

Bldg Operations/ Project Mgr:
CAD: BSD
Site: GSK S. CAMPUS, N. COMPLEX
Scale: 1" = 200'

Title:
SITE LAYOUT

FIGURE 1

Drawing Number:

Rev: 0

Summary of Groundwater Sample Collection and Analysis
GlaxoSmithKline – Research Triangle Park, NC
South Campus, North Complex

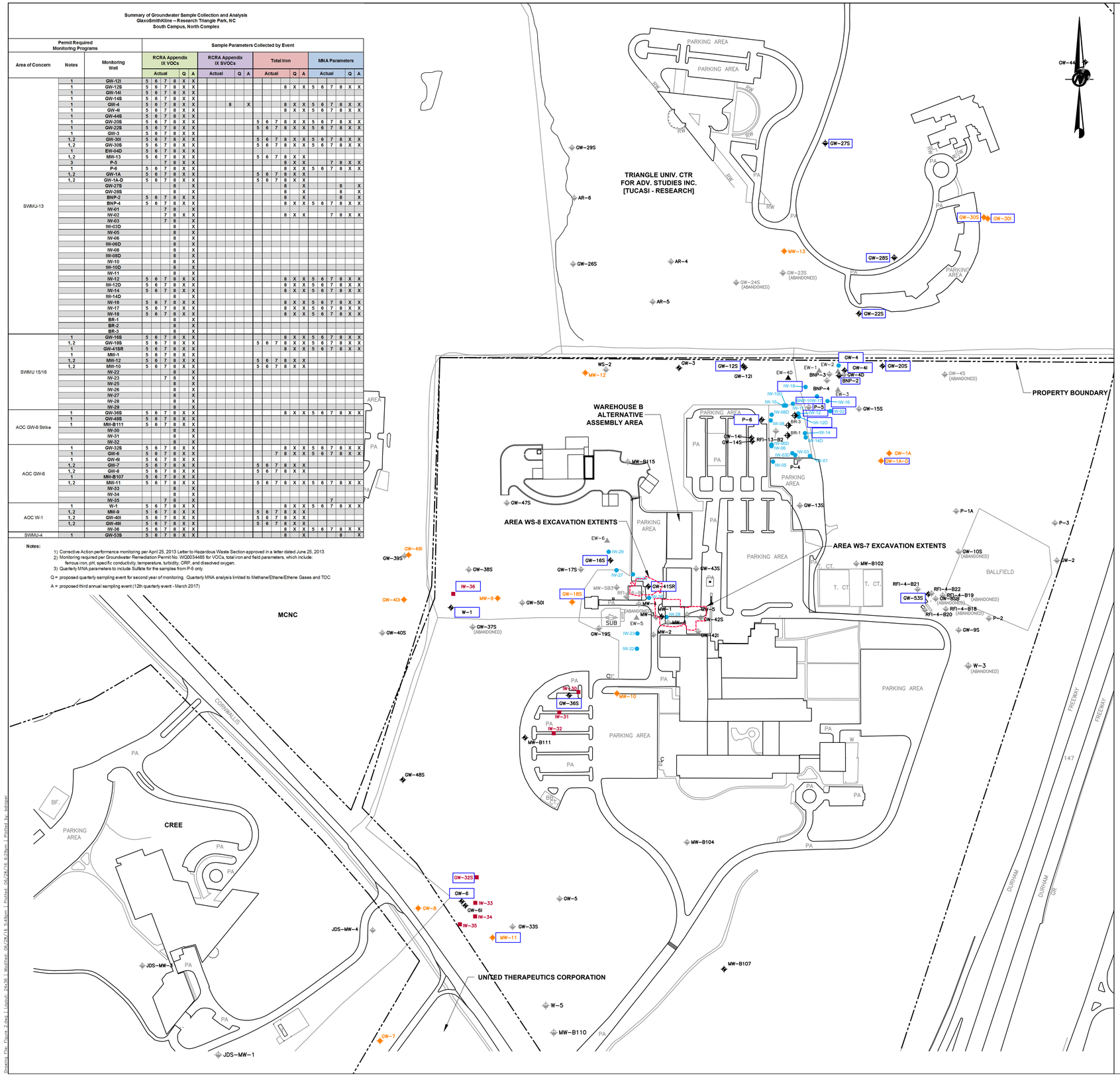
Permit Required Monitoring Programs			Sample Parameters Collected by Event																										
			RCRA Appendix IX VOCs						RCRA Appendix IX SVOCs						Total Iron						MNA Parameters								
Area of Concern	Notes	Monitoring Well	Actual			Q	A		Actual			Q	A		Actual			Q	A		Actual						Q	A	
SWMU-13	1	GW-12I	5	6	7	8	X	X																					
	1	GW-12S	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
	1	GW-14I	5	6	7	8	X	X																					
	1	GW-14S	5	6	7	8	X	X																					
	1	GW-4	5	6	7	8	X	X				8		X				8	X	X	5	6	7	8	X	X			
	1	GW-4I	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
	1	GW-44S	5	6	7	8	X	X																					
	1	GW-20S	5	6	7	8	X	X							5	6	7	8	X	X	5	6	7	8	X	X			
	1	GW-22S	5	6	7	8	X	X							5	6	7	8	X	X	5	6	7	8	X	X			
	1	GW-3	5	6	7	8	X	X																					
	1, 2	GW-30I	5	6	7	8	X	X							5	6	7	8	X	X	5	6	7	8	X	X			
	1, 2	GW-30S	5	6	7	8	X	X							5	6	7	8	X	X	5	6	7	8	X	X			
	1	EW-04D	5	6	7	8	X	X																					
	1, 2	MW-13	5	6	7	8	X	X							5	6	7	8	X	X									
	3	P-5			7	8	X	X										8	X	X			7	8	X	X			
	1	P-6	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
	1, 2	GW-1A	5	6	7	8	X	X							5	6	7	8	X	X									
	1, 2	GW-1A-D	5	6	7	8	X	X							5	6	7	8	X	X									
		GW-27S				8		X										8		X				8		X			
		GW-28S				8		X										8		X				8		X			
		BNP-2	5	6	7	8	X	X										8		X				8		X			
		BNP-4	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
		IW-01			7	8		X																					
		IW-02			7	8	X	X										8	X	X			7	8	X	X			
		IW-03			7	8		X																					
		IW-03D				8		X																					
		IW-05				8		X																					
		IW-06				8		X																					
		IW-06D				8		X																					
		IW-08				8		X																					
		IW-08D				8		X																					
		IW-10				8		X																					
		IW-10D				8		X																					
		IW-11				8		X																					
		IW-12	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
		IW-12D	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
		IW-14	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
		IW-14D				8		X																					
		IW-16	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
		IW-17	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
		IW-18	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
		BR-1				8		X																					
		BR-2				8		X																					
		BR-3				8		X																					
SWMU 15/16	1	GW-16B	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
	1, 2	GW-18B	5	6	7	8	X	X							5	6	7	8	X	X	5	6	7	8	X	X			
	1	GW-415R	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
	1	MW-1	5	6	7	8	X	X																					
	1, 2	MW-12	5	6	7	8	X	X							5	6	7	8	X	X									
	1, 2	MW-10	5	6	7	8	X	X							5	6	7	8	X	X									
		IW-22				8		X																					
		IW-23			7	8		X																					
		IW-25				8		X																					
		IW-26				8		X																					
		IW-27				8		X																					
		IW-28				8		X																					
		IW-29				8		X																					
AOC GW-6 Strike	1	GW-36S	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
	1	GW-48S	5	6	7	8	X	X																					
	1	MW-B111	5	6	7	8	X	X																					
		IW-30				8		X																					
		IW-31				8		X																					
		IW-32				8		X																					
AOC GW-6	1	GW-32S	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
	1	GW-6	5	6	7	8	X	X									7	8	X	X	5	6	7	8	X	X			
	1	GW-6I	5	6	7	8	X	X																					
	1,2	GW-7	5	6	7	8	X	X							5	6	7	8	X	X									
	1,2	GW-8	5	6	7	8	X	X							5	6	7	8	X	X									
	1	MW-B107	5	6	7	8	X	X																					
	1,2	MW-11	5	6	7	8	X	X							5	6	7	8	X	X	5	6	7	8	X	X			
		IW-33				8		X																					
		IW-34				8		X																					
		IW-35			7	8		X															7						
AOC W-1	1	W-1	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
	1, 2	MW-9	5	6	7	8	X	X							5	6	7	8	X	X									
	1,2	GW-40I	5	6	7	8	X	X							5	6	7	8	X	X									
	1,2	GW-49I	5	6	7	8	X	X							5	6	7	8	X	X									
		IW-36	5	6	7	8	X	X										8	X	X	5	6	7	8	X	X			
SWMU-4	1	GW-53B	5	6	7	8	X	X										8	X					8		X			

Notes:

1) Corrective Action performance monitoring per April 25, 2013 Letter to Hazardous Waste Section approved in a letter dated June 25, 2013
2) Monitoring required per Groundwater Remediation Permit No. WQ0034465 for VOCs, total iron and field parameters, which include: ferrous iron, pH, specific conductivity, temperature, turbidity, ORP, and dissolved oxygen.
3) Quarterly MNA parameters to include Sulfate for the samples from P-5 only.

Q = proposed quarterly sampling event for second year of monitoring. Quarterly MNA analysis limited to Methane/Ethane/Ethene Gases and TOC

A = proposed third annual sampling event (12th quarterly event - March 2017)



LEGEND

GW–30I	GROUNDWATER MONITORING WELL
GW–10S	MONITORING WELL
IW-03	PHASE II NZVI INJECTION WELL – CLASS 5L
IW-31	NZVI INJECTION WELL – CLASS 5I
BR-3	FRACTURED BEDROCK SVE WELL ALSO USED AS NZVI INJECTION WELL
EW–4D	EXTRACTION WELL INCLUDED IN MONITORING NETWORK
MW–9	EXISTING WELLS FOR COMPLIANCE MONITORING
EW–1	EXTRACTION WELL

FOR INJECTION WELLS "D" DENOTE DEEP WELLS OTHER INJECTION WELLS ARE IN THE SHALLOW ZONE; FOR MONITORING WELLS "S" DENOTE SHALLOW AND "I" INTERMEDIATE WELLS OTHER MONITORING WELLS ARE IN THE DEEP ZONE.

PROPERTY BOUNDARY

ADJACENT PROPERTY BOUNDARY

MNA MONITORING LOCATIONS

NOTES

1. CURRENT AND FORMER BUILDING STRUCTURES ARE SHOWN.
2. GLAXOSMITHKLINE CONTRACTED A NORTH CAROLINA LICENSED LAND SURVEYOR TO LOCATE WELLS AT THE SOUTH CAMPUS, NORTH COMPLEX FACILITY IN DURHAM, NC. THE SURVEYOR SUCCESSFULLY LOCATED 109 WELLS ON THE PROPERTY. DESPITE AN EXTENSIVE SEARCH (INCLUDING SURVEYING THE LOCATIONS AND A SEARCH OF THE AREA USING GROUND PENETRATING RADAR, FOUR WELLS (MW–4, RFI–4–B21, RFI–4–B22, AND RFI–16–B11) COULD NOT BE LOCATED.
3. MARCH 9–10, 2016 MONITORING WELLS GW–8SB, GW10–S, GW37–S, MW–3, RFI–4–B18, RFI–4–B19, AND W–3 WERE ABANDONED.

REFERENCES

1. GROUNDWATER MONITORING WELLS TAKEN FROM CADD FILE TITLED "554/00JAN–DG–FIG5–15", DATED 06/22/00.
2. PLANIMETRIC FEATURES TAKEN FROM CADD FILE TITLED "S&ME", DATED 11/10/99. ALL FEATURES WERE SHIFTED 208.71 FEET AND 223D35'39.423" TO ALIGN WITH GROUNDWATER MONITORING WELLS.
3. ALL BASE CADD FILES USED DURING DRAWING PROTOTYPE CONSTRUCTION WERE TAKEN FROM COMPACT DISK SUPPLIED BY GSK.
4. BNP–1 AND GW–8 WERE SURVEYED IN NOVEMBER 2008 BY STANTEC CONSULTING.
5. COORDINATE SYSTEM SHOWN IS NORTH CAROLINA STATE PLANE NAD27.
6. BNP–2, BNP–3, BNP–4, GW–47S, GW–48S, AND W–2 WERE SURVEYED ON 09/11/02 AND GW–49I AND GW–50I WERE SURVEYED ON 11/15/02 BY TAYLOR WISEMAN AND TAYLOR.
7. MONITORING WELL LOCATIONS FROM JOHN R. McADAMS COMPANY, INC. MAY 2012 DATED MAY 2, 2012 (2012–05–02) ASB LOCATION.DWG)

150 0 150 300
SCALE FEET

GlaxoSmithKline

CONTRACTOR FIRM ID

Golder Associates
Golder Associates NC, Inc.

PE C–2862
PG C–399

CONTRACTOR PROJ No: 073–96115.002

Designed By: BJE
Drawn By: BSD
Checked By: BJE
Project Manager: BRIAN EICHLIN, P.E.

GSK PROJECT INFORMATION

GSK CONTRACT NO: 139535
PROJECT NAME: RCRA CORRECTIVE MEASURES
GSK PROJECT MGR: LINDSEY WALATA, P.G.

SECOND ANNUAL REPORT

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

0	ISSUED TO NCDE	6/30/16
N	R	D

Bldg Operations/ Project Mgr:
CAD: LKB
Site: GSK S. CAMPUS: N. COMPLEX
Scale: 1" = 150'

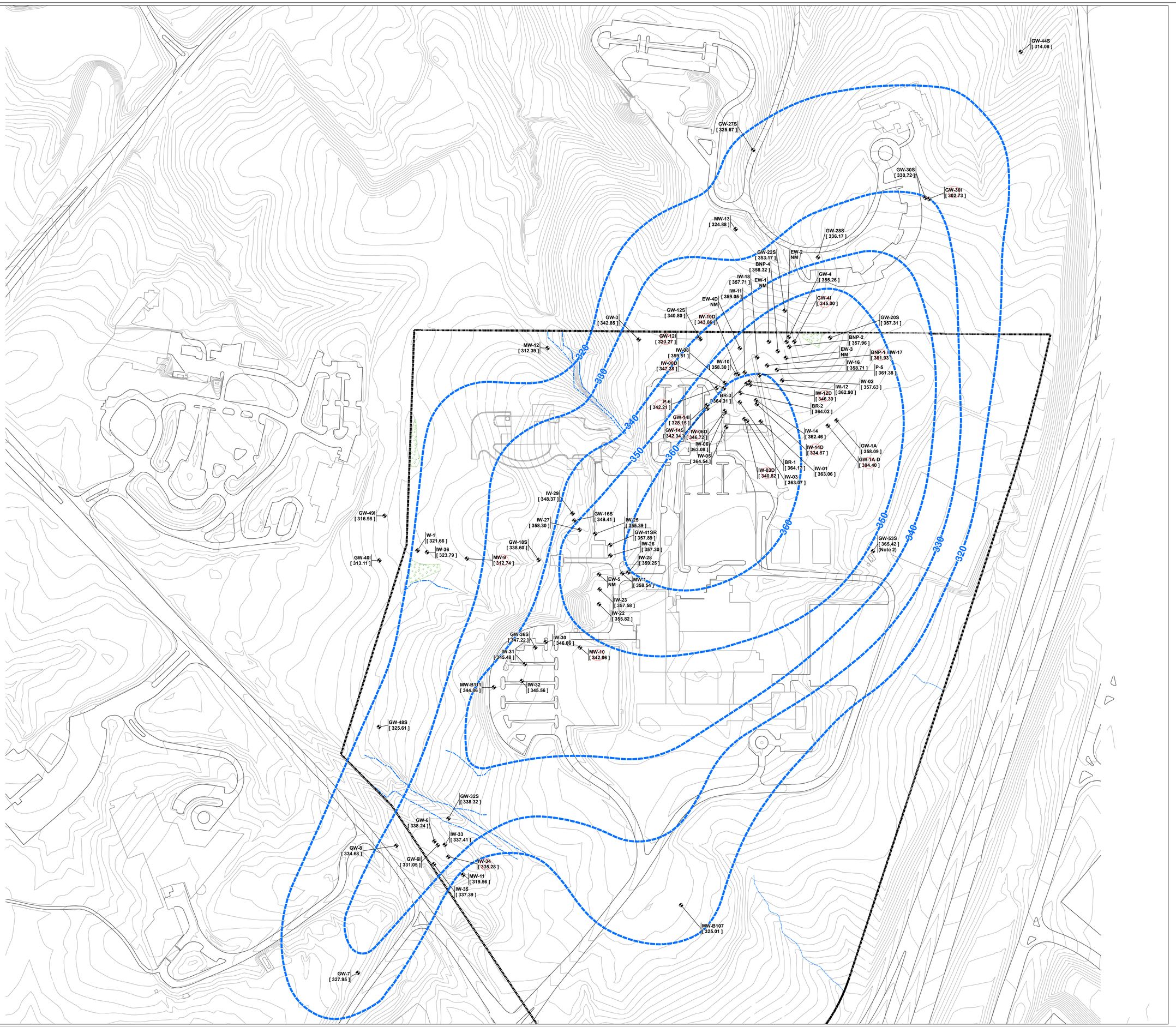
T

GROUNDWATER MONITORING NETWORK

FIGURE 2

GSK Dr N r

R: 0



N

GlaxoSmithKline

CONTRACTOR FIRM ID

Golder Associates
GOLDER ASSOCIATES NC, INC.

PE C-2862
PG C-399

CONTRACTOR PROJECT No.: 073-9611502

Designed By: BSD
Drawn By: BSD
Checked By: BJE
Project Manager: Brian Eichlin, P.E.

GSK PROJECT INFORMATION

GSK Project No.: 139535 RCRA
Project Name: Corrective Measures
GSK Project Mgr.: Lindsey Walata, P.G.

SECOND ANNUAL REPORT

LEGEND

- Monitoring Well Location and GW Elevation
- 2016 Groundwater Contours (10' Interval)
- Approximate GSK Property Boundary
- Intermittent Streams (on GSK Property)
- Ephemeral Streams (on GSK Property)
- Delineated Wetlands (on GSK Property)
- Groundwater Elevation (Not Used) (Monitoring well likely screened in or influenced by the deeper aquifer)

NOTES

1.) Facility operates under Groundwater Remediation Permit No. WQ34465.

2.) Water in GW-53S is likely perched and is therefore not used in the creation of this map.

REFERENCES

Wetland and Stream features delineated by Golder Associates NC, Inc. as part of RJD dated June 8, 2009 and approved by USACE on October 17, 2009 and by NCDENR on July 16, 2009.

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and

0 50 100 200 Feet

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date
0	ISSUED TO NCDEQ	06/30/16

Bldg Operation/ Project Mgr:

GIS: BSD

Site: GSK S. CAMPUS, N. COMPLEX

Scale: 1" = 200'

Title:

EIGHTH QUARTER (MARCH 2016) YEAR 2 GROUNDWATER LEVEL CONTOURS

FIGURE: 3

Sheet Number:

Rev: **0**

Arc MXD: V:\Projects\079\9615\GSK\GW Sampling\Drawings\IW_Contour_Map_20160615.mxd | Date Saved: 6/28/2016 4:43:42 PM | By: bdrager

LEGEND

Y2Q4_TCE_Results_032016
- ND to 3 (NC2L) ug/L (TCE)
- 3 to 10 ug/L (TCE)
- 10 to 100 ug/L (TCE)
- 100 to 1,000 ug/L (TCE)
- > 1,000 ug/L (TCE)

Y2Q3_TCE_Results_012016
- ND to 3 (NC2L) ug/L (TCE)
- 3 to 10 ug/L (TCE)
- 10 to 100 ug/L (TCE)
- 100 to 1,000 ug/L (TCE)
- > 1,000 ug/L (TCE)

Y2Q2_TCE_Results_092015
- ND to 3 (NC2L) ug/L (TCE)
- 3 to 10 ug/L (TCE)
- 10 to 100 ug/L (TCE)
- 100 to 1,000 ug/L (TCE)
- > 1,000 ug/L (TCE)

Y2Q1_TCE_Results_062015
- ND to 3 (NC2L) ug/L (TCE)
- 3 to 10 ug/L (TCE)
- 10 to 100 ug/L (TCE)
- 100 to 1,000 ug/L (TCE)
- > 1,000 ug/L (TCE)

Historical Well Location (Not Sampled on a Quarterly Basis)

Compliance Network *Compliance Monitoring Well*

Inoculation Injection Sites

nZVI Injection Sites

Approximate GSK Property Boundary

Intermittent Streams (on GSK Property)

Ephemeral Streams (on GSK Property)

Review Boundary (See Note 6)

Compliance Boundary (See Note 5)

Target nZVI Injection Areas (See Note 2)

nZVI Injection Area of Influence/ Waste Boundary (See Note 4)

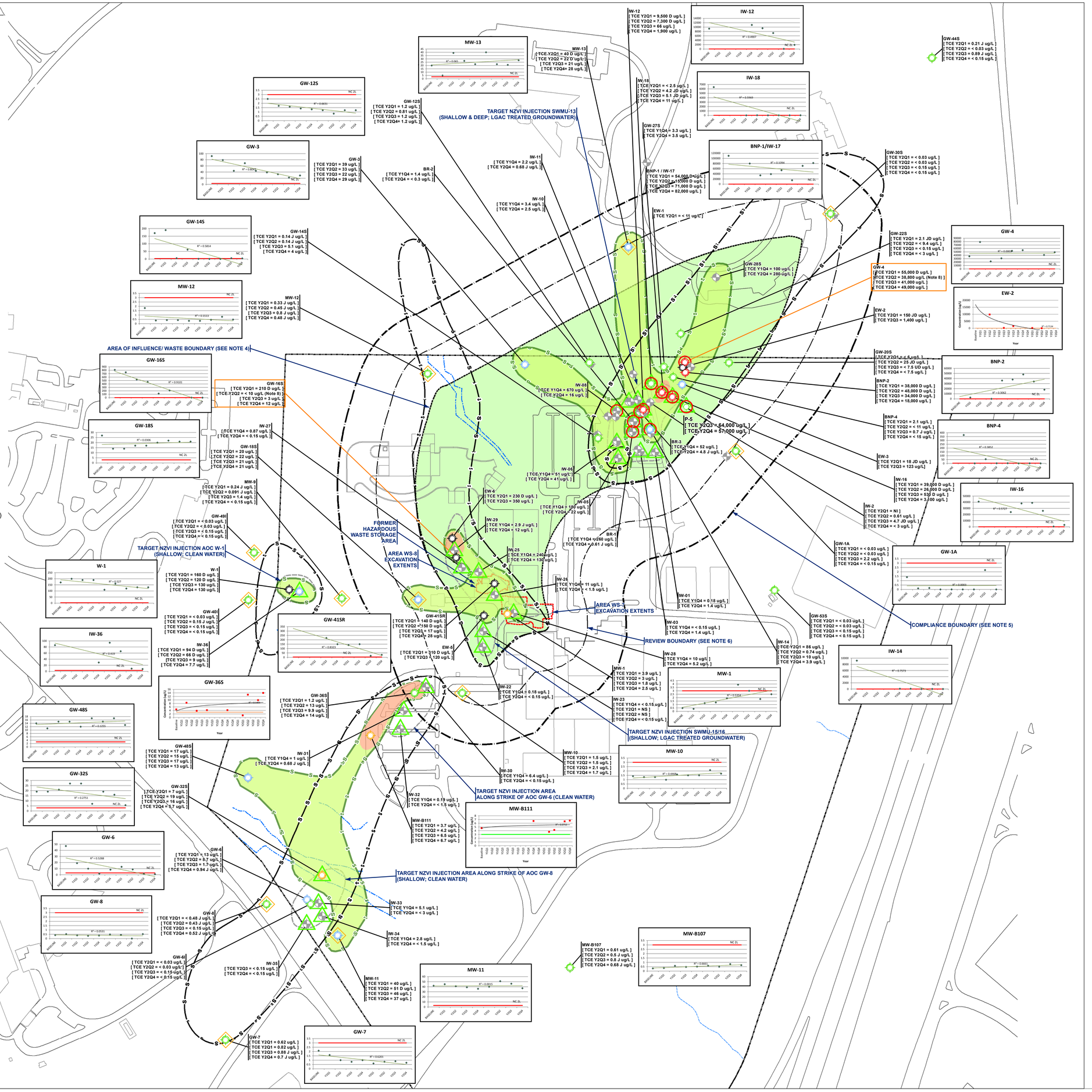
Original Groundwater Impact Zone (Shallow Aquifer) (See Note 3)

Current Groundwater Impact Zone (Shallow with an increasing trend) (See Note 3)

Current Groundwater Impact Zone (Shallow with a declining or stable trend) (See Note 3)

Sample Key:

- Year 2 First Quarter Monitoring Event (June 2015)
- Year 2 Second Quarter Monitoring Event (September 2015)
- Year 2 Third Quarter Monitoring Event (January 2016)
- Year 2 Fourth Quarter Monitoring Event (March 2016)



NOTES

1.) Topographic Contour Interval is 2 feet.

2.) Target nZVI Injection Area shows the location where injection wells will be in compliance with applicable NCDENR setback criteria.

3.) The original groundwater impact area shown is the extent of groundwater impacts in the shallow aquifer, based on historical groundwater monitoring data. The current groundwater impact area shown is the extent of groundwater impacts in the shallow aquifer as related to the most recent groundwater monitoring results. The areas shown are the areas in which groundwater impacts exceed the NC 2L Standards.

4.) The nZVI area of influence is the permitted direction and distance at which the nZVI is expected to travel from the injection wells while providing subsurface treatment of the existing groundwater impact area. For permitting purposes the nZVI area of influence is the waste boundary as defined in 15A NCAC 02L .0102.

5.) The compliance boundary is the maximum distance from a waste boundary that the NC 2L Standards must be met. For the permitted remediation system the compliance boundary applies only to the injected wastewater (i.e., the extracted groundwater) and injectants.

6.) The review boundary is established around a disposal system midway between the compliance boundary and the waste boundary in accordance with 15A NCAC 02L .0108.

7.) As a reference the drawing shows site features as they were prior to demolition activities.

8.) The results shown are from a In-Situ Microcosm (ISM) study performed on monitoring wells GW-4, GW-4I, and GW-16S. These specific results are from the MNA unit contain no exogenous amendment. For further details see the ISM final report dated November 2, 2015.

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Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

100 50 0 100 Feet

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date
0	ISSUED TO NCDEQ	06/30/16

GIS: AM

Site: GSK S. CAMPUS, N. COMPLEX

Scale: AS SHOWN

Title:

TRICHLOROETHENE SHALLOW SITE WIDE GROUNDWATER MONITORING RESULTS YEAR 2

FIGURE: 4A

Sheet Number:

Rev: **0**

GlaxoSmithKline

CONTRACTOR FIRM ID

Golder Associates
GOLDER ASSOCIATES NC, INC.

PE C-2862
PG C-399

CONTRACTOR PROJECT No.: 073-9611502

Designed By: BSD
Drawn By: BSD
Checked By: BJE
Project Manager: Brian Eichlin, P.E.

GSK PROJECT INFORMATION

GSK Project No.: 139535 RCRA
Project Name: Corrective Action
GSK Project Mgr.: Lindsey Walata, P.G.

SECOND ANNUAL REPORT

Path: V:\Projects\007\9596115_GlaxoSmithKline\4-QA_Monitoring_Reports\2016\Second Annual\739615196\04TCE_Shallow_Aquifer_(30-2016).mxd | Date Saved: 6/27/2016 9:43:29 AM | By: AMcrates

LEGEND

Y2Q4_TCE_Results_032016
RESULT_NUMERIC57

- ND to 3 (NC2L) ug/L (TCE)
- 3 to 10 ug/L (TCE)
- 10 to 100 ug/L (TCE)
- 100 to 1,000 ug/L (TCE)
- > 1,000 ug/L (TCE)

Y2Q3_TCE_Results_012016
Y2Q3_TCE_NUM

- ND to 3 (NC2L) ug/L (TCE)
- 3 to 10 ug/L (TCE)
- 10 to 100 ug/L (TCE)
- 100 to 1,000 ug/L (TCE)
- > 1,000 ug/L (TCE)

Y2Q2_TCE_Results_092015
Y2Q1_TCE_NUM

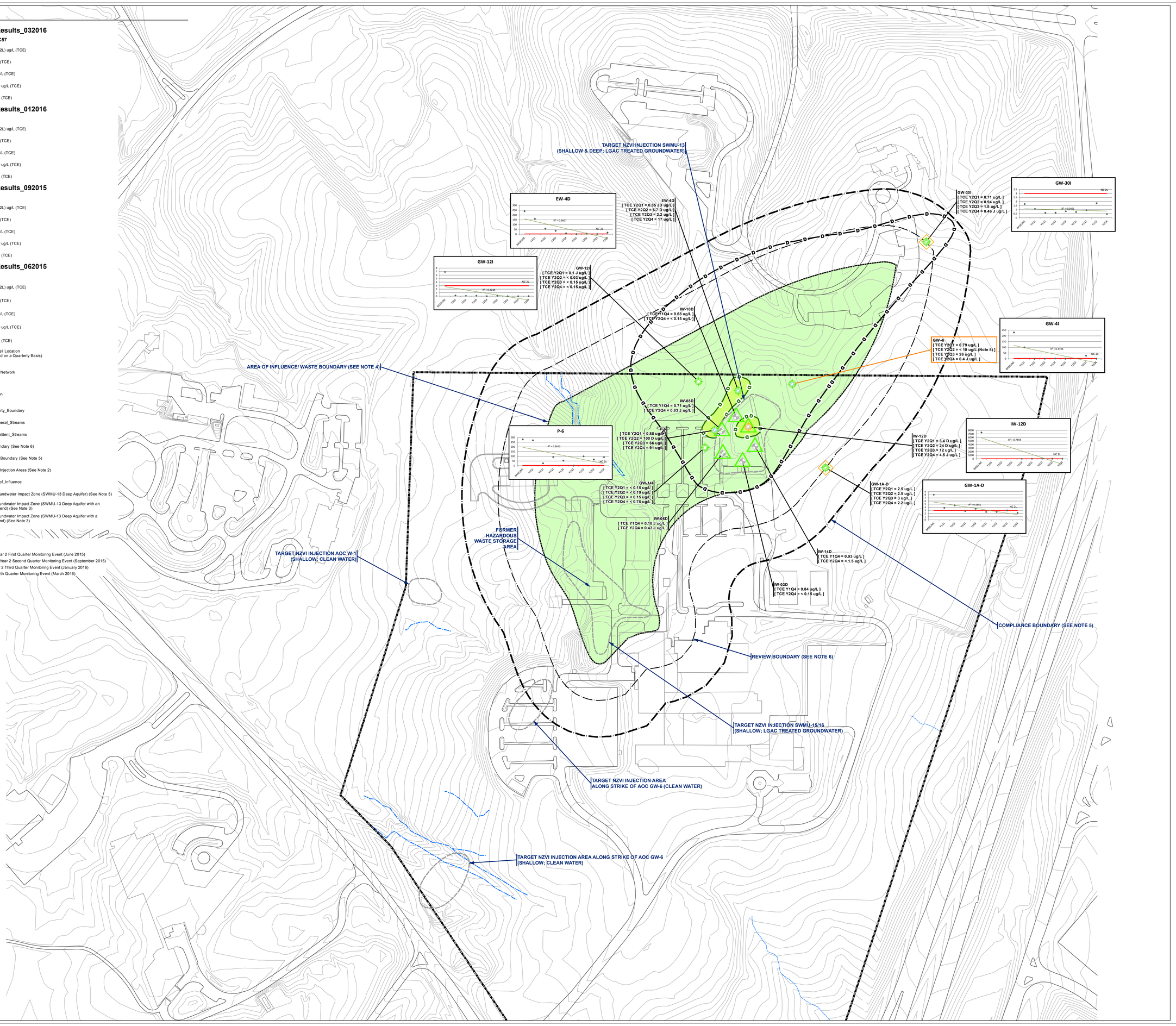
- ND to 3 (NC2L) ug/L (TCE)
- 3 to 10 ug/L (TCE)
- 10 to 100 ug/L (TCE)
- 100 to 1,000 ug/L (TCE)
- > 1,000 ug/L (TCE)

Y2Q1_TCE_Results_062015
Y2Q1_TCE_NUM

- ND to 3 (NC2L) ug/L (TCE)
- 3 to 10 ug/L (TCE)
- 10 to 100 ug/L (TCE)
- 100 to 1,000 ug/L (TCE)
- > 1,000 ug/L (TCE)
- Historical Well Location (Not Sampled on a Quarterly Basis)
- Compliance Network
- nZVI Injection
- Base_Property_Boundary
- Base_Ephimeral_Streams
- Base_Intermittent_Streams
- Review Boundary (See Note 6)
- Compliance Boundary (See Note 5)
- Target nZVI Injection Areas (See Note 2)
- nZVI_Area_of_Influence
- Original Groundwater Impact Zone (SWMU-13 Deep Aquifer) (See Note 3)
- Current Groundwater Impact Zone (SWMU-13 Deep Aquifer with an increasing trend) (See Note 3)
- Current Groundwater Impact Zone (SWMU-13 Deep Aquifer with a declining trend) (See Note 3)

Sample Key:

- Year 2 First Quarter Monitoring Event (June 2015)
- Year 2 Second Quarter Monitoring Event (September 2015)
- Year 2 Third Quarter Monitoring Event (January 2016)
- Year 2 Fourth Quarter Monitoring Event (March 2016)



N

GlaxoSmithKline

CONTRACTOR FIRM ID

Golder Associates
GOLDER ASSOCIATES NC, INC.

PE C-2862
PG C-399

CONTRACTOR PROJECT No.: 073-9611502

Designed By: BSD
Drawn By: BSD
Checked By: BJE
Project Manager: Brian Eichlin, P.E.

GSK PROJECT INFORMATION

GSK Project No.: 139535 RCRA
Project Name: Corrective Measures
GSK Project Mgr.: Lindsey Walata, P.G.

SECOND ANNUAL REPORT

NOTES

1.) Topographic Contour Interval is 2 feet.

2.) Target nZVI Injection Area shows the location where injection wells will be in compliance with applicable NCDENR setback criteria.

3.) The orginal groundwater impact area shown is the extent of groundwater impacts in the deep aquifer (associated with the contamination in SWMU-13), based on historical groundwater monitoring data. The current groundwater impact area shown is the extent of groundwater impacts in the deep aquifer as related to the most recent groundwater monitoring results. The areas shown are the areas in which groundwater impacts exceed the NC 2L Standards.

4.) The nZVI area of influence is the permitted direction and distance at which the nZVI is expected to travel from the injection wells while providing subsurface treatment of the existing groundwater impact area. For permitting purposes the nZVI area of influence is the waste boundary as defined in 15A NCAC 02L .0102.

5.) The compliance boundary is the maximum distance from a waste boundary that the NC 2L Standards must be met. For the permitted remediation system the compliance boundary applies only to the injected wastewater (i.e., the extracted groundwater) and injectants.

6.) The review boundary is established around a disposal system midway between the compliance boundary and the waste boundary in accordance with 15A NCAC 02L .0108.

7.) As a reference the drawing shows site features as they were prior to demolition activities.

8.) The results shown are from a In-Situ Microcosm (ISM) study performed on monitoring wells GW-4, GW-4I, and GW-16S. These specific results are from the MNA unit contain no exogenous amendment. For further details see the ISM final report dated November 2, 2015.

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Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

100 50 0 100 Feet

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date
0	ISSUED TO NCDEQ	06-30-16

Bing Operator
Project Mgr

GIS: AM

Site: GSK S. CAMPUS, N. COMPLEX

Scale: AS SHOWN

Title:

TRICHLOROETHYLENE DEEP SWMU-13 GROUNDWATER MONITORING RESULTS YEAR 2

FIGURE: 4B

Sheet Number:

Rev: **0**

Path: V:\Projects\00\0073\96\15_Cows\Settlement\GW_Monitoring_Report\2016\Second Annual\073\96\15\WQ\TCE_Deep_Aquifer_03-2016.mxd | Date Saved: 6/28/2016 10:28:11 AM | By: AMcraven

LEGEND

Y2Q4_DCE_Results_032016

- ND to 70 (NC2L) ug/L (cis-1,2-DCE)
- 70 (NC2L) to 500 ug/L (cis-1,2-DCE)
- 500 to 1,000 ug/L (cis-1,2-DCE)
- 1,000 to 10,000 ug/L (cis-1,2-DCE)
- > 10,000 ug/L (cis-1,2-DCE)

Y2Q3_DCE_Results_012016

- ND to 70 (NC2L) ug/L (cis-1,2-DCE)
- 70 (NC2L) to 500 ug/L (cis-1,2-DCE)
- 500 to 1,000 ug/L (cis-1,2-DCE)
- 1,000 to 10,000 ug/L (cis-1,2-DCE)
- > 10,000 ug/L (cis-1,2-DCE)

Y2Q2_DCE_Results_092015

- ND to 70 (NC2L) ug/L (cis-1,2-DCE)
- 70 (NC2L) to 500 ug/L (cis-1,2-DCE)
- 500 to 1,000 ug/L (cis-1,2-DCE)
- 1,000 to 10,000 ug/L (cis-1,2-DCE)
- > 10,000 ug/L (cis-1,2-DCE)

Y2Q1_DCE_Results_062015

- ND to 70 (NC2L) ug/L (cis-1,2-DCE)
- 70 (NC2L) to 500 ug/L (cis-1,2-DCE)
- 500 to 1,000 ug/L (cis-1,2-DCE)
- 1,000 to 10,000 ug/L (cis-1,2-DCE)
- > 10,000 ug/L (cis-1,2-DCE)

Historical Well Location (Not Sampled on a Quarterly Basis)

Compliance Monitoring Well

Inoculation Injection Sites

nZVI Injection Sites

Approximate GSK Property Boundary

Intermittent Streams (on GSK Property)

Ephemeral Streams (on GSK Property)

Review Boundary (See Note 6)

Compliance Boundary (See Note 5)

Target nZVI Injection Areas (See Note 2)

nZVI Injection Area of Influence/ Waste Boundary (See Note 4)

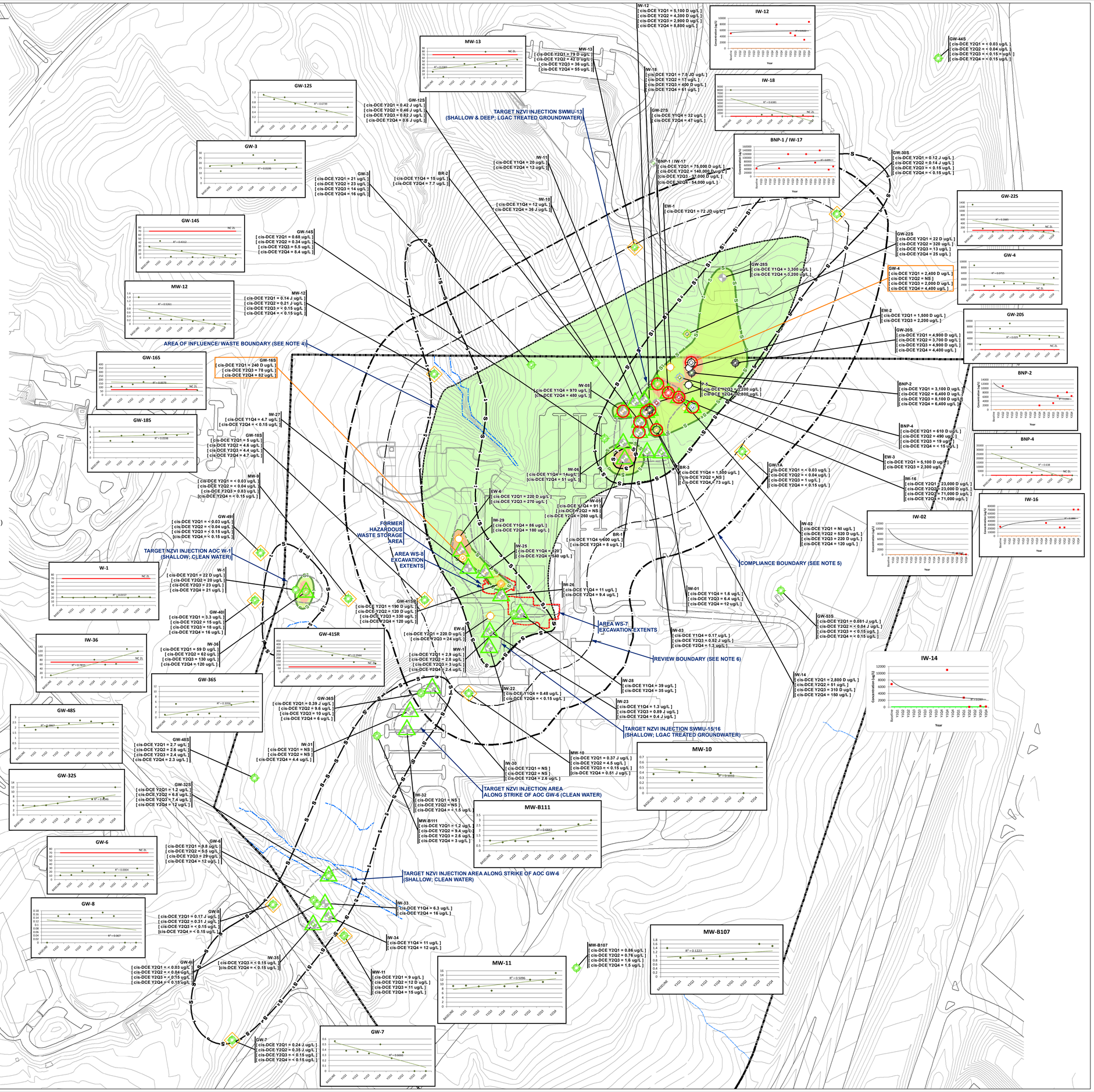
Original Groundwater Impact Zone (Shallow Aquifer) (See Note 3)

Current Groundwater Impact Zone (Shallow with an increasing trend) (See Note 3)

Current Groundwater Impact Zone (Shallow with a declining trend) (See Note 3)

Sample Key:

- Year 2 First Quarterly Monitoring Event (June 2015)
- Year 2 Second Quarterly Monitoring Event (September 2015)
- Year 2 Third Quarterly Monitoring Event (January 2016)
- Year 2 Fourth Quarterly Monitoring Event (March 2016)



N

GlaxoSmithKline

CONTRACTOR FIRM ID

Golder Associates
GOLDER ASSOCIATES NC, INC.

PE C-2862
PG C-399

CONTRACTOR PROJECT No.: 073-9611502

Designed By: BSD
Drawn By: BSD
Checked By: BJE
Project Manager: Brian Eichlin, P.E.

GSK PROJECT INFORMATION

GSK Project No.: 139535 RCRA
Project Name: Corrective Measures
GSK Project Mgr.: Lindsey Walata, P.G.

SECOND ANNUAL REPORT

NOTES

1.) Topographic Contour Interval is 2 feet.

2.) Target nZVI Injection Area shows the location where injection wells will be in compliance with applicable NCDENR setback criteria.

3.) The original groundwater impact area shown is the extent of groundwater impacts in the shallow aquifer, based on historical groundwater monitoring data. The current groundwater impact area shown is the extent of groundwater impacts in the shallow aquifer as related to the most recent groundwater monitoring results. The areas shown are the areas in which groundwater impacts exceed the NC 2L Standards.

4.) The nZVI area of influence is the permitted direction and distance at which the nZVI is expected to travel from the injection wells while providing subsurface treatment of the existing groundwater impact area. For permitting purposes the nZVI area of influence is the waste boundary as defined in 15A NCAC 02L .0102.

5.) The compliance boundary is the maximum distance from a waste boundary that the NC 2L Standards must be met. For the permitted remediation system the compliance boundary applies only to the injected wastewater (i.e., the extracted groundwater) and injectants.

6.) The review boundary is established around a disposal system midway between the compliance boundary and the waste boundary in accordance with 15A NCAC 02L .0108.

7.) As a reference the drawing shows site features as they were prior to demolition activities.

8.) The results shown are from a In-Situ Microcosm (ISM) study performed on monitoring wells GW-4, GW-41, and GW-16S. These specific results are from the MNA unit contain no exogenous amendment. For further details see the ISM final report dated November 2, 2015.

REFERENCES

Wetland and Stream features delineated by Golder Associates NC, Inc. as part of RJD dated June 8, 2009 and approved by USACE on October 17, 2009 and by NCDENR on July 16, 2009.

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

100 50 0 100 Feet

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date
0	ISSUED TO NCDEQ	06/30/16

Bldg Operator/ Project Mgr:

GIS: AM

Site: GSK S. CAMPUS, N. COMPLEX

Scale: AS SHOWN

Title:

cis 1,2-DICHLOROETHYLENE SHALLOW SITE WIDE GROUNDWATER MONITORING RESULTS YEAR 2

FIGURE: 5A

Sheet Number:

Rev: **0**

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LEGEND

Y2Q4_DCE_Results_032016
- ND to 70 (NC2L) ug/L (cis-1,2-DCE)
- 70 (NC2L) to 500 ug/L (cis-1,2-DCE)
- 500 to 1,000 ug/L (cis-1,2-DCE)
- 1,000 to 10,000 ug/L (cis-1,2-DCE)
- > 10,000 ug/L (cis-1,2-DCE)

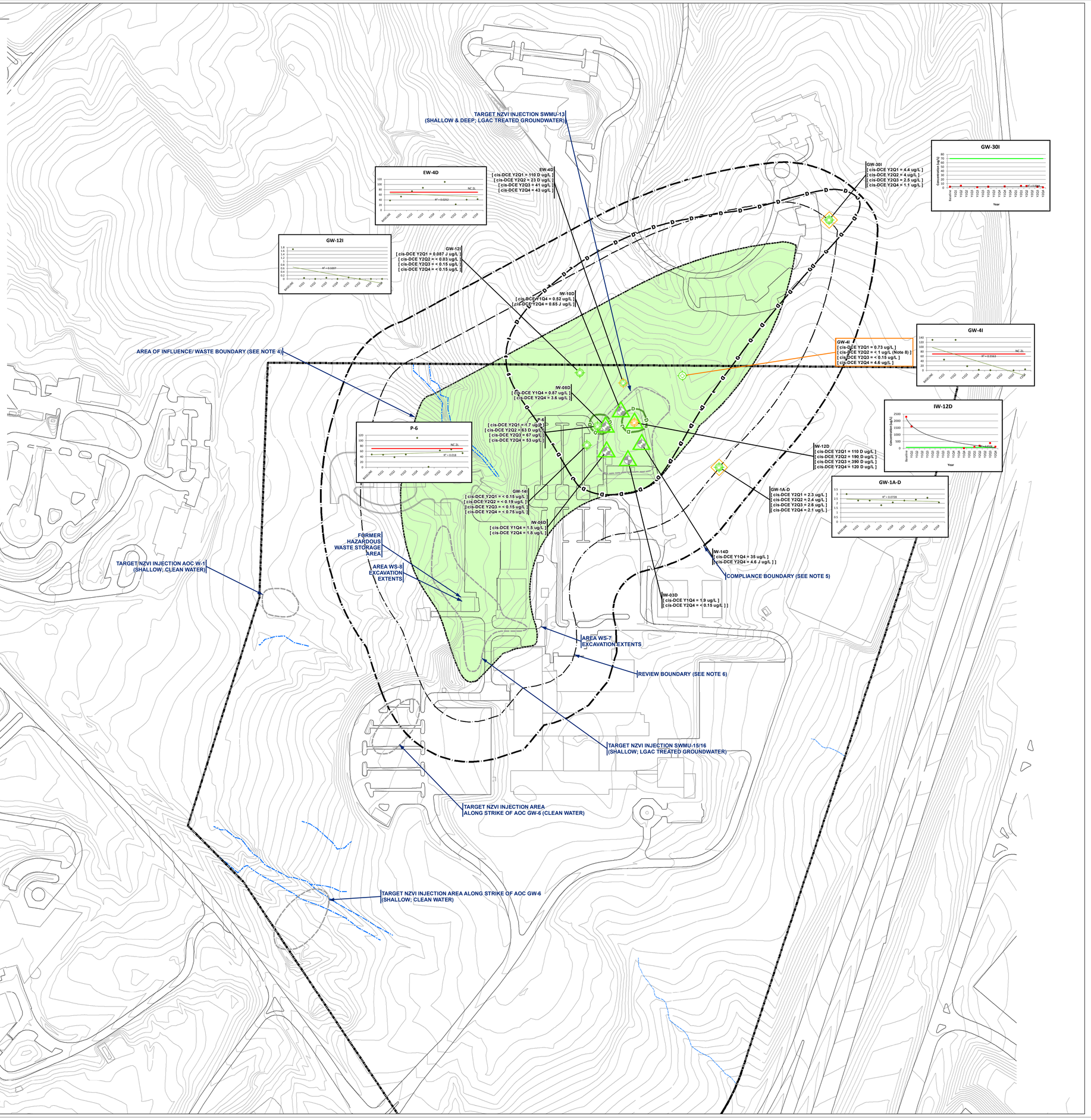
Y2Q3_DCE_Results_012016
- ND to 70 (NC2L) ug/L (cis-1,2-DCE)
- 70 (NC2L) to 500 ug/L (cis-1,2-DCE)
- 500 to 1,000 ug/L (cis-1,2-DCE)
- 1,000 to 10,000 ug/L (cis-1,2-DCE)
- > 10,000 ug/L (cis-1,2-DCE)

Y2Q2_DCE_Results_092015
- ND to 70 (NC2L) ug/L (cis-1,2-DCE)
- 70 (NC2L) to 500 ug/L (cis-1,2-DCE)
- 500 to 1,000 ug/L (cis-1,2-DCE)
- 1,000 to 10,000 ug/L (cis-1,2-DCE)
- > 10,000 ug/L (cis-1,2-DCE)

Y2Q1_DCE_Results_062015
- ND to 70 (NC2L) ug/L (cis-1,2-DCE)
- 70 (NC2L) to 500 ug/L (cis-1,2-DCE)
- 500 to 1,000 ug/L (cis-1,2-DCE)
- 1,000 to 10,000 ug/L (cis-1,2-DCE)
- > 10,000 ug/L (cis-1,2-DCE)

- Historical Well Location (Not Sampled on a Quarterly Basis)
- Compliance Monitoring Well
- nZVI Injection
- Base_Property_Boundary *Approximate GSK Property Boundary*
- Base_Ephimeral_Streams *Ephemeral Streams (on GSK Property)*
- Base_Intermittent_Streams *Intermittent Streams (on GSK Property)*
- Review Boundary (See Note 6)
- Compliance Boundary (See Note 5)
- Target nZVI Injection Areas (See Note 2)
- nZVI Injection Area of Influence/ Waste Boundary (See Note 4)
- Original Groundwater Impact Zone (SWMU-13 Deep Aquifer) (See Note 3)

Sample Key:
- Year 2 First Quarter Monitoring Event (June 2015)
- Year 2 Second Quarter Monitoring Event (September 2015)
- Year 2 Third Quarter Monitoring Event (January 2016)
- Year 2 Fourth Quarter Monitoring Event (March 2016)



N

GlaxoSmithKline

CONTRACTOR FIRM ID

Golder Associates
GOLDER ASSOCIATES NC, INC.

PE C-2862
PG C-399

CONTRACTOR PROJECT No.: 073-9611502

Designed By: BSD
Drawn By: BSD
Checked By: BJE
Project Manager: Brian Eichlin, P.E.

GSK PROJECT INFORMATION

GSK Project No.: 139535 RCRA
Project Name: Corrective Measures
GSK Project Mgr.: Lindsey Walata, P.G.

SECOND ANNUAL REPORT

NOTES

1.) Topographic Contour Interval is 2 feet.

2.) Target nZVI Injection Area shows the location where injection wells will be in compliance with applicable NCDENR setback criteria.

3.) The orginal groundwater impact area shown is the extent of groundwater impacts in the deep aquifer, based on historical groundwater monitoring data. The current groundwater impact area shown is the extent of groundwater impacts in the deep aquifer as related to the most recent groundwater monitoring results. The areas shown are the areas in which groundwater impacts exceed the NC 2L Standards.

4.) The nZVI area of influence is the permitted direction and distance at which the nZVI is expected to travel from the injection wells while providing subsurface treatment of the existing groundwater impact area. For permitting purposes the nZVI area of influence is the waste boundary as defined in 15A NCAC 02L .0102.

5.) The compliance boundary is the maximum distance from a waste boundary that the NC 2L Standards must be met. For the permitted remediation system the compliance boundary applies only to the injected wastewater (i.e., the extracted groundwater) and injectants.

6.) The review boundary is established around a disposal system midway between the compliance boundary and the waste boundary in accordance with 15A NCAC 02L .0108.

7.) As a reference the drawing shows site features as they were prior to demolition activities.

8.) The results shown are from a In-Situ Microcosm (ISM) study performed on monitoring wells GW-4, GW-4I, and GW-16S. These specific results are from the MNA unit contain no exogenous amendment. For further details see the ISM final report dated November 2, 2015.

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Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

100 50 0 100
Feet

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date
0	ISSUED TO NCDEQ	06/30/16

Bldg Operation/ Project No.

GIS: AM

Site: GSK S. CAMPUS, N. COMPLEX

Scale: AS SHOWN

Title:

cis-1,2-DICHLOROETHYLENE DEEP SWMU-13 GROUNDWATER MONITORING RESULTS YEAR 2

FIGURE: 5B

Sheet Number:

Rev: **0**

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LEGEND

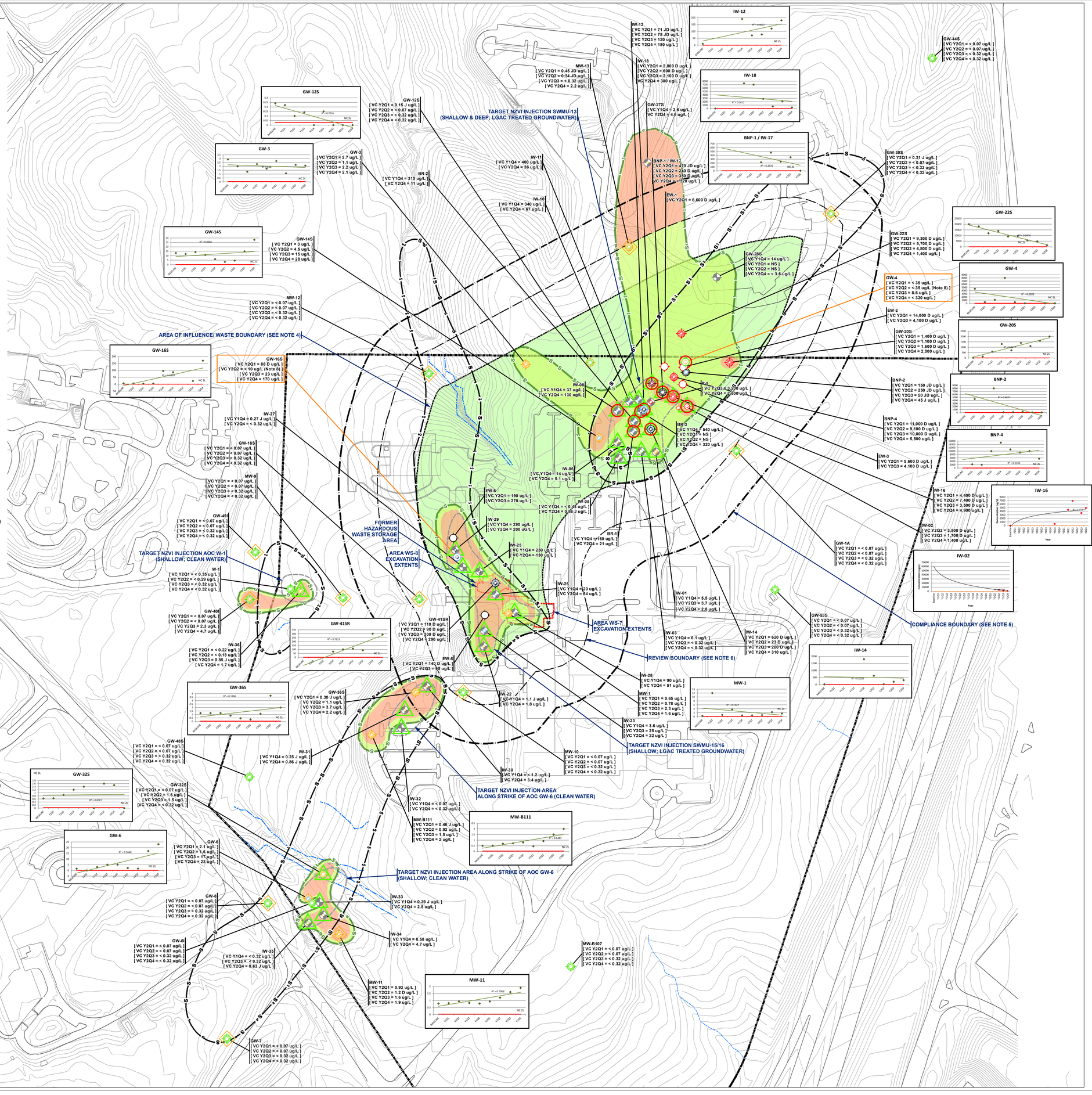
Y2Q4_VC_Results_032016
- ND to 0.03 ug/L (Vinyl Chloride)
- 0.03 to 10 ug/L (Vinyl Chloride)
- 10 to 100 ug/L (Vinyl Chloride)
- 100 to 1000 ug/L (Vinyl Chloride)
- > 1000 ug/L (Vinyl Chloride)

Y2Q3_VC_Results_012016
- ND to 0.03 ug/L (Vinyl Chloride)
- 0.03 to 10 ug/L (Vinyl Chloride)
- 10 to 100 ug/L (Vinyl Chloride)
- 100 to 1000 ug/L (Vinyl Chloride)
- > 1000 ug/L (Vinyl Chloride)

Y2Q2_VC_Results_092015
- ND to 0.03 ug/L (Vinyl Chloride)
- 0.03 to 10 ug/L (Vinyl Chloride)
- 10 to 100 ug/L (Vinyl Chloride)
- 100 to 1000 ug/L (Vinyl Chloride)
- > 1000 ug/L (Vinyl Chloride)

Y2Q1_VC_Results_062015
- ND to 0.03 ug/L (NC 2L) (Vinyl Chloride)
- 0.03 to 10 ug/L (Vinyl Chloride)
- 10 to 100 ug/L (Vinl Chloride)
- 100 to 1,000 ug/L (Vinyl Chloride)
- >1,000 ug/L (Vinyl Chloride)
- Historical Well Location (Not Sampled on a Quarterly Basis)
- Compliance Monitoring Well
- Inoculation Injection Sites
- nZVI Injection Sites
- Approximate GSK Property Boundary
- Ephemeral Streams (on GSK Property)
- Intermittent Streams (on GSK Property)
- Review Boundary (See Note 6)
- Compliance Boundary (See Note 5)
- Target nZVI Injection Areas (See Note 2)
- nZVI Injection Area of Influence/ Waste Boundary (See Note 4)
- Original Groundwater Impact Zone (Shallow Aquifer) (See Note 3)
- Current Groundwater Impact Zone (Shallow with an increasing trend) (See Note 3)
- Current Groundwater Impact Zone (Shallow with a declining or stable trend) (See Note 3)

Sample Key:
- Year 2 First Quarter Monitoring Event (June 2015)
- Year 2 Second Quarter Monitoring Event (September 2015)
- Year 2 Third Quarter Monitoring Event (January 2016)
- Year 2 Fourth Quarter Monitoring Event (March 2016)



NOTES

1.) Topographic Contour Interval is 2 feet.

2.) Target nZVI Injection Area shows the location where injection wells will be in compliance with applicable NCDENR setback criteria.

3.) The original groundwater impact area shown is the extent of groundwater impacts in the shallow aquifer, based on historical groundwater monitoring data. The current groundwater impact area shown is the extent of groundwater impacts in the shallow aquifer as related to the most recent groundwater monitoring results. The areas shown are the areas in which groundwater impacts exceed the NC 2L Standards.

4.) The nZVI area of influence is the permitted direction and distance at which the nZVI is expected to travel from the injection wells while providing subsurface treatment of the existing groundwater impact area. For permitting purposes the nZVI area of influence is the waste boundary as defined in 15A NCAC 02L .0102.

5.) The compliance boundary is the maximum distance from a waste boundary that the NC 2L Standards must be met. For the permitted remediation system the compliance boundary applies only to the injected wastewater (i.e., the extracted groundwater) and injectants.

6.) The review boundary is established around a disposal system midway between the compliance boundary and the waste boundary in accordance with 15A NCAC 02L .0108.

7.) As a reference the drawing shows site features as they were prior to demolition activities.

8.) The results shown are from a In-Situ Microcosm (ISM) study performed on monitoring wells GW-4, GW-4I, and GW-16S. These specific results are from the MNA unit contain no exogenous amendment. For further details see the ISM final report dated November 2, 2015.

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Projection: Lambert Conformal Conic

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

100 50 0 100 Feet

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date
0	ISSUED TO NCDEQ	06/30/16

Bldg Operator/ Project Mgr:
GIS: BSD
Site: GSK S. CAMPUS, N. COMPLEX
Scale: AS SHOWN

Title:

VINYL CHLORIDE SHALLOW SITE WIDE GROUNDWATER MONITORING RESULTS YEAR 2

FIGURE: 6A

Sheet Number:

Rev: **0**

GlaxoSmithKline

CONTRACTOR FIRM ID

Golder Associates
GOLDER ASSOCIATES NC, INC.

PE C-2862
PG C-399

CONTRACTOR PROJECT No.: 073-9611502

Designed By: BSD
Drawn By: BSD
Checked By: BJE
Project Manager: Brian Eichlin, P.E.

GSK PROJECT INFORMATION

GSK Project No.: 139535 RCRA
Project Name: Corrective Measures
GSK Project Mgr.: Lindsey Walata, P.G.

SECOND ANNUAL REPORT

File: V:\Projects\007\073-9611502\Second Annual\2016\Second Annual 2016 Report\Figures\Site Wide GW Monitoring Report 2016 Figure 6A - VC Shallow Aquifer_v0.dwg [Sep 01, 2016 - 10:37:36 AM] By: Allcraies

LEGEND

Y2Q4_VC_Results_032016
- ND to 0.03 ug/L (Vinyl Chloride)
- 0.03 to 10 ug/L (Vinyl Chloride)
- 10 to 100 ug/L (Vinyl Chloride)
- 100 to 1000 ug/L (Vinyl Chloride)
- > 1000 ug/L (Vinyl Chloride)

Y2Q3_VC_Results_012016
- ND to 0.03 ug/L (Vinyl Chloride)
- 0.03 to 10 ug/L (Vinyl Chloride)
- 10 to 100 ug/L (Vinyl Chloride)
- 100 to 1000 ug/L (Vinyl Chloride)
- > 1000 ug/L (Vinyl Chloride)

Y2Q2_VC_Results_092015
- ND to 0.03 ug/L (Vinyl Chloride)
- 0.03 to 10 ug/L (Vinyl Chloride)
- 10 to 100 ug/L (Vinyl Chloride)
- 100 to 1000 ug/L (Vinyl Chloride)
- > 1000 ug/L (Vinyl Chloride)

Y2Q1_VC_Results_062015
- ND to 0.03 ug/L (Vinyl Chloride)
- 0.03 to 10 ug/L (Vinyl Chloride)
- 10 to 100 ug/L (Vinyl Chloride)
- 100 to 1000 ug/L (Vinyl Chloride)
- > 1000 ug/L (Vinyl Chloride)

Historical Well Location (Not Sampled on a Quarterly Basis)

Compliance Monitoring Well

nZVI Injection

Base_Property_Boundary *Approximate GSK Property Boundary*

Base_Ephemeral_Streams *Ephemeral Streams (on GSK Property)*

Base_Intermittent_Streams *Intermittent Streams (on GSK Property)*

Review Boundary (See Note 6)

Compliance Boundary (See Note 5)

Target nZVI Injection Areas (See Note 2)

nZVI Injection Area of Influence/ Waste Boundary (See Note 4)

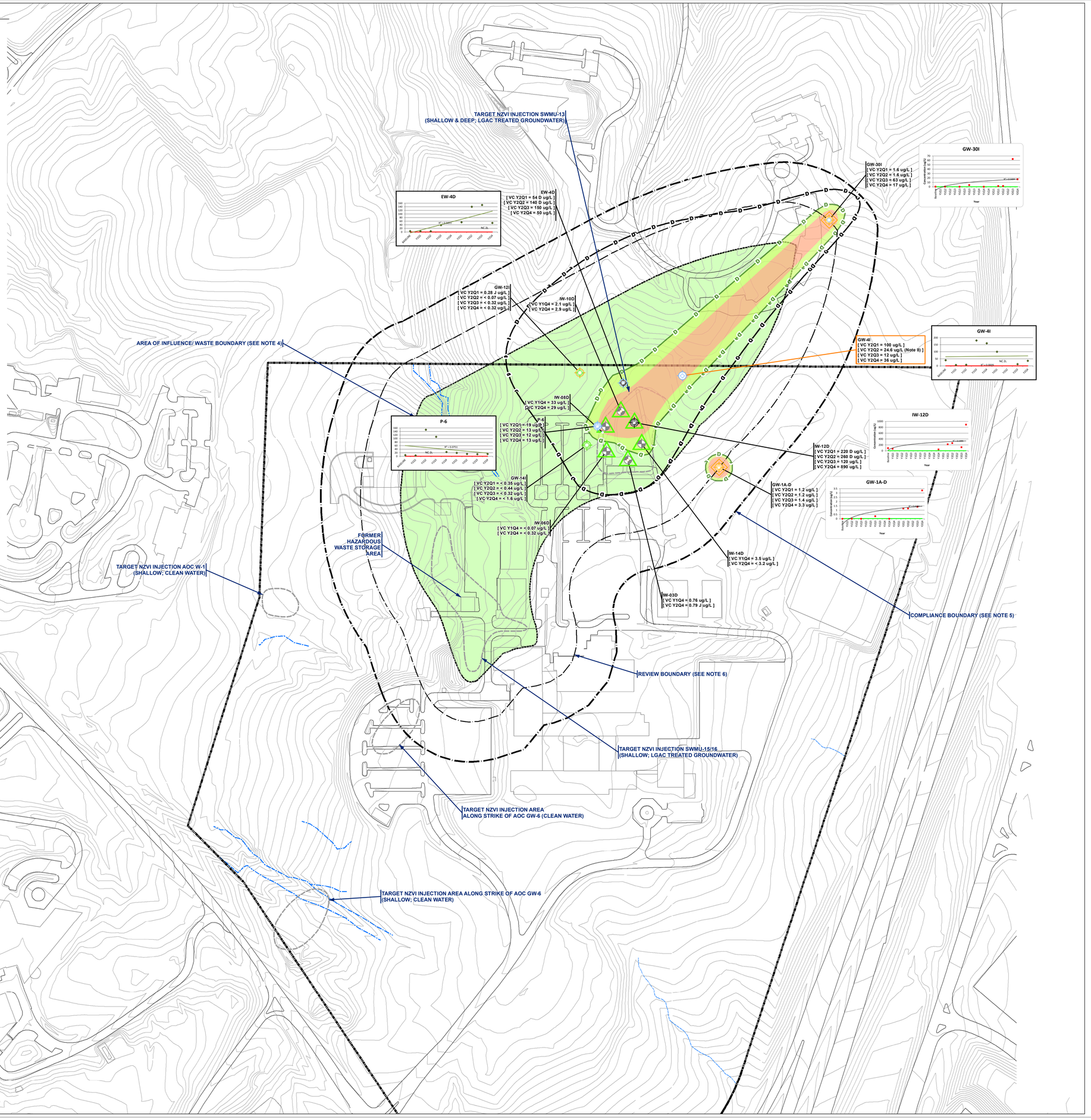
Original Groundwater Impact Zone (SWMU-13 Deep Aquifer) (See Note 3)

Current Groundwater Impact Zone (Deep with an increasing trend) (See Note 3)

Current Groundwater Impact Zone (Deep with a declining or stable trend) (See Note 3)

Sample Key:

- Year 2 First Quarter Monitoring Event (June 2015)
- Year 2 Second Quarter Monitoring Event (September 2015)
- Year 2 Third Quarter Monitoring Event (January 2016)
- Year 2 Fourth Quarter Monitoring Event (March 2016)



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GSK Project No.: 139535 RCRA
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GSK Project Mgr.: Lindsey Walata, P.G.

SECOND ANNUAL REPORT

NOTES

1.) Topographic Contour Interval is 2 feet.

2.) Target nZVI Injection Area shows the location where injection wells will be in compliance with applicable NCDENR setback criteria.

3.) The orginal groundwater impact area shown is the extent of groundwater impacts in the deep aquifer, based on historical groundwater monitoring data. The current groundwater impact area shown is the extent of groundwater impacts in the deep aquifer as related to the most recent groundwater monitoring results. The areas shown are the areas in which groundwater impacts exceed the NC 2L Standards.

4.) The nZVI area of influence is the permitted direction and distance at which the nZVI is expected to travel from the injection wells while providing subsurface treatment of the existing groundwater impact area. For permitting purposes the nZVI area of influence is the waste boundary as defined in 15A NCAC 02L .0102.

5.) The compliance boundary is the maximum distance from a waste boundary that the NC 2L Standards must be met. For the permitted remediation system the compliance boundary applies only to the injected wastewater (i.e., the extracted groundwater) and injectants.

6.) The review boundary is established around a disposal system midway between the compliance boundary and the waste boundary in accordance with 15A NCAC 02L .0108.

7.) As a reference the drawing shows site features as they were prior to demolition activities.

8.) The results shown are from a In-Situ Microcosm (ISM) study performed on monitoring wells GW-4, GW-4I, and GW-16S. These specific results are from the MNA unit contain no exogenous amendment. For further details see the ISM final report dated November 2, 2015.

REFERENCES

Wetland and Stream features delineated by Golder Associates NC, Inc. as part of RJD dated June 8, 2009 and approved by USACE on October 17, 2009 and by NCDENR on July 16, 2009.

Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

100 50 0 100
Feet

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date
0	ISSUED TO NCDEQ	06/30/16

Bldg Operation/ Project No.

GIS: AM

Site: GSK S. CAMPUS, N. COMPLEX

Scale: AS SHOWN

Title:

VINYL CHLORIDE DEEP SWMU-13 GROUNDWATER MONITORING RESULTS YEAR 2

FIGURE: 6B

Sheet Number:

Rev: **0**

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LEGEND

Y2Q4_Fe_Results_032016

- ND to 200 (DL) ug/L (Fe)
- 200 (DL) to 300 (NC2L) ug/L (Fe)
- 300 (NC2L) to 1,000 ug/L (Fe)
- 1,000 to 10,000 ug/L (Fe)
- 10,000 to 100,000 ug/L (Fe)

Y2Q3_Fe_NUM

- ND to 200 (DL) ug/L (Fe)
- 200 (DL) to 300 (NC2L) ug/L (Fe)
- 300 (NC2L) to 1,000 ug/L (Fe)
- 1,000 to 10,000 ug/L (Fe)
- 10,000 to 100,000 ug/L (Fe)

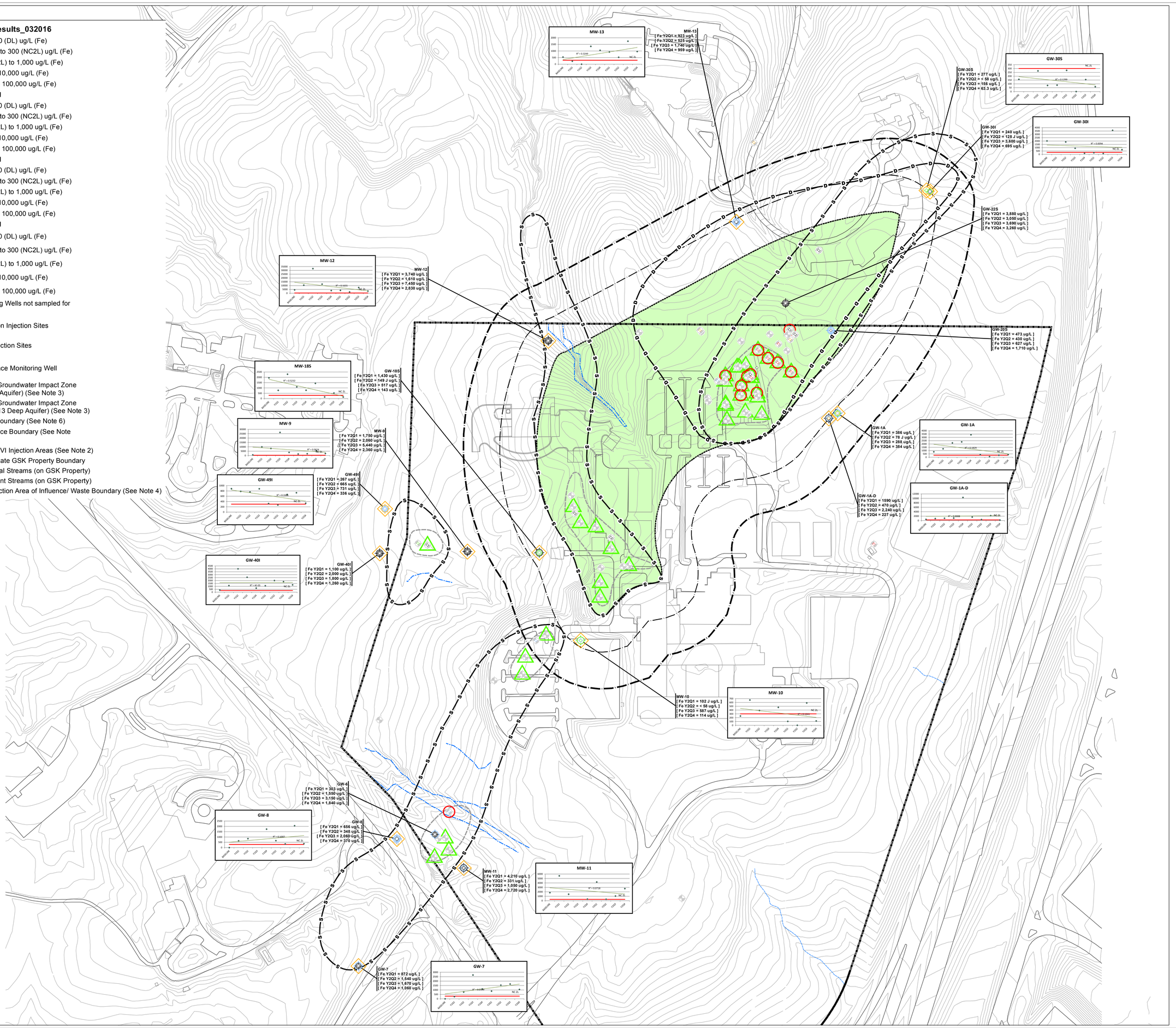
Y2Q2_Fe_NUM

- ND to 200 (DL) ug/L (Fe)
- 200 (DL) to 300 (NC2L) ug/L (Fe)
- 300 (NC2L) to 1,000 ug/L (Fe)
- 1,000 to 10,000 ug/L (Fe)
- 10,000 to 100,000 ug/L (Fe)

Y2Q1_Fe_NUM

- ND to 200 (DL) ug/L (Fe)
- 200 (DL) to 300 (NC2L) ug/L (Fe)
- 300 (NC2L) to 1,000 ug/L (Fe)
- 1,000 to 10,000 ug/L (Fe)
- 10,000 to 100,000 ug/L (Fe)

- Monitoring Wells not sampled for Fe
- Inoculation Injection Sites
- nZVI Injection Sites
- Compliance Monitoring Well
- Original Groundwater Impact Zone (Shallow Aquifer) (See Note 3)
- Original Groundwater Impact Zone (SWMU-13 Deep Aquifer) (See Note 3)
- Review Boundary (See Note 6)
- Compliance Boundary (See Note 5)
- Target nZVI Injection Areas (See Note 2)
- Approximate GSK Property Boundary
- Ephemeral Streams (on GSK Property)
- Intermittent Streams (on GSK Property)
- nZVI Injection Area of Influence/ Waste Boundary (See Note 4)



N

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CONTRACTOR FIRM ID

Golder Associates
GOLDER ASSOCIATES NC, INC.

PE C-2862
PG C-399

CONTRACTOR PROJECT No.: 073-9611502

Designed By: BSD
Drawn By: BSD
Checked By: BJE
Project Manager: Brian Eichlin, P.E.

GSK PROJECT INFORMATION

GSK Project No.: 139535 RCRA
Project Name: Corrective Measures
GSK Project Mgr.: Lindsey Walata, P.G.

SECOND ANNUAL REPORT

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Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet
Projection: Lambert Conformal Conic

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

0 50 100 200 Feet

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date
0	ISSUED TO NCDEQ	06/30/16

Bldg Operations/ Project Mgr:

GIS: AM

Site: GSK S. CAMPUS, N. COMPLEX

Scale: AS SHOWN

Title:

TOTAL IRON SITE WIDE GROUNDWATER MONITORING RESULTS YEAR 2

FIGURE: 7

Sheet Number:

Rev: **0**

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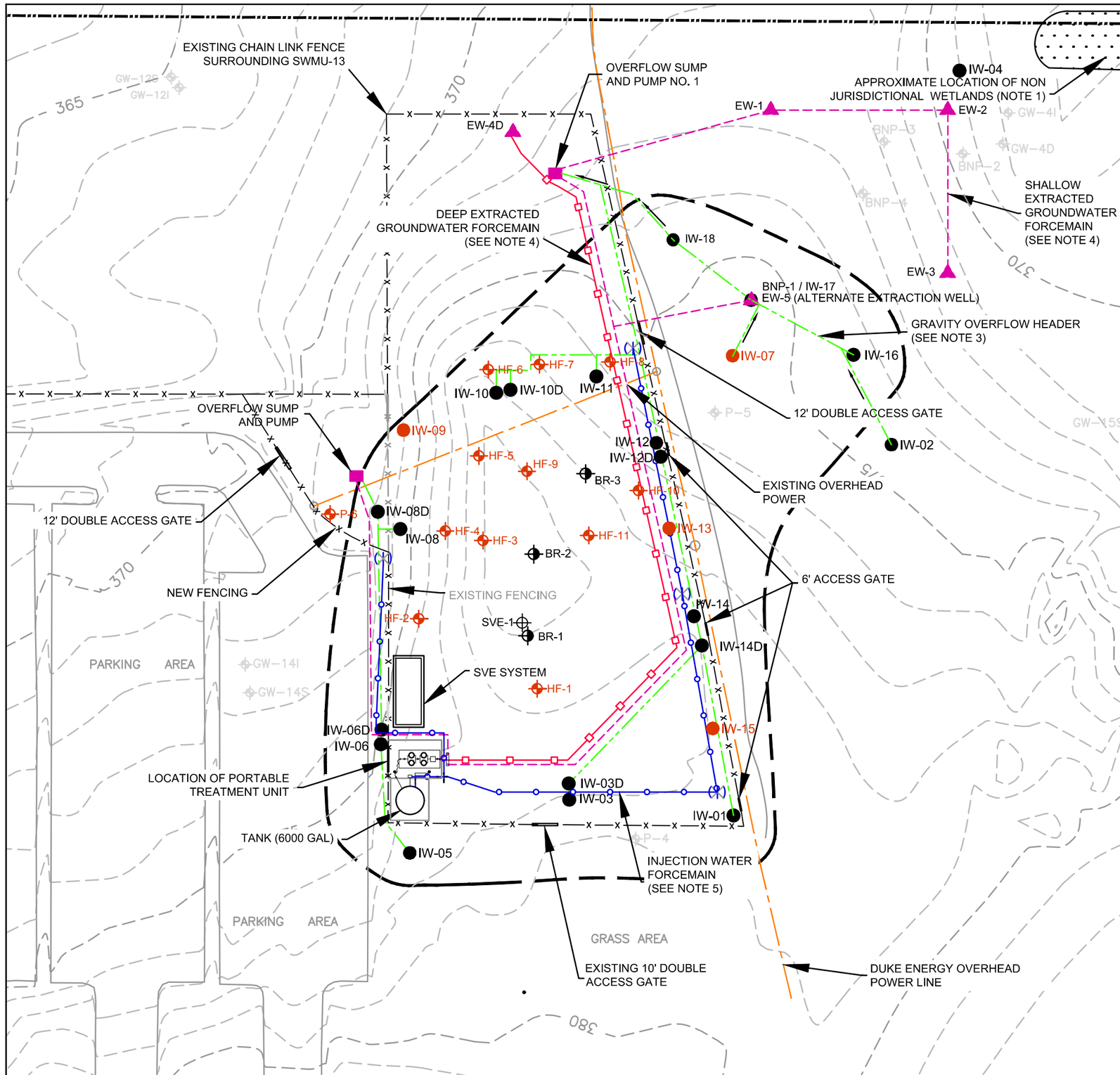


LEGEND

IW-06	PHASE I NZVI INJECTION WELL
IW-06D	DEEP PHASE I NZVI INJECTION WELL
EW-1	PHASE I EXTRACTION WELL
IW-07	PROPOSED CONTINGENT INJECTION WELL LOCATION
BR-3	BEDROCK NZVI INJECTION WELL AND SVE WELL
SVE-1	SHALLOW SVE WELL
HF-1	HYDRAULICALLY FRACTURED SVE WELL; PROPOSED INJECTION POINTS
GW-15S	MONITORING WELL
	INJECTION WATER HOSE CONNECTION LOCATIONS
	EXISTING OVERHEAD POWER LINE
	PROPERTY LINE
	5' CONTOUR INTERVAL
	SHALLOW EXTRACTED GROUNDWATER FORCEMAIN
	DEEP EXTRACTED GROUNDWATER FORCEMAIN
	GRAVITY OVERFLOW HEADER
	INJECTION WATER FORCEMAIN
	PHASE II nZVI TARGET INJECTION AREA SHALLOW &DEEP)

NOTES

1. GRAVITY OVERFLOW HEADER LINES TO BE 1-INCH SDR-11 HDPE PIPE WITH 2% MINIMUM GRADE TO PROMOTE GRAVITY FLOW.
2. SHALLOW AND DEEP GROUNDWATER FORCEMAIN TO BE 1" SDR-11 HDPE PIPE.
3. INJECTION WATER FORCEMAIN TO BE 1" SDR-11 HDPE PIPE.

40 0 40 80
SCALE FEET

GlaxoSmithKline

Golder Associates

CONTACTOR PROJECT NO: 073-96115
DESIGNED BY: BSD
DRAWN BY: BSD
CHECKED BY: BJE
PROJECT MANAGER: BRIAN EICHLIN, P.E.

GSK PROJECT INFORMATION
GSK PROJECT NO: REI0614
PROJECT NAME: CORRECTIVE MEASURES
GSK PROJECT MGR: LINDSEY WALATA, P.G.

SECOND ANNUAL REPORT

No	Revision	Date
0	SUBMITTED TO NCDEQ	06/30/16

Developer:
CAD: CTF
Site: GSK S. CAMPUS, N COMPLEX
Scale: 1" = 40'

Title:
SWMU-13 PROPOSED INJECTION WELL LAYOUT

FIGURE: 8

Drawing Number:
Rev: 0

APPENDICES

APPENDIX A

SVE SYSTEM OPERATIONS

APPENDIX A

SVE SYSTEM OPERATIONS

A-1 Introduction

Corrective measures in soils at SWMU 13 are based on the North Carolina Department of Environment and Natural Resources (NCDENR) Division of Waste Management (DWM) approved Corrective Measures Study (CMS)—South Campus, North Complex, GlaxoSmithKline Facility, RTP, NC, July 2003, Revised February 2004. SWMU 13 overburden soils and contents of waste disposal trenches were previously removed in 1984-1985, at the time of the property sale by Monsanto, the former property owner, and transported offsite for disposal. Excavation was conducted into weathered bedrock (i.e. residuum) until refusal was encountered; the excavation was backfilled with clean fill, compacted, and capped with a clay cap.

The CMS remedy at SWMU 13 includes the remediation of VOCs at the bedrock interface using fracture enhanced Soil Vapor Extraction (SVE) wells to remove VOCs at the bedrock interface. SVE is an in-situ technique by which the volatilization of VOCs is induced in the subsurface and the constituents are removed in the extracted vapor via advection. Prior to the design and construction of the SVE system a pilot test was conducted and the results were presented in the Phase I Pre-Design Investigation Report for RCRA Corrective Actions (Phase I PDI) (Golder Associates, July 2008). The design of the SVE system and associated well network was presented in the Phase II Pre-Design Investigation and Groundwater and SVE Corrective Measures Design for South Campus, North Complex Site (CM Design) (Golder Associates, February 2009).

The SVE wells were constructed in accordance with a Class 5Z Application Permit to Construct Enhanced Soil Vapor Extraction Wells (Golder Associates, August 2011) and the approved Injection Permit WI0500421 issued by the NCDENR Aquifer Protection Section, UIC Injection Control Program on September 26, 2011. The shallow hydraulic fractures and SVE wells were installed in the SWMU-13 area between March 5 and 8, 2012. Shallow hydraulic fractures were created in 11 target locations in and around the SWMU-13 cap (HF-1 through HF-11). Some locations included multiple fracture depths to target both fill areas and native residuum. An approximate horizontal spacing of fractures of 20 to 25 feet was used as determined from the estimated radius of influence from the SVE pilot test. Shallow well SVE-1 was not hydraulically fractured. SVE well construction information is summarized on Table A-1 and the system layout is presented on Figure A-1. An SVE injection event record, which included all fracture data and well construction records, was also completed as required by the permit and was submitted to the NCDENR Underground Injection Control (UIC) Program on behalf of Golder on June 25, 2012. As presented on Figure A-1, the SVE system is also connected to several injections wells, including BR-1, BR-2 and BR-3,

to remove VOC containing vapors from the bedrock pore spaces that volatilize from groundwater. The extracted vapors are treated by two vapor phase granular activated carbon (GAC) vessels operating in series. Each vapor phase GAC vessel contains 2,000 lbs of GAC.

System operation and commissioning was delayed until January of 2014 until soil excavation activities were completed. PCBs were removed at SWMU 13 by soil excavation to the TSCA 10 mg/kg Low Occupancy Standard. In accordance with the Soil Excavation and PCB Remediation Work Plan and related Addenda (PCB Work Plan) (Golder Associates, September 2011) soil excavation to remove PCBs at SWMU 13 to below the TSCA Low Occupancy Standard of 10 mg/kg was completed during July 2013 to September 2014.

A *Construction Completion Report- Soil Remediation for PCB Remediation and RCRA Corrective Action* (CCR) (Golder Associates, September, 2015), summarizing these activities was submitted to DWM and USEPA for review in September of 2015. On April 22, 2016, the HWS of NCDEQ issued a letter stating that the HWS had reviewed the CCR and issued a No Further Action Letter for VOCs in soils with the exception of ongoing remediation of SWMU 13 soils via soil vapor extraction (SVE). As summarized in email correspondence with USEPA on April 19, 2016, documenting verbal input from USEPA, USEPA review and/or approval of the Construction Completion Report (CCR) is not required and GSK has fulfilled the regulatory obligations of the USEPA August 8, 2013 approval letter and the approved work plans.

A summary of the first year of operations was included in Appendix A of the *First Annual Assessment Report December 2013-March 2015 Reporting Period (Golder Associates, May 15, 2015)* (2015 Annual Report) for submission to the North Carolina Department of Environmental Quality (NCDEQ).

A-2 System Operations

The SVE commissioning began in early January 2014 following the completion of the baseline groundwater sampling event. The initial start-up and testing period using ambient air provided insight into the capabilities of the system and confirmation that equipment and instrumentation operated effectively. The reporting period for Year 2 operations covered April 2015 through March 2016. Table A-2 provides a timeline of the SVE system operation. The SVE system is not operated during injection events since it is connected to four (4) shallow-zone injection wells in the SWMU-13 area.

As described in the 2015 Annual Report, initial operation of the SVE revealed perched water within the area of influence which was restricting flow through the SVE well fractures. The perched water appears to be the result of stormwater that accumulates within the porous fracture network as it infiltrates into the ground surface. A larger vadose zone exists within the capped areas of the former disposal trenches (i.e. HF-5, HF-6, HF-9, HF-10) where stormwater infiltration rates are lower, as evidenced by groundwater elevations

presented in Table A-3. Water levels were generally lower in the late spring to late fall, likely due reduced rainfall rates, higher evaporation and plant uptake rates during the summer months. It is expected that significant seasonal fluctuations in groundwater elevations across the target area will continue and the most effective periods of system operation will be during late spring to late fall.

Water level measurements were taken at each SVE well and compared against well fracture depths throughout the operating period. The proactive removal of excess water from the system allowed personnel to run the system periodically at higher vacuums. As presented in Table A-3, water levels declined during the summer months allowing for greater operating vacuums and less condensate generation. System vacuums ranged significantly during the second year of operation beginning with 5.0-6.5 inches of Hg (in Hg) during the wetter spring months. As groundwater levels declined, the vacuum was gradually increased from 8.0 to 11.0 in Hg before reaching a maximum of 11.8 in Hg during the August 5, 2015 vapor sampling event. Approximately 675 gallons of condensate was generated during the reporting period. A waste profile was generated using analytical data from samples for RCRA Appendix IX VOCs (VOCs) and PCBs collected on May 2, 2014, and another for VOCs collected on October 14, 2015. The SVE condensate waste was classified as non-hazardous and disposed of by A&D at the Republic Uwharrie facility in Archdale, NC. Waste disposal documentation is provided in Appendix C.

A-3 Vapor Concentrations and Mass Removal

The removal of VOCs by SVE may be controlled by one or more of the following processes: advection, volatilization, desorption and diffusion. During SVE, as air is drawn through the soil pore space, VOCs volatilize and are carried with the air to extraction wells via advection. This removal induces further volatization from the impacted soils. Impacted areas that are not in direct contact with the advective air flow achieve contaminant reduction through diffusion of VOCs toward zones of enhanced air flow. Diffusion is a slower, rate-limiting process compared to advection (USACOE, 2002).

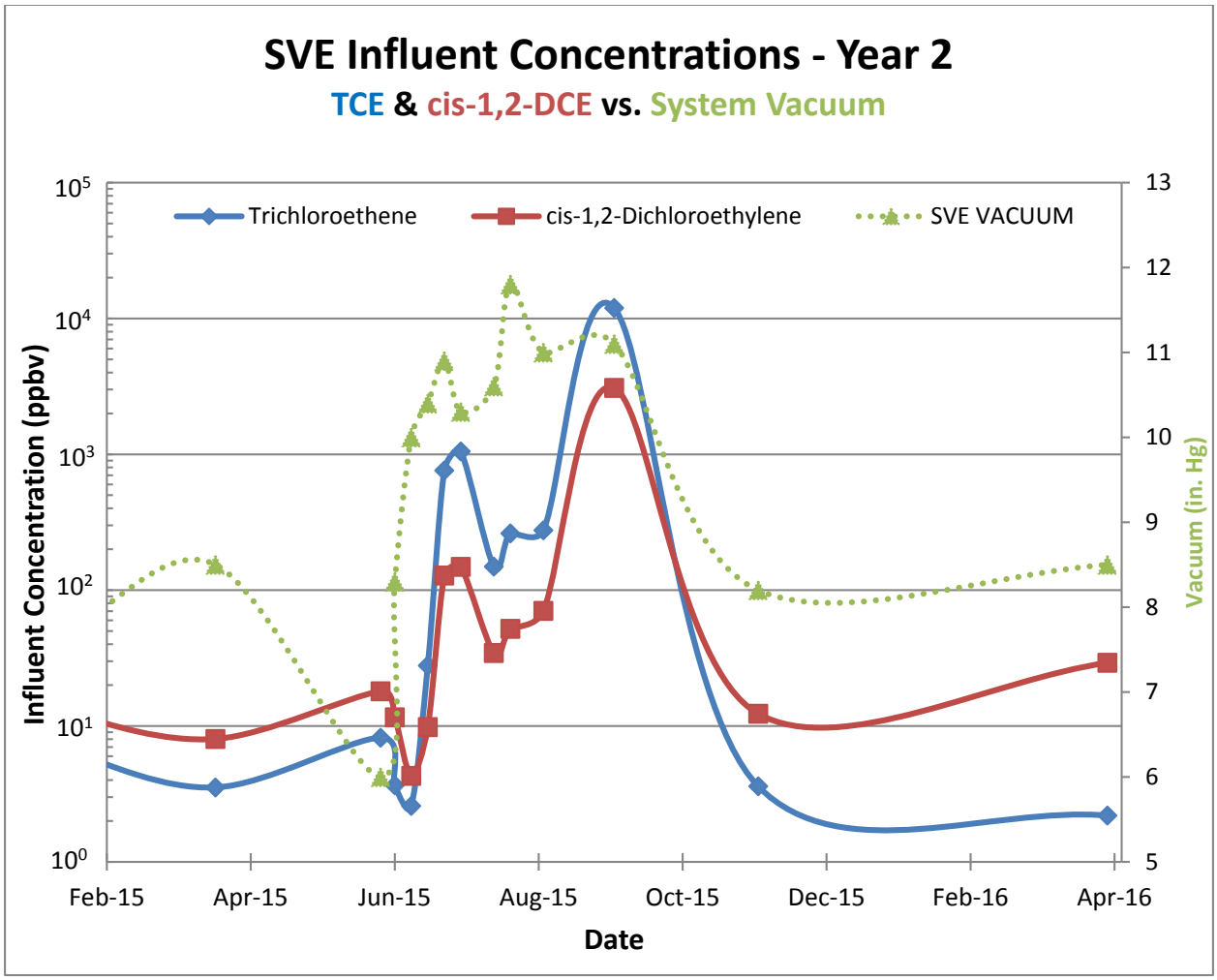
As presented in the CMS and CM Design the SVE system is designed to target VOCs that are trapped in the residuum layer beneath the former disposal trenches which had been previously excavated. Since the residuum is located beneath the hydraulically fractured wells advection is not the primary means of mass removal and, as discussed in the CMS, VOC mass removal rates at SWMU 13, even with fracturing of the soils, will be predominately controlled by diffusion instead of by gas-phase advection. In summary, VOC vapors will need to diffuse from the residuum, any perched water and through the soils to reach the porous fracture pathway before being removed.

A total of twelve (12) vapor sampling events were conducted during the second operational year for the SVE system. Analytical results from samples collected at the influent, midfluent, and effluent of the vapor-phase granular activated carbon (GAC) units are provided in Table A-4. The influent concentration

represents the combined concentration of the vapors collected from the SVE wells and dilution air used to control the SVE blower vacuum. In response to declining influent VOC concentrations, on-off cycling of the system was initiated in January 2015 following a significant rebound in influent concentrations from the December 18, 2014 vapor sampling event. To determine system effectiveness and rebound rates during the pulse cycles, six (6) influent-only vapor samples were collected on a nearly weekly basis between June 17 and August 5, 2015.

The SVE system is considered a de minimis air emission source and not subject to numerical limits. As presented on Table A-4 the mid-fluent and effluent vapor concentrations for TCE, cis-1,2-DCE and other c-VOCs have been non-detect or significantly (i.e. one or more order of magnitude less) than the influent concentrations. This indicates that the vapor phase GAC units still have capacity and do not require replacement. In addition, as presented on Table A-5, vapor effluent concentrations are less than the published Permissible Exposure Limits (PELs) indicating that the discharges does not pose a safety concern. It is noted that benzene has been consistently detected in the effluent but at concentrations well below the PEL.

As presented in the trend graph below, influent vapor concentrations for Trichloroethylene (TCE) and cis-1,2-dichloroethylene (cis-1,2-DCE) show a strong positive correlation between increases in the operating system vacuum above 10 in Hg and mass removal rates. As presented in Table A-5, well head total organic concentrations as measured with a Photoionization Detector (PID) are generally higher for the injection wells indicating that substantial mass is being removed from the bedrock pores.



After a typical SVE system has been operating continuously for an extended period of time, the system becomes diffusion driven and removal rates decrease to a non-zero asymptotic level. If the system is turned off at this point, diffusion of VOCs from lower to higher permeability zones can occur, resulting in more effective mass removal upon restarting the system. This phenomenon is known as the "rebound" effect. In these situations, cycling or pulsing of the system is generally employed to remove additional VOC mass as the final stage of removal. Golder initiated pulsed operations in January 2015 with the goal of operating under weekly 3-day cycles. With a calculated pore volume exchange rate of ~16 hours, a 3-day run is expected to extract 4 to 5 volumes per cycle. As presented in the graph above, VOC concentrations were exponentially higher for most of the pulsed operational period between June and October 2015.

A-4 Conclusions

The SVE system is removing VOCs from the residuum and bedrock. As presented on Table A-6, 8.41 lbs of VOCs have been removed and treated by the system since January 2014, with removal of 5.04 lbs during

Year 2. Improved mass removal rates are observed with increased vacuums and reduced water levels. It's recommended that the system be operated to achieve maximum operating vacuums. The SVE system will continue to operate in a pulsed manner to optimize mass removal while conserving energy.

Tables:

A-1 SVE Well Construction
A-2 SVE System Operational Timeline
A-3 SVE System Groundwater Elevations
A-4 SVE System Analytical (TO-15) Results
A-5 SVE System Field Readings
A-6 SVE System Mass Removal Rates

Figures:

A-1 SVE System Layout

APPENDIX A

TABLES

Table A-1

SVE System Well Information
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Zone	Well ID	Installation Date	Well Depth (ft bgs)	Screen Interval (ft bgs)		Fracture Depth (ft bgs)	Fracture Radii (ft)	Comments
				Top	Bottom			
1	HF-2*	03/06/12	14.5	9.5	14.5	10.5 & 14	18.36 & 12.27	
	HF-3	03/07/12	21.0	16.0	21.0	20.5	22.93	
	HF-4*	03/06/12	13.0	8.0	13.0	9 & 11	15.05 & 17.63	
	HF-5	03/08/12	19.0	14.0	19.0	18	19.91	
	HF-6*	3/6-7/12	16.5	11.5	16.5	15.5	19.24	HF-6 first two fracture attempts vented after 250 and 750 pounds of sand, respectively. The third and final fracture attempt was at a new location to the north and did not vent at 1000 pounds of sand. The final fracture was the deepest depth.
2	HF-7*	03/08/12	13.0	8.0	13.0	12	18.75	
	HF-8*	03/08/12	12.0	7.0	12.0	11	16.76	
	HF-9	3/6-7/12	22.0	17.0	22.0	22	20.71	HF-9 first fracture attempt vented after completion with 1000 pounds of sand. The second attempt vented after 500 pounds of sand. The third and final fracture attempt did not vent at 1000 pounds of sand. The final fracture was the deepest depth.
	HF-10	03/07/12	17.5	12.5	17.5	16	18.64	
	HF-11	03/07/12	19.0	14.0	19.0	18	20.57	
	SVE-1	03/08/12	15.0	10.0	15.0	---	---	
3	HF-1	03/06/12	11.5	6.5	11.5	11.5	17.99	

Notes:
bgs = below ground surface
* = well located outside of capped area
1) SVE-1 is an unfractured screened SVE well

Table A-2

SVE System Operation Timeline
GlaxoSmithKline -- Research Triangle Park
South Campus, North Complex

Date	Action	Auto / Manual	Activity Description	Vacuum (inHg)	Blower Hours	Pre-Sample Run Length (hours)	Average Vacuum (inHg)
01/02/14	Start-up	M	Initial start-up, system testing				
	Shut Down	M	WLs at or above screened interval in most SVE wells				
01/03/14	Operations	--	Pump water from SVE wells (periodic, end 01/14/14)				
02/19/14	Operations	--	AFVR, Zones 1 & 2, 265 gal removed.				
	Restart	M	Zones 2 & 3 open.				
02/21/14	**Sample [01]**	**--**	**MID sample collected, Zones 2 & 3 only.**				
	Shut Down	M		--	--		
02/24/14	Restart	M			67.9		
02/25/14	Shut Down	M	Install EFFLUENT sample port	--	--		
02/26/14	Restart	M	IWs only	10.0	89.4		
02/28/14	**Sample [02]**	**--**	**INF, MID, EFF from IWs only**	**10.0**	**134.9**	**45.5**	**10.0**
03/03/14	Shut Down	M	Maintenance on 03/04-05	--	208.7		
03/05/14	Maintenance	--	Change blower oil	--	--		
03/31/14	Restart	M	First restart after initial injection event	10.0	209.8		
04/02/14	Shut Down	M	Tranfer pump housing cracked, leaked to pad	--	250.4		
04/16/14	Maintenance	--	Replace Transfer pump housing	--	--		
04/17/14	Restart	M	System readings	10.0	250.9		
	Shut Down	M	Monitor WLs, drain headers	--	253.4		
04/21/14	Restart	M	System readings	10.0	253.7		
	Sample [03]	**--**	**INF, MID, EFF**	**10.0**	**254.5**	**0.8**	**10.0**
	Shut Down	M	Monitor WLs, drain headers	--	--		
04/23/14	Restart	M	System readings	10.0	256.4		
	Shut Down	M		--	--		
04/24/14	Restart	M	System readings, test Transfer pump	10.0	259.2		
	Shut Down	M	Troubleshoot Transfer pump	--	--		
05/02/14	Restart	M	System readings	10.1	265.8		
	Sample [04]	**--**	**INF, MID, EFF**	**10.1**	**269.9**	**4.1**	**10.1**
	Shut Down	M		--	270.8		
05/05/14	Restart	M	HF-1, -2, -4, -6, -7, -8 closed due to shallow WLs.	10.1	271.2		
	Shut Down	M		--	273.2		
05/06/14	Restart	M	System readings; closed SVE-1, wells (5/5) remain closed.	10.0	273.2		
05/08/14	Operations	--	Closed HF-3, -11. Opened HF-6, -8, SVE-1.	--	--		
05/09/14	Shut Down	M		--	350.3		
05/13/14	Restart	M	System readings	8.5	350.3		
05/16/14	**Sample [05]**	**--**	**INF, MID, EFF**	**8.5**	**421.8**	**71.5**	**8.5**
	Shut Down	M		--	423.2		
05/19/14	Restart	M	System readings	8.5	423.6		
05/22/14	Shut Down	M		--	499.5		
05/27/14	Restart	M	Monitor WLs, drain headers	7.0	499.5		
	Shut Down	A	Test Condensate drum HI-HI Alarm, confirmed.	--	502.9		
05/29/14	Restart	M	System readings	6.9	503.5		
05/30/14	Operations	--	Increased system vacuum	7.5	--		
06/02/14	Operations	--	Increased system vacuum	8.0	--		
06/04/14	Operations	--	System readings	8.0	642.5		
06/11/14	Shut Down	A	Power fault	--	811.5		
	Restart	M	JAD	8.5	811.8		
06/13/14	Shut Down	M	Injections @ SWMU-13	--	865.9		
06/24/14	Restart	M	2nd Injection event completed	7.0	866.5		
07/07/14	**Sample [06]**	**--**	**INF, MID, EFF**	**7.1**	**963.5**	**97**	**7.1**
	Shut Down	M	Maintenance on 07/09	--	1186.1		
07/09/14	Maintenance	--	Change blower oil	--	1186.1		
	Restart	M	All wells open except HF-11 (to remain closed).	9.0	1186.6		
07/16/14	Shut Down	M	Maintenance	--	1350.9		
	Maintenance	--	Change blower grease	--	--		
	Restart	M	System readings	9.5	1350.9		
08/13/14	Shut Down	M	JAD, per call with BJE	9.5	1935.0		
08/20/14	Restart	M	JAD	9.5	1951.2		
08/21/14	Shut Down	A	KO Tank HI-HI ALARM	--	1971.5		
08/28/14	Restart	M	Pump KO Tank, clear alarm	8.5	1971.5		
09/03/14	**Sample [07]**	**--**	**INF, EFF; Ferrule broke on MID sample**	**8.7**	**2112.1**	**140.6**	**8.6**
09/10/14	Shut Down	M	PID readings @ wellhead, open to system	--	2288.2		
09/11/14	Operations	--	PID readings @ wellhead, closed from system, no vac	--	--		
	Restart	M	HF-11 remain closed, solid mud @ 6.78'	9.0	2288.8		
10/08/14	Shut Down	M	Begin injections @ SWMU-13	9.1	2942.5		
10/17/14	Restart	M	3rd Injection event completed	10.0	2942.6		
10/31/14	**Sample [08]**	**--**	**INF, MID, EFF**	**10.1**	**3280.6**	**338.0**	**10.1**
11/18/14	**Sample [09]**	**--**	**INF, MID, EFF**	**9.5**	**3717.4**	**436.8**	**9.8**
	Shut Down	M	Pre-PID readings @ wellheads	--	3717.7		
11/20/14	Operations	--	PID readings @ closed wellheads, no vac	--	--		
	Restart	M	Wellhead vacuum & ΔP readings; HF-11 opened.	9.5	3717.7		
11/28/14	Shut Down	A	Condensate Tank Hi-Hi Alarm	--	3915.1		
12/04/14	Operations	--	Personnel on-site, turn off power to system	--	--		
12/17/14	Operations	--	PID readings @ wellhead, closed 5 hours, no vac	--	--		
	Restart	M	All wells open except HF-11.	8.0	3915.1		
12/18/14	**Sample [10]**	**--**	**INF, MID, EFF**	**8.0**	**3936.1**	**21.0**	**8.0**
12/23/14	Shut Down	M	Await lab results; 4th Injection event (01/05-19)	8.2	4052.8		
01/27/15	Operations	--	PID readings @ closed wellheads, no vac	--	--		
	Restart	M	4th injection event completed; HF-11 closed	8.0	4052.8		
01/30/15	**Sample [11]**	**--**	**INF, MID, EFF, AIR**	**7.8**	**4122.1**	**69.3**	**7.8**
	Shut Down	M	Maintenance - Change blower oil. Grease gun broken, ordered replacement.		4123.1		
02/06/15	Restart	M	Begin running system on 3-day cycles	8.0	4123.1		
02/09/15	Shut Down	M	End 3-day cycle	8.7	4196.9		

Table A-2

SVE System Operation Timeline
GlaxoSmithKline -- Research Triangle Park
South Campus, North Complex

Date	Action	Auto / Manual	Activity Description	Vacuum (inHg)	Blower Hours	Pre-Sample Run Length (hours)	Average Vacuum (inHg)
02/13/15	Maintenance	--	Attempt to change grease, relief valve clogged. Cover-blind dislodged from casing due to pressure build-up.	--	--		
	LO/TO						
03/02/15	LO/TO	--	Freeze damage found at HF-2 and HF-6. Install small drain valves along 3" pipe to drain condensate from HF-2 and HF-4, repair HF-6.	--	--		
03/27/15	Operations	--	PID readings @ closed wellheads, no vac	--	--		
03/30/15	Maintenance	--	Complete repair @ blower, grease blower; collect WLs	--	--		
	Restart	M	All wells open except HF-11.	7.0	4196.9		
04/02/15	**Sample [12]**	**--**	**INF, MID, EFF**	**8.5**	**4265.3**	**68.4**	**7.8**
	Shut Down	M	End 3-day cycle; PID readings @ closed wellheads	8.5	4267.7		
04/15/15	Operations	--	PID readings @ closed wellheads, no vac	--	--		
	Restart	M	Begin 3-day cycle, AM-801 motor fault	5.2	4267.7		
04/17/15	Shut Down	M	End cycle	6.5	4321.0		
04/21/15	Restart	M	Begin 3-day cycle	5.0	4321.0		
04/24/15	Shut Down	M	End cycle	5.9	4394.1		
04/27/15	Restart	M	Begin 3-day cycle	--	4394.1		
	Shut Down	M	Received motor faults at AM-801 and MV-203	--	4394.6		
05/19/15	Operations	--	Electrician on-site to troubleshoot motor faults	--	--		
05/27/15	Operations	--	PID readings @ closed wellheads, no vac	--	--		
	Restart	M	Begin 3-day cycle, test repairs. Zone 3 closed due to crack in header pipe *(repaired on 6/5).*	6.0	4394.6		
	Shut Down	M	3-day cycle cancelled. AM-801 motor fault; new motor ordered.	6.4	4402.8		
06/10/15	Operations	--	Install AM-801 replacement motor.	--	--		
	Restart	M	Begin cycle, all wells open	6.0	4402.8		
06/11/15	**Sample [13]**	**--**	**INF, MID, EFF**	**6.0**	**4426.4**	**23.6**	**6.0**
06/12/15	Shut Down	M	End cycle *(2-day cycle before weekend)*	6.0	4454.4		
	Maintenance	--	Greased blower	--	--		
06/16/15	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
	Restart	M	Begin cycle, HF-11 closed	8.0	4454.4		
06/17/15	**Sample [14]**	**--**	**INF Only**	**8.3**	**4477.5**	**23.1**	**8.2**
06/18/15	Shut Down	M	End cycle	8.5	4499.3		
	Operations	--	Collect post-shut down PID readings @ closed wellheads	--	--		
06/23/15	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
	Restart	M	Begin cycle, HF-11 closed	10.0	4499.3		
06/24/15	**Sample [15]**	**--**	**INF Only**	**10.0**	**4523.5**	**24.2**	**10.0**
06/25/15	Shut Down	M	End cycle	10.0	4548.0		
	Operations	--	Collect post-shut down PID readings @ closed wellheads	--	--		
06/30/15	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
	Restart	M	Begin cycle, HF-11 closed	10.5	4548.1		
07/01/15	**Sample [16]**	**--**	**INF Only**	**10.4**	**4571.7**	**23.6**	**10.5**
07/02/15	Shut Down	M	End cycle	10.4	4595.6		
	Operations	--	Collect post-shut down PID readings @ closed wellheads	--	--		
07/07/15	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
	Restart	M	Begin cycle	11.0	4595.6		
	Shut Down	M	P-201 unable to prime (leak @ Wye strainer). Manually drained KO tank (~40 gal) in order to run high vac overnight.	11.0	4596.8		
	Restart	M	Resume cycle (2 hour delay)	11.0	4596.8		
07/08/15	**Sample [17]**	**--**	**INF, MID, EFF**	**10.9**	**4620.1**	**24.5**	**10.9**
07/09/15	Shut Down	A	KO Tank HI-HI ALARM at 0205. P-201 off while awaiting replacement part. Manually drained KO Tank	--	4628.5		
	Operations	--	Collect post-shut down PID readings @ closed wellheads. Wells open to system for ~7 hrs after auto shutdown.	--	--		
07/14/15	Operations	--	Collect WLs; unable to collect pre-startup PID readings due to equipment malfunction.	--	--		
	Restart	M	Begin cycle	10.2	4628.5		
07/15/15	**Sample [18]**	**--**	**INF Only**	**10.3**	**4652.8**	**24.3**	**10.3**
07/16/15	Shut Down	M	End cycle	10.3	4675.3		
	Operations	--	Collect post-shut down PID readings @ closed wellheads	--	--		
07/28/15	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
	Restart	M	Begin cycle	10.5	4675.3		
07/29/15	**Sample [19]**	**--**	**INF Only**	**10.6**	**4702.5**	**27.2**	**10.6**
07/30/15	Operations	--	Collect vacuum & ΔP readings at wellheads	10.7	4724.2		
	Shut Down	M	End cycle	10.7	4725.2		
	Operations	--	Collect post-shut down PID readings @ closed wellheads	--	--		
08/04/15	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
	Restart	M	Begin cycle	11.8	4725.2		
08/05/15	**Sample [20]**	**--**	**INF Only**	**11.8**	**4745.8**	**20.6**	**11.8**
	Operations	--	Collect vacuum & ΔP readings at wellheads	11.8	4745.8		
08/06/15	Shut Down	M	End cycle	11.9	4766.6		
	Operations	--	Collect post-shut down PID readings @ closed wellheads	--	--		
08/17/15	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
	Restart	M	Begin cycle	11.0	4766.6		
08/19/15	**Sample [21]**	**--**	**INF, MID, EFF**	**11.0**	**4816.3**	**49.7**	**11.0**
08/20/15	Operations	--	Collect vacuum & ΔP readings at wellheads	11.0	--		
	Shut Down	M	End cycle	11.0	4834.8		
	Operations	--	Collect post-shut down PID readings @ closed wellheads	--	--		
08/31/15	Restart	M	Begin cycle	11.5	4834.8		
09/03/15	Shut Down	M	End cycle	11.3	4904.9		
09/14/15	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
	Maintenance	--	Change blower oil & grease	--	--		
09/16/15	Restart	M	Begin cycle	11.3	4904.9		
09/18/15	**Sample [22]**	**--**	**INF, MID, EFF**	**11.1**	**4949.4**	**44.5**	**11.2**
	Shut Down	M	End cycle	11.1	4950.1		
	Operations	--	Collect post-shut down PID readings @ closed wellheads	--	--		

Table A-2

SVE System Operation Timeline
GlaxoSmithKline -- Research Triangle Park
South Campus, North Complex

Date	Action	Auto / Manual	Activity Description	Vacuum (inHg)	Blower Hours	Pre-Sample Run Length (hours)	Average Vacuum (inHg)
09/29/15	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
	Restart	M	Begin cycle	11.0	4950.1		
09/30/15	Shut Down	A	KO Tank HI-HI ALARM at 1110. P-201 not in operation. KO Tank drained via vac truck (10/19).	--	4967.5		
11/16/15	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
	Restart	M	Begin cycle	--	4967.5		
	Shut Down	M	Zone 1 piping disconnected at repaired joint between HF-5 and IW-10. Resealed and allowed to sit overnight.	--	4967.8		
11/17/15	Restart	M	Begin cycle	8.0	4967.8		
11/18/15	**Sample [23]**	**--**	**INF, MID, EFF**	**8.2**	**5001.4**	**33.6**	**8.1**
11/19/15	Shut Down	M	End cycle	8.2	5022.8		
	Operations	--	Collect post-shut down PID readings @ closed wellheads	--	--		
02/18/16	Operations		Collect WLs at wellheads	--	--		
02/29/16	Operations		Collect WLs at wellheads	--	--		
03/09/16	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
03/28/16	Operations	--	Collect PID readings @ closed wellheads, WLs	--	--		
03/30/16	Operations	--	Change blower grease	--	--		
	Restart	M	Begin cycle	8.0	5022.8		
04/01/16	Shut Down	M	End cycle	8.4	5068.7		

Table A-3

SVE System Groundwater Elevations
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

	SVE System Wells												Injection Wells				Bedrock Wells		
Well ID	**HF-1**	**HF-2**	**HF-3**	**HF-4**	**HF-5**	**HF-6**	**HF-7**	**HF-8**	**HF-9**	**HF-10**	**HF-11**	**SVE-1**	**IW-08**	**IW-10**	**IW-11**	**IW-14**	**BR-1**	**BR-2**	**BR-3**
TOC Elev. (ft. AMSL)	382.1	380.6	383.4	381.1	382.9	379.6	378.9	379.7	382.7	381.4	383.3	384.1	374.3	376.6	377.3	380.2	380.9	380.3	379.9
Fracture Elev.	366.5	366.0	359.0	367.0	361.0	361.0	363.0	365.0	357.0	361.5	361.0	----	----	----	----	----	----	----	----
Date	**Static Groundwater Elevation (1) (ft. AMSL)**																		
01/06/14	371.07	372.30	371.87	372.62	361.15	360.04	369.12	368.94	364.15	364.90	367.14	371.43	NM	NM	NM	NM	NM	NM	NM
01/13/14	371.51	372.95	368.25	373.15	361.52	360.24	369.42	369.22	364.32	364.85	367.18	371.38	NM	NM	NM	NM	NM	NM	NM
01/14/14 (2)	371.52	373.10	368.39	373.18	361.32	360.45	369.62	369.43	363.99	364.81	367.12	370.53	356.62	355.71	354.57	362.31	359.92	363.42	355.72
01/20/14	371.32	372.38	369.24	372.69	361.75	360.82	369.70	369.52	364.81	365.25	367.46	371.41	NM	NM	NM	NM	NM	NM	NM
02/17/14 (3)	371.74	372.89	369.67	373.18	361.96	361.14	369.49	369.25	365.28	365.58	367.85	371.73	357.26	356.45	355.23	364.35	359.76	369.35	356.65
03/31/14	372.68	372.67	370.63	373.14	364.32	363.11	370.52	370.29	366.39	367.80	369.68	372.83	NM	NM	NM	NM	NM	NM	NM
04/17/14	372.44	372.45	368.02	372.99	364.27	362.29	370.17	369.98	366.62	368.31	370.31	373.00	NM	NM	NM	NM	NM	NM	NM
04/21/14	373.11	372.70	368.64	373.15	363.28	362.89	370.87	370.67	367.20	369.01	370.82	373.52	NM	NM	NM	NM	NM	NM	NM
04/23/14	372.83	372.42	370.69	372.86	363.38	363.14	370.72	370.52	367.27	369.01	370.82	373.64	354.20	353.33	353.41	358.27	359.42	359.41	359.40
04/24/14	372.52	372.21	370.30	372.68	363.23	364.20	370.49	370.27	367.17	368.79	370.75	373.43	354.05	353.07	353.24	358.04	359.39	359.25	359.15
05/02/14	372.55	372.32	370.26	372.78	363.39	362.92	370.46	370.29	367.33	369.12	371.13	373.58	354.31	353.26	353.44	358.25	359.46	359.48	359.34
05/05/14	372.22	371.92	369.93	372.28	364.31	362.88	370.28	370.10	367.32	369.06	371.18	373.29	354.21	353.16	353.33	358.29	359.40	359.47	359.32
05/08/14 (4)	371.91	371.69	375.80	372.03	363.09	362.59	369.98	369.81	367.25	368.80	----	373.04	358.86	355.29	355.60	360.64	361.66	367.36	362.72
05/19/14	372.33	372.17	369.41	372.66	362.82	362.42	370.47	370.29	367.17	369.02	----	373.34	353.89	352.75	352.94	358.19	359.34	359.42	359.30
07/09/14	370.14	370.01	368.09	369.73	361.32	361.00	368.37	368.24	365.37	366.96	----	371.50	352.83	351.69	351.50	357.19	358.43	358.45	358.40
01/27/15	373.61	372.90	371.01	373.60	361.32	363.23	371.12	370.92	366.67	369.16	----	373.94	NM	NM	NM	NM	NM	NM	NM
03/27/15	373.71	372.78	371.75	373.60	362.70	363.10	371.42	371.27	369.87	371.09	----	374.75	355.12	355.27	355.38	359.13	361.47	360.49	360.47
05/27/15	371.37	371.28	370.14	371.42	362.78	364.24	369.62	369.47	369.07	368.91	----	372.91	355.34	354.29	354.67	357.27	359.10	358.74	358.59
06/16/15	370.68	370.52	369.22	370.34	360.71	360.77	368.67	368.50	368.09	367.82	----	372.04	NM	NM	NM	NM	NM	NM	NM
06/23/15	370.80	370.95	369.10	370.73	360.44	360.39	368.62	368.47	367.91	367.61	----	372.00	NM	NM	NM	NM	NM	NM	NM
06/30/15	371.24	371.60	369.08	371.43	360.28	**360.32**	368.94	368.77	367.87	367.48	----	372.22	NM	NM	NM	NM	NM	NM	NM
07/07/15	371.45	372.12	368.23	372.12	360.37	**360.34**	369.39	369.21	367.92	367.44	----	372.36	NM	NM	NM	NM	NM	NM	NM
07/14/15	371.48	372.18	369.60	372.14	360.56	**360.32**	369.30	369.22	367.76	367.50	----	372.35	NM	NM	NM	NM	NM	NM	NM
07/28/15	370.73	371.14	368.07	371.10	360.33	360.99	369.22	369.06	367.44	367.11	----	371.75	NM	NM	NM	NM	NM	NM	NM
08/04/15	370.34	370.59	366.65	370.28	360.29	360.79	368.66	368.49	367.11	366.88	----	371.42	NM	NM	NM	NM	NM	NM	NM
08/17/15	369.88	369.71	366.43	369.20	360.32	360.71	367.85	367.68	366.62	366.50	----	370.92	NM	NM	NM	NM	NM	NM	NM
09/14/15	369.47	370.34	364.68	369.69	360.18	361.10	367.05	366.88	365.56	365.78	----	370.38	NM	NM	NM	355.61	NM	NM	NM
09/29/15	370.72	373.35	367.01	372.14	360.30	360.64	369.93	369.79	365.81	366.23	----	370.93	NM	NM	NM	NM	NM	NM	NM
11/16/15	372.91	372.81	367.01	373.16	364.27	364.23	370.95	370.76	368.54	368.78	----	373.45	353.60	353.84	354.39	357.68	358.92	359.02	358.99
02/18/16	374.08	373.47	369.18	373.91	365.60	365.65	372.02	371.95	371.64	371.58	----	375.09	NM	NM	NM	NM	NM	NM	NM
02/29/16	374.30	373.41	369.57	373.86	366.42	366.37	372.20	372.18	372.16	372.32	----	375.72	NM	NM	NM	NM	NM	NM	NM
03/09/16	373.12	372.88	368.74	373.37	365.33	365.31	371.32	371.25	371.19	371.12	----	374.56	NM	NM	NM	NM	NM	NM	NM
03/28/16	373.83	373.77	369.08	374.06	365.11	365.09	371.78	371.54	371.35	371.04	----	374.69	359.51	358.30	359.05	362.46	364.17	364.02	364.31

NOTES:

ft. AMSL = Feet above mean sea level
TOC = Top of casing
NI = Not installed
NM = Not measured
IW = Injection well

HF = Hydraulically fractured well
SVE = Soil vapor extraction well
BR = Bedrock well
Bold = Measured depth is approximate elevation of well bottom.

1) Groundwater elevations are given as measured from the top of casing for each well.
2) IW and BR well values for 01/14/14 were taken 01/17/14
3) IW and BR well values for 02/17/14 were taken 02/19/14
4) HF-11 drew water during normal opeartions and became filled with mud prior to the measurement on 05/08/14.

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
1,1,1,2-Tetrachloroethane	02/21/14	--	--	ND	--	ND
PEL = *	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.10	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
1,1,1-Trichloroethane	02/21/14	--	--	0.30	--	ND
PEL = 10,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	5.40	ND	ND	--	ND
	05/02/14	3.54	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.11	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	0.16	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	0.13	--	--	--	ND
	08/19/15	0.17	ND	ND	--	ND
	09/18/15	2.12	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
1,1,2,2-Tetrachloroethane	02/21/14	--	--	ND	--	ND
PEL = 1,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	0.28	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.12	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	0.78	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	0.39	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
1,1,2-Trichloroethane	02/21/14	--	--	ND	--	ND
PEL = 10,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.09	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	0.78	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
1,1-Dichloroethane	02/21/14	--	--	0.34	--	ND
PEL = 100,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	9.43	ND	ND	--	ND
	05/02/14	3.90	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.30	ND	ND	--	ND
	01/30/15	0.11	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	0.27	--	--	--	ND
	07/08/15	5.91	ND	ND	--	ND
	07/15/15	6.17	--	--	--	ND
	07/29/15	1.82	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	0.73	ND	ND	--	ND
	09/18/15	114	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
1,1-Dichloroethene	02/21/14	--	--	10.4	--	ND
PEL = 1,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	165	ND	ND	--	ND
	05/02/14	94.7	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	0.11	ND	ND	--	ND
	11/18/14	0.12	ND	ND	--	ND
	12/18/14	0.58	ND	ND	--	ND
	01/30/15	0.23	ND	ND	ND	ND
	04/02/15	0.17	ND	ND	--	ND
	06/11/15	0.59	ND	ND	--	ND
	06/17/15	0.28	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	1.85	--	--	--	ND
	07/08/15	32.4	ND	ND	--	ND
	07/15/15	49.0	--	--	--	ND
	07/29/15	10.1	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	5.04	ND	0.12	--	ND
	09/18/15	634	ND	ND	--	ND
	11/18/15	0.32	ND	0.12	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
1,2,4-Trichlorobenzene	02/21/14	--	--	0.31	--	ND
PEL = 5,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	ND	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
1,2,4-Trimethylbenzene	02/21/14	--	--	ND	--	ND
PEL = 25,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	1.74	ND	--	ND
	05/02/14	ND	0.80	ND	--	ND
	05/16/14	ND	0.82	ND	--	ND
	07/07/14	ND	0.79	ND	--	ND
	09/03/14	0.75	--	ND	--	ND
	10/31/14	ND	1.24	0.10	--	ND
	11/18/14	ND	0.96	0.18	--	ND
	12/18/14	0.19	0.93	ND	--	ND
	01/30/15	ND	0.62	ND	ND	ND
	04/02/15	0.16	1.34	ND	--	ND
	06/11/15	1.40	2.33	1.17	--	ND
	06/17/15	0.41	--	--	--	ND
	06/24/15	0.21	--	--	--	ND
	07/01/15	0.36	--	--	--	ND
	07/08/15	0.39	1.65	ND	--	ND
	07/15/15	0.39	--	--	--	ND
	07/29/15	0.41	--	--	--	ND
	08/05/15	0.46	--	--	--	ND
	08/19/15	0.43	1.67	ND	--	ND
	09/18/15	0.51	3.63	ND	--	ND
	11/18/15	0.83	1.51	0.55	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
1,2-Dichlorobenzene	02/21/14	--	--	ND	--	ND
PEL = 25,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.09	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	0.31	ND	ND	--	ND
	11/18/15	0.12	ND	0.13	--	ND
1,2-Dichloroethane	02/21/14	--	--	24.7	--	ND
PEL = 1,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	759	ND	ND	--	ND
	05/02/14	--	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	0.91	ND	ND	--	0.11
	11/18/14	0.90	0.09	ND	--	ND
	12/18/14	6.20	ND	ND	--	ND
	01/30/15	1.02	ND	ND	ND	ND
	04/02/15	1.08	ND	ND	--	ND
	06/11/15	1.28	0.14	ND	--	ND
	06/17/15	0.66	--	--	--	ND
	06/24/15	0.63	--	--	--	ND
	07/01/15	2.74	--	--	--	ND
	07/08/15	17.4	ND	ND	--	ND
	07/15/15	11.0	--	--	--	ND
	07/29/15	1.51	--	--	--	ND
	08/05/15	2.81	--	--	--	ND
	08/19/15	1.79	ND	ND	--	ND
	09/18/15	438	ND	ND	--	ND
	11/18/15	0.96	ND	ND	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
1,2-Dichloropropane	02/21/14	--	--	ND	--	ND
PEL = 75,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.10	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
1,3,5-Trimethylbenzene	02/21/14	--	--	ND	--	ND
PEL = 25,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	0.90	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	0.37	--	ND	--	ND
	10/31/14	ND	0.53	0.46	--	ND
	11/18/14	ND	0.43	ND	--	ND
	12/18/14	0.12	0.46	ND	--	ND
	01/30/15	ND	0.29	ND	ND	ND
	04/02/15	ND	0.64	ND	--	ND
	06/11/15	0.41	0.86	0.38	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	0.13	--	--	--	ND
	07/08/15	0.16	0.76	ND	--	ND
	07/15/15	0.14	--	--	--	ND
	07/29/15	0.17	--	--	--	ND
	08/05/15	0.17	--	--	--	ND
	08/19/15	0.17	0.86	ND	--	ND
	09/18/15	0.24	1.91	ND	--	ND
	11/18/15	0.32	0.63	0.20	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
1,3-Butadiene	02/21/14	--	--	ND	--	ND
PEL = 1,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	0.09	ND	--	ND
	12/18/14	0.16	0.20	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	0.38	ND	--	ND
	06/11/15	ND	1.10	ND	--	0.05
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	1.72	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	2.11	ND	--	ND
	09/18/15	ND	4.99	ND	--	ND
	11/18/15	ND	2.73	ND	--	ND
1,3-Dichlorobenzene	02/21/14	--	--	ND	--	ND
PEL = *	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	ND	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	ND	ND	--	ND
	11/18/15	ND	0.10	0.11	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
1,4-Dichlorobenzene	02/21/14	--	--	ND	--	ND
PEL = 10,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	ND	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	0.09	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	0.13	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	ND	ND	--	ND
	11/18/15	0.11	ND	0.14	--	ND
1,4-Dioxane	02/21/14	--	--	ND	--	ND
PEL = 100,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	0.30	--	ND	--	ND
	10/31/14	ND	ND	3.79	--	ND
	11/18/14	0.15	ND	ND	--	ND
	12/18/14	0.21	0.19	0.31	--	ND
	01/30/15	ND	ND	1.49	0.12	ND
	04/02/15	0.39	ND	4.14	--	ND
	06/11/15	2.79	11.1	7.51	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	0.20	ND	ND	--	ND
	07/15/15	0.19	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	1.20	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
2,2,4-trimethylpentane	02/21/14	--	--	1.33	--	ND
PEL = 300,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	6.67	ND	ND	--	ND
	05/02/14	3.65	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.13	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	0.27	0.29	0.32	--	ND
	06/17/15	21.7	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	0.14	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	0.27	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
2-Chlorotoluene	02/21/14	--	--	ND	--	ND
PEL = 50,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	0.09	ND	--	ND
	12/18/14	0.10	0.13	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	0.32	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
2-Hexanone	02/21/14	--	--	1.60	--	ND
PEL = 1,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	0.75	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	0.14	1.93	ND	--	ND
	11/18/14	ND	0.17	1.61	--	ND
	12/18/14	0.26	0.13	ND	--	ND
	01/30/15	ND	4.98	ND	ND	ND
	04/02/15	0.22	23.6	0.13	--	ND
	06/11/15	0.54	28.1	0.13	--	ND
	06/17/15	0.76	--	--	--	ND
	06/24/15	0.13	--	--	--	ND
	07/01/15	0.21	--	--	--	ND
	07/08/15	1.34	45.2	ND	--	ND
	07/15/15	0.64	--	--	--	ND
	07/29/15	0.39	--	--	--	ND
	08/05/15	0.24	--	--	--	ND
	08/19/15	0.20	63.2	0.52	--	ND
	09/18/15	ND	115	0.16	--	ND
	11/18/15	0.52	40.4	0.58	--	ND
4-Ethyltoluene	02/21/14	--	--	ND	--	ND
PEL = *	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	0.77	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	0.42	ND	--	ND
	11/18/14	ND	0.34	ND	--	ND
	12/18/14	0.12	0.37	ND	--	ND
	01/30/15	ND	0.24	ND	ND	ND
	04/02/15	ND	0.56	ND	--	ND
	06/11/15	0.28	0.63	0.28	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	0.61	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	0.71	ND	--	ND
	09/18/15	ND	1.61	ND	--	ND
	11/18/15	0.23	0.54	0.16	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Acetone	02/21/14	--	--	0.59	--	0.12
PEL = 500,000 ppb	02/28/14	5.13	2.81	7.35	--	ND
	04/21/14	27.1	32.5	15.3	--	ND
	05/02/14	26.5	43.3	15.3	--	ND
	05/16/14	21.9	34.7	7.26	--	ND
	07/07/14	32.1	34.9	7.22	--	ND
	09/03/14	34.6	--	30.5	--	ND
	10/31/14	15.5	33.5	19.9	--	0.08
	11/18/14	3.96	20.1	19.3	--	0.12
	12/18/14	18.2	25.0	15.8	--	ND
	01/30/15	6.65	530	7.29	ND	0.12
	04/02/15	34.0	954	13.6	--	0.12
	06/11/15	54.3	605	23.7	--	0.12
	06/17/15	41.5	--	--	--	0.13
	06/24/15	56.1	--	--	--	ND
	07/01/15	26.3	--	--	--	0.12
	07/08/15	23.1	1,243	13.9	--	0.11
	07/15/15	36.5	--	--	--	0.13
	07/29/15	20.5	--	--	--	ND
	08/05/15	18.3	--	--	--	ND
	08/19/15	18.1	1366	15.9	--	0.15
	09/18/15	15.1	2,773	14.8	--	ND
	11/18/15	132	1,438	14.2	--	ND
Acetonitrile	02/21/14	--	--	0.69	--	ND
PEL = 40,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	0.31	--	ND	--	ND
	10/31/14	0.45	ND	0.23	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.27	ND	1.53	--	ND
	01/30/15	ND	0.37	2.64	0.25	0.09
	04/02/15	0.30	ND	1.16	--	ND
	06/11/15	ND	ND	2.73	--	ND
	06/17/15	0.33	--	--	--	0.10
	06/24/15	0.21	--	--	--	0.09
	07/01/15	0.41	--	--	--	0.09
	07/08/15	0.19	0.20	ND	--	0.08
	07/15/15	0.59	--	--	--	0.07
	07/29/15	0.44	--	--	--	0.07
	08/05/15	0.61	--	--	--	ND
	08/19/15	0.77	0.93	0.46	--	0.10
	09/18/15	3.50	0.69	0.63	--	0.04
	11/18/15	0.46	0.32	ND	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Acrolein	02/21/14	--	--	0.28	--	ND
PEL = 100 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	2.04	ND	--	ND
	05/02/14	0.91	0.75	ND	--	ND
	05/16/14	0.79	0.67	ND	--	ND
	07/07/14	ND	0.53	ND	--	ND
	09/03/14	0.97	--	0.41	--	ND
	10/31/14	0.29	0.24	0.54	--	ND
	11/18/14	0.18	ND	0.21	--	ND
	12/18/14	0.72	0.34	0.48	--	ND
	01/30/15	ND	0.65	ND	0.20	ND
	04/02/15	1.11	3.40	0.41	--	ND
	06/11/15	ND	4.47	ND	--	0.06
	06/17/15	1.67	--	--	--	ND
	06/24/15	0.51	--	--	--	ND
	07/01/15	2.28	--	--	--	ND
	07/08/15	1.07	9.56	0.58	--	ND
	07/15/15	1.11	--	--	--	ND
	07/29/15	1.29	--	--	--	ND
	08/05/15	0.93	--	--	--	ND
	08/19/15	1.00	14.5	0.84	--	0.04
	09/18/15	1.04	27.3	0.51	--	ND
	11/18/15	1.13	11.0	0.52	--	0.04
Acrylonitrile	02/21/14	--	--	ND	--	ND
PEL = 2,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.11	0.11	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	0.04
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
3-chloropropene	02/21/14	--	--	ND	--	ND
PEL = 1,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.11	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	0.04
	09/18/15	ND	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
Benzene	02/21/14	--	--	2.86	--	ND
PEL = 1,000 ppb	02/28/14	ND	ND	6.51	--	ND
	04/21/14	39.0	12.8	28.0	--	ND
	05/02/14	23.3	7.57	7.61	--	ND
	05/16/14	ND	8.62	23.5	--	ND
	07/07/14	1.13	11.0	24.9	--	ND
	09/03/14	1.41	--	42.7	--	ND
	10/31/14	0.42	11.5	72.3	--	ND
	11/18/14	0.66	6.45	39.2	--	ND
	12/18/14	1.04	7.26	50.1	--	ND
	01/30/15	1.11	4.51	33.0	0.33	ND
	04/02/15	1.00	12.9	20.7	--	ND
	06/11/15	1.34	14.9	23.5	--	0.04
	06/17/15	1.20	--	--	--	ND
	06/24/15	0.40	--	--	--	ND
	07/01/15	0.88	--	--	--	ND
	07/08/15	7.44	21.7	37.0	--	ND
	07/15/15	4.37	--	--	--	ND
	07/29/15	3.59	--	--	--	ND
	08/05/15	1.29	--	--	--	ND
	08/19/15	1.57	15.1	26.3	--	ND
	09/18/15	56.6	24.0	66.1	--	ND
	11/18/15	0.88	7.02	57.0	--	0.04

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Bromoethene (Vinyl bromide)	02/21/14	--	--	ND	--	ND
PEL = 100 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	3.77	ND	ND	--	ND
	05/02/14	1.22	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.23	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	0.36	--	--	--	ND
	07/08/15	6.27	ND	ND	--	ND
	07/15/15	4.31	--	--	--	ND
	07/29/15	3.58	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	0.67	ND	ND	--	ND
	09/18/15	64.6	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
Bromomethane	02/21/14	--	--	ND	--	ND
PEL = 1,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	0.09	ND	--	ND
	12/18/14	0.16	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Carbon disulfide	02/21/14	--	--	0.42	--	0.17
PEL = 1,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	0.89	--	0.50	--	ND
	10/31/14	0.50	ND	0.56	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.47	1.09	0.47	--	ND
	01/30/15	ND	ND	0.57	0.64	ND
	04/02/15	1.40	ND	ND	--	ND
	06/11/15	1.50	7.70	0.51	--	ND
	06/17/15	1.35	--	--	--	ND
	06/24/15	0.36	--	--	--	ND
	07/01/15	0.33	--	--	--	ND
	07/08/15	0.37	ND	ND	--	ND
	07/15/15	0.26	--	--	--	ND
	07/29/15	0.37	--	--	--	ND
	08/05/15	0.47	--	--	--	ND
	08/19/15	0.41	1.34	ND	--	ND
	09/18/15	0.50	ND	ND	--	ND
	11/18/15	0.21	ND	ND	--	ND
Carbon tetrachloride	02/21/14	--	--	ND	--	ND
PEL = 2,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	0.11	ND	ND	--	ND
	11/18/14	0.11	ND	ND	--	ND
	12/18/14	0.23	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	0.12	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	0.48	--	--	--	ND
	07/08/15	12.4	ND	ND	--	ND
	07/15/15	20.7	--	--	--	ND
	07/29/15	1.82	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	1.04	ND	ND	--	ND
	09/18/15	228	ND	ND	--	ND
	11/18/15	0.16	ND	ND	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Chlorobenzene	02/21/14	--	--	ND	--	ND
PEL = 10,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	3.04	ND	ND	--	ND
	05/02/14	1.81	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.26	ND	0.13	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	2.33	ND	ND	--	ND
	07/15/15	1.74	--	--	--	ND
	07/29/15	0.43	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	28.5	ND	ND	--	ND
	11/18/15	0.17	ND	ND	--	ND
Chloroethane	02/21/14	--	--	ND	--	ND
PEL = 100,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	1.09	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	0.20	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.17	ND	0.21	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	0.27	ND	--	0.06
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	0.24	ND	--	ND
	09/18/15	ND	0.24	ND	--	ND
	11/18/15	ND	ND	ND	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Vinyl Chloride	02/21/14	--	--	0.36	--	ND
PEL = 1,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	4.12	ND	ND	--	ND
	05/02/14	1.90	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	4.75	--	ND	--	ND
	10/31/14	3.30	0.27	0.97	--	ND
	11/18/14	6.60	0.25	ND	--	ND
	12/18/14	12.6	0.30	ND	--	ND
	01/30/15	28.9	ND	ND	0.21	ND
	04/02/15	3.22	0.44	ND	--	ND
	06/11/15	16.5	6.18	ND	--	ND
	06/17/15	12.2	--	--	--	ND
	06/24/15	2.88	--	--	--	ND
	07/01/15	5.69	--	--	--	ND
	07/08/15	11.6	9.03	ND	--	ND
	07/15/15	13.9	--	--	--	ND
	07/29/15	15.1	--	--	--	ND
	08/05/15	9.24	--	--	--	ND
	08/19/15	3.61	37.0	0.15	--	ND
	09/18/15	26.1	32.2	ND	--	ND
	11/18/15	5.56	11.9	ND	--	ND
Chloroform	02/21/14	--	--	73.9	--	ND
PEL = 2,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	1199	ND	ND	--	ND
	05/02/14	1044	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	0.75	--	ND	--	ND
	10/31/14	1.07	ND	ND	--	ND
	11/18/14	1.02	ND	ND	--	ND
	12/18/14	6.62	ND	ND	--	ND
	01/30/15	0.60	ND	ND	ND	ND
	04/02/15	0.26	ND	1.02	--	ND
	06/11/15	0.77	ND	ND	--	ND
	06/17/15	0.34	--	--	--	ND
	06/24/15	0.20	--	--	--	ND
	07/01/15	2.30	--	--	--	ND
	07/08/15	159	ND	ND	--	ND
	07/15/15	204	--	--	--	ND
	07/29/15	15.4	--	--	--	ND
	08/05/15	26.6	--	--	--	ND
	08/19/15	45.1	0.14	ND	--	ND
	09/18/15	2949	ND	ND	--	ND
	11/18/15	0.62	ND	0.24	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Chloromethane	02/21/14	--	--	0.61	--	ND
PEL = 50,000 ppb	02/28/14	ND	ND	2.76	--	ND
	04/21/14	ND	0.82	8.06	--	ND
	05/02/14	0.84	1.18	1.28	--	ND
	05/16/14	0.73	1.01	3.30	--	ND
	07/07/14	0.86	1.08	4.86	--	ND
	09/03/14	1.32	--	8.21	--	ND
	10/31/14	0.61	1.11	7.23	--	ND
	11/18/14	0.66	0.81	4.67	--	ND
	12/18/14	0.83	0.87	5.68	--	ND
	01/30/15	0.48	0.59	2.79	0.45	ND
	04/02/15	0.66	0.80	4.14	--	ND
	06/11/15	1.34	1.05	2.78	--	0.04
	06/17/15	0.81	--	--	--	ND
	06/24/15	0.29	--	--	--	ND
	07/01/15	0.58	--	--	--	ND
	07/08/15	0.55	0.98	ND	--	ND
	07/15/15	0.76	--	--	--	ND
	07/29/15	0.84	--	--	--	ND
	08/05/15	0.72	--	--	--	ND
	08/19/15	0.87	0.98	3.21	--	ND
	09/18/15	0.75	0.82	7.24	--	ND
	11/18/15	0.74	0.44	5.76	--	ND
cis-1,2-Dichloroethylene	02/21/14	--	--	423	--	ND
PEL = 200,000 ppb	02/28/14	0.98	ND	ND	--	ND
	04/21/14	5958	ND	ND	--	0.56
	05/02/14	5063	ND	ND	--	ND
	05/16/14	2.56	ND	ND	--	ND
	07/07/14	7.96	ND	ND	--	ND
	09/03/14	2.76	--	ND	--	ND
	10/31/14	4.11	ND	ND	--	ND
	11/18/14	5.02	ND	ND	--	ND
	12/18/14	29.2	0.10	ND	--	ND
	01/30/15	12.6	ND	ND	ND	ND
	04/02/15	8.03	ND	ND	--	ND
	06/11/15	18.0	ND	ND	--	ND
	06/17/15	11.6	--	--	--	ND
	06/24/15	4.29	--	--	--	ND
	07/01/15	9.83	--	--	--	ND
	07/08/15	128	ND	ND	--	ND
	07/15/15	148	--	--	--	ND
	07/29/15	34.5	--	--	--	ND
	08/05/15	51.9	--	--	--	ND
	08/19/15	70.4	0.22	ND	--	ND
	09/18/15	3,082	ND	ND	--	ND
	11/18/15	12.3	ND	0.28	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Cyclohexane	02/21/14	--	--	2.07	--	ND
PEL = 300,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	20.6	ND	ND	--	ND
	05/02/14	10.2	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	0.11	ND	ND	--	ND
	11/18/14	0.12	ND	0.16	--	ND
	12/18/14	0.26	0.11	ND	--	ND
	01/30/15	0.28	ND	ND	ND	ND
	04/02/15	0.12	ND	ND	--	ND
	06/11/15	0.64	0.23	ND	--	ND
	06/17/15	1.17	--	--	--	ND
	06/24/15	0.16	--	--	--	ND
	07/01/15	0.71	--	--	--	ND
	07/08/15	5.97	0.30	ND	--	ND
	07/15/15	8.66	--	--	--	ND
	07/29/15	4.43	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	0.72	ND	ND	--	ND
	09/18/15	18.9	0.49	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
Ethanol	02/21/14	--	--	2.29	--	0.11
PEL = 1,000,000 ppb	02/28/14	3.51	2.16	0.89	--	ND
	04/21/14	24.3	132	3.37	--	ND
	05/02/14	17.4	97.7	1.68	--	ND
	05/16/14	23.2	114	2.40	--	ND
	07/07/14	24.3	141	1.24	--	ND
	09/03/14	31.9	--	1.85	--	ND
	10/31/14	1.71	132	7.50	--	ND
	11/18/14	105	61.3	1.04	--	ND
	12/18/14	2.80	59.7	0.99	--	ND
	01/30/15	5.56	59.3	1.20	5.79	ND
	04/02/15	4.33	164	0.95	--	ND
	06/11/15	9.80	193	0.99	--	ND
	06/17/15	12.3	--	--	--	ND
	06/24/15	5.09	--	--	--	ND
	07/01/15	16.6	--	--	--	ND
	07/08/15	10.8	230	1.52	--	ND
	07/15/15	14.1	--	--	--	0.14
	07/29/15	13.2	--	--	--	ND
	08/05/15	10.1	--	--	--	ND
	08/19/15	14.5	188	2.91	--	0.13
	09/18/15	13.8	199	1.67	--	0.12
	11/18/15	8.69	85.1	1.45	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Ethyl acetate	02/21/14	--	--	ND	--	ND
PEL = 400,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	2.07	ND	--	ND
	05/02/14	ND	1.44	ND	--	ND
	05/16/14	1.29	2.55	ND	--	ND
	07/07/14	ND	1.78	ND	--	ND
	09/03/14	3.03	--	6.80	--	ND
	10/31/14	ND	2.00	ND	--	ND
	11/18/14	ND	0.99	ND	--	ND
	12/18/14	ND	1.23	ND	--	ND
	01/30/15	ND	0.91	1.42	2.66	ND
	04/02/15	ND	ND	ND	--	0.04
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	3.37	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	1.43	--	--	--	ND
	08/05/15	1.48	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	3.07	ND	--	ND
	11/18/15	ND	1.43	ND	--	ND
Ethylbenzene	02/21/14	--	--	ND	--	ND
PEL = 5,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	0.58	--	ND	--	ND
	10/31/14	ND	0.13	ND	--	ND
	11/18/14	ND	0.09	ND	--	ND
	12/18/14	0.18	0.13	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	0.14	ND	--	ND
	06/11/15	0.64	0.65	0.41	--	ND
	06/17/15	0.71	--	--	--	ND
	06/24/15	0.37	--	--	--	ND
	07/01/15	0.50	--	--	--	ND
	07/08/15	0.77	0.29	ND	--	ND
	07/15/15	0.57	--	--	--	ND
	07/29/15	1.01	--	--	--	ND
	08/05/15	1.20	--	--	--	ND
	08/19/15	0.53	0.38	ND	--	ND
	09/18/15	0.78	0.46	ND	--	ND
	11/18/15	0.15	0.12	ND	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Freon 11 (CCl3F)	02/21/14	--	--	2.00	--	ND
PEL = 1,000,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	22.8	ND	ND	--	ND
	05/02/14	10.8	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	0.34	--	ND	--	ND
	10/31/14	0.28	ND	ND	--	ND
	11/18/14	0.27	ND	ND	--	ND
	12/18/14	0.39	0.11	ND	--	ND
	01/30/15	0.19	ND	ND	0.18	ND
	04/02/15	0.22	ND	ND	--	ND
	06/11/15	0.34	ND	ND	--	ND
	06/17/15	0.31	--	--	--	ND
	06/24/15	0.14	--	--	--	ND
	07/01/15	0.30	--	--	--	ND
	07/08/15	0.81	0.13	ND	--	ND
	07/15/15	0.94	--	--	--	ND
	07/29/15	0.46	--	--	--	ND
	08/05/15	0.45	--	--	--	ND
	08/19/15	0.37	0.19	ND	--	ND
	09/18/15	3.87	ND	ND	--	ND
	11/18/15	0.28	ND	ND	--	ND
Freon 113 (C2Cl3F3)	02/21/14	--	--	0.50	--	ND
PEL = 1,000,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	2.95	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	0.10	ND	ND	--	ND
	12/18/14	0.17	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	0.12	ND	ND	--	ND
	06/17/15	0.55	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	0.12	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	0.23	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Freon 114 (C2Cl2F4)	02/21/14	--	--	ND	--	ND
PEL = 1,000,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.11	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	0.08	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
Freon 12 (CCl2F2)	02/21/14	--	--	0.45	--	ND
PEL = 1,000,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	0.55	--	ND	--	ND
	10/31/14	0.50	0.71	ND	--	ND
	11/18/14	0.53	0.47	ND	--	ND
	12/18/14	0.63	0.48	ND	--	ND
	01/30/15	0.40	0.25	ND	0.41	ND
	04/02/15	0.49	0.53	ND	--	ND
	06/11/15	0.51	2.61	0.11	--	ND
	06/17/15	0.50	--	--	--	ND
	06/24/15	0.19	--	--	--	ND
	07/01/15	0.48	--	--	--	ND
	07/08/15	0.81	1.90	ND	--	ND
	07/15/15	0.90	--	--	--	ND
	07/29/15	0.57	--	--	--	ND
	08/05/15	0.46	--	--	--	ND
	08/19/15	0.53	2.53	ND	--	ND
	09/18/15	1.41	1.74	0.66	--	ND
	11/18/15	0.54	0.73	0.23	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Heptane	02/21/14	--	--	ND	--	ND
PEL = 400,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	3.69	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	0.09	0.09	0.78	--	ND
	12/18/14	0.33	0.10	ND	--	ND
	01/30/15	ND	0.50	ND	ND	ND
	04/02/15	0.40	2.16	ND	--	ND
	06/11/15	1.25	1.42	0.18	--	0.04
	06/17/15	1.19	--	--	--	ND
	06/24/15	0.27	--	--	--	ND
	07/01/15	0.70	--	--	--	ND
	07/08/15	3.13	1.56	0.20	--	ND
	07/15/15	3.74	--	--	--	ND
	07/29/15	2.82	--	--	--	ND
	08/05/15	0.87	--	--	--	ND
	08/19/15	0.18	1.67	0.21	--	ND
	09/18/15	1.67	2.83	0.16	--	ND
	11/18/15	0.27	1.07	0.15	--	ND
Hexane	02/21/14	--	--	2.48	--	ND
PEL = 50,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	23.9	ND	ND	--	ND
	05/02/14	8.04	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	0.35	--	ND
	10/31/14	0.35	ND	ND	--	ND
	11/18/14	0.35	0.10	0.21	--	ND
	12/18/14	0.58	0.10	ND	--	ND
	01/30/15	1.17	0.31	0.59	0.08	ND
	04/02/15	0.55	1.51	ND	--	ND
	06/11/15	4.37	1.07	0.24	--	0.04
	06/17/15	3.35	--	--	--	ND
	06/24/15	0.95	--	--	--	ND
	07/01/15	4.30	--	--	--	ND
	07/08/15	35.6	1.20	0.21	--	ND
	07/15/15	39.9	--	--	--	ND
	07/29/15	22.6	--	--	--	ND
	08/05/15	4.21	--	--	--	ND
	08/19/15	1.94	4.41	ND	--	ND
	09/18/15	26.4	2.94	ND	--	ND
	11/18/15	0.46	1.05	ND	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Isopropyl alcohol	02/21/14	--	--	1.46	--	0.11
PEL = 400,000 ppb	02/28/14	0.75	ND	ND	--	0.24
	04/21/14	9.27	51.3	0.81	--	ND
	05/02/14	8.24	52.4	ND	--	ND
	05/16/14	7.65	56.9	1.29	--	ND
	07/07/14	11.0	75.5	ND	--	ND
	09/03/14	13.0	--	1.17	--	ND
	10/31/14	0.60	64.9	1.25	--	0.09
	11/18/14	0.61	33.9	0.61	--	ND
	12/18/14	1.20	39.4	0.36	--	ND
	01/30/15	0.78	33.8	18.7	0.33	ND
	04/02/15	1.73	107	0.59	--	ND
	06/11/15	3.61	95.5	0.36	--	ND
	06/17/15	3.63	--	--	--	0.12
	06/24/15	1.51	--	--	--	0.06
	07/01/15	2.81	--	--	--	0.09
	07/08/15	3.24	114	1.06	--	0.09
	07/15/15	3.40	--	--	--	0.09
	07/29/15	3.88	--	--	--	0.07
	08/05/15	3.49	--	--	--	0.10
	08/19/15	3.64	90.1	0.94	--	0.08
	09/18/15	3.32	109	0.52	--	ND
	11/18/15	2.28	54.2	0.45	--	ND
m-/p-Xylenes	02/21/14	--	--	ND	--	ND
PEL = 100,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	2.92	11.9	ND	--	ND
	05/02/14	1.14	ND	ND	--	ND
	05/16/14	0.63	ND	ND	--	ND
	07/07/14	1.49	ND	ND	--	ND
	09/03/14	3.06	--	0.65	--	ND
	10/31/14	0.27	0.32	ND	--	ND
	11/18/14	ND	ND	0.21	--	ND
	12/18/14	0.43	0.28	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	0.30	0.29	ND	--	ND
	06/11/15	3.04	2.73	1.72	--	ND
	06/17/15	4.07	--	--	--	ND
	06/24/15	2.39	--	--	--	ND
	07/01/15	3.02	--	--	--	ND
	07/08/15	3.66	0.98	0.41	--	ND
	07/15/15	3.28	--	--	--	ND
	07/29/15	6.05	--	--	--	ND
	08/05/15	7.62	--	--	--	ND
	08/19/15	3.20	1.36	0.32	--	ND
	09/18/15	2.20	1.08	ND	--	ND
	11/18/15	0.55	0.30	ND	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
2-Butanone	02/21/14	--	--	ND	--	ND
PEL = 200,000 ppb	02/28/14	1.25	ND	ND	--	ND
	04/21/14	ND	5.15	1.31	--	ND
	05/02/14	65.5	7.08	0.82	--	ND
	05/16/14	16.6	3.97	ND	--	ND
	07/07/14	12.6	5.07	ND	--	ND
	09/03/14	7.29	--	0.73	--	ND
	10/31/14	0.92	4.97	4.49	--	ND
	11/18/14	0.64	2.34	4.48	--	ND
	12/18/14	2.33	2.35	0.55	--	ND
	01/30/15	0.90	37.8	0.16	0.28	0.05
	04/02/15	12.5	129	0.92	--	ND
	06/11/15	11.4	107	0.69	--	0.05
	06/17/15	34.1	--	--	--	ND
	06/24/15	59.7	--	--	--	ND
	07/01/15	7.29	--	--	--	ND
	07/08/15	8.61	171	1.31	--	ND
	07/15/15	44.9	--	--	--	ND
	07/29/15	8.60	--	--	--	ND
	08/05/15	12.3	--	--	--	ND
	08/19/15	6.63	198	2.68	--	ND
	09/18/15	66.1	403	1.27	--	ND
	11/18/15	55.8	153	1.48	--	ND
Methyl isobutyl ketone	02/21/14	--	--	ND	--	ND
PEL = 50,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	2.08	2.00	ND	--	ND
	05/02/14	1.06	0.76	ND	--	ND
	05/16/14	1.16	0.94	ND	--	ND
	07/07/14	2.94	ND	ND	--	ND
	09/03/14	2.26	--	1.85	--	ND
	10/31/14	0.16	0.44	0.21	--	ND
	11/18/14	ND	0.11	0.28	--	ND
	12/18/14	0.18	0.18	0.10	--	ND
	01/30/15	ND	0.11	ND	ND	ND
	04/02/15	0.41	0.83	ND	--	ND
	06/11/15	2.85	5.14	1.17	--	ND
	06/17/15	6.43	--	--	--	ND
	06/24/15	3.31	--	--	--	ND
	07/01/15	3.87	--	--	--	ND
	07/08/15	5.24	3.76	1.31	--	ND
	07/15/15	4.59	--	--	--	ND
	07/29/15	8.30	--	--	--	ND
	08/05/15	13.5	--	--	--	ND
	08/19/15	4.48	3.65	1.25	--	ND
	09/18/15	2.19	2.62	0.26	--	ND
	11/18/15	0.51	0.56	0.18	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Methyl methacrylate	02/21/14	--	--	ND	--	ND
PEL = 50,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	0.12	ND	--	ND
	12/18/14	0.09	0.15	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	0.41	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	0.57	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
Methyl tert-butyl ether	02/21/14	--	--	ND	--	ND
PEL = 40,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.09	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	0.12	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Methylene chloride	02/21/14	--	--	1.23	--	ND
PEL = 25,000 ppb	02/28/14	2.92	3.07	3.06	--	0.76
	04/21/14	14.0	2.77	3.08	--	0.92
	05/02/14	8.62	3.23	3.34	--	0.84
	05/16/14	2.60	2.39	2.26	--	0.72
	07/07/14	2.90	1.51	2.09	--	0.95
	09/03/14	2.70	--	3.40	--	0.81
	10/31/14	2.62	2.28	2.38	--	0.78
	11/18/14	2.41	2.19	2.26	--	0.81
	12/18/14	2.82	2.57	2.67	--	0.95
	01/30/15	2.39	2.35	4.45	1.80	0.73
	04/02/15	ND	ND	1.56	--	ND
	06/11/15	0.22	0.12	ND	--	ND
	06/17/15	0.26	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	0.17	--	--	--	0.04
	07/08/15	0.75	ND	ND	--	ND
	07/15/15	0.60	--	--	--	ND
	07/29/15	0.31	--	--	--	ND
	08/05/15	0.22	--	--	--	ND
	08/19/15	0.46	1.98	ND	--	ND
	09/18/15	54.6	ND	ND	--	ND
	11/18/15	0.18	ND	ND	--	ND
Naphthalene	02/21/14	--	--	0.65	--	ND
PEL = 100 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	0.04
	11/18/14	ND	ND	ND	--	ND
	12/18/14	ND	0.39	ND	--	ND
	01/30/15	ND	ND	ND	ND	0.06
	04/02/15	ND	ND	ND	--	0.05
	06/11/15	0.17	0.27	0.15	--	0.04
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	0.04
	09/18/15	ND	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
o-Xylene	02/21/14	--	--	ND	--	ND
PEL = 100,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	5.19	1.43	ND	--	ND
	05/02/14	1.66	ND	ND	--	ND
	05/16/14	0.68	ND	ND	--	ND
	07/07/14	1.81	ND	ND	--	ND
	09/03/14	3.26	--	0.82	--	ND
	10/31/14	0.23	0.26	0.50	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.28	0.18	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	0.30	0.29	ND	--	ND
	06/11/15	2.89	2.70	1.19	--	ND
	06/17/15	5.30	--	--	--	ND
	06/24/15	3.02	--	--	--	ND
	07/01/15	4.08	--	--	--	ND
	07/08/15	5.28	1.57	0.65	--	ND
	07/15/15	4.67	--	--	--	ND
	07/29/15	9.27	--	--	--	ND
	08/05/15	12.0	--	--	--	ND
	08/19/15	4.75	1.87	0.61	--	ND
	09/18/15	4.63	1.50	ND	--	ND
	11/18/15	0.58	0.34	0.13	--	ND
Propylene	02/21/14	--	--	1.45	--	ND
PEL = *	02/28/14	0.84	ND	ND	--	ND
	04/21/14	46.7	ND	ND	--	ND
	05/02/14	9.07	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	0.92	1.94	ND	--	ND
	09/03/14	0.93	--	1.39	--	ND
	10/31/14	1.06	2.58	2.86	--	ND
	11/18/14	1.21	1.55	2.81	--	0.07
	12/18/14	2.37	11.7	3.88	--	0.05
	01/30/15	13.5	18.6	3.32	0.89	0.04
	04/02/15	3.24	61.0	4.95	--	0.06
	06/11/15	25.4	132	20.2	--	0.09
	06/17/15	20.2	--	--	--	0.04
	06/24/15	3.91	--	--	--	ND
	07/01/15	9.46	--	--	--	0.05
	07/08/15	44.2	242	10.2	--	ND
	07/15/15	74.5	--	--	--	0.06
	07/29/15	50.6	--	--	--	0.04
	08/05/15	18.0	--	--	--	0.05
	08/19/15	5.23	233	ND	--	0.06
	09/18/15	53.8	384	17.6	--	ND
	11/18/15	2.51	189	7.10	--	ND

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SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Styrene	02/21/14	--	--	ND	--	ND
PEL = 50,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.10	0.19	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	0.13	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	ND	ND	--	ND
	07/15/15	0.18	--	--	--	ND
	07/29/15	0.30	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	ND	ND	--	ND
	09/18/15	ND	ND	ND	--	ND
	11/18/15	ND	ND	ND	--	ND
Tetrachloroethene	02/21/14	--	--	0.53	--	ND
PEL = 25,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	11.7	ND	ND	--	ND
	05/02/14	6.40	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	0.813	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	0.139	ND	ND	--	ND
	06/17/15	0.288	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	1.00	--	--	--	ND
	07/08/15	19.8	ND	ND	--	ND
	07/15/15	28.7	--	--	--	ND
	07/29/15	5.63	--	--	--	ND
	08/05/15	2.36	--	--	--	ND
	08/19/15	3.90	ND	ND	--	ND
	09/18/15	443	ND	ND	--	0.04
	11/18/15	0.33	0.14	ND	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Tetrahydrofuran	02/21/14	--	--	2.41	--	ND
PEL = 200,000 ppb	02/28/14	2.40	ND	1.97	--	ND
	04/21/14	218	11.3	ND	--	ND
	05/02/14	133	0.83	11.8	--	ND
	05/16/14	31.3	ND	8.88	--	ND
	07/07/14	28.0	ND	16.2	--	ND
	09/03/14	31.0	--	23.2	--	ND
	10/31/14	1.96	0.32	7.59	--	ND
	11/18/14	0.98	0.19	2.99	--	ND
	12/18/14	13.6	0.24	2.95	--	ND
	01/30/15	3.39	0.13	1.76	ND	ND
	04/02/15	30.9	0.46	6.32	--	ND
	06/11/15	89.5	2.23	14.6	--	ND
	06/17/15	103	--	--	--	ND
	06/24/15	343	--	--	--	ND
	07/01/15	26.8	--	--	--	ND
	07/08/15	11.0	ND	14.9	--	ND
	07/15/15	29.9	--	--	--	ND
	07/29/15	35.8	--	--	--	ND
	08/05/15	49.9	--	--	--	ND
	08/19/15	14.0	2.89	33.7	--	ND
	09/18/15	46.9	2.29	17.9	--	ND
	11/18/15	247	1.24	5.47	--	ND
Toluene	02/21/14	--	--	0.70	--	ND
PEL = 10,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	2.59	ND	ND	--	ND
	05/02/14	1.02	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	0.40	--	ND
	10/31/14	0.17	0.18	0.26	--	ND
	11/18/14	0.17	0.10	0.47	--	ND
	12/18/14	0.41	0.19	0.23	--	ND
	01/30/15	0.26	0.10	0.13	0.19	ND
	04/02/15	0.13	0.20	ND	--	ND
	06/11/15	1.92	1.96	1.58	--	ND
	06/17/15	0.38	--	--	--	ND
	06/24/15	0.13	--	--	--	ND
	07/01/15	0.20	--	--	--	ND
	07/08/15	0.31	0.23	0.19	--	ND
	07/15/15	0.29	--	--	--	ND
	07/29/15	0.39	--	--	--	ND
	08/05/15	0.29	--	--	--	ND
	08/19/15	0.23	0.27	ND	--	ND
	09/18/15	4.79	0.35	0.21	--	ND
	11/18/15	0.37	0.11	0.18	--	0.04

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
trans-1,2-Dichloroethene	02/21/14	--	--	10.1	--	ND
PEL = 200,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	112	ND	ND	--	ND
	05/02/14	69.3	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	0.10	ND	ND	--	ND
	12/18/14	0.39	ND	ND	--	ND
	01/30/15	0.15	ND	ND	ND	ND
	04/02/15	ND	ND	ND	--	ND
	06/11/15	0.28	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	0.12	--	--	--	ND
	07/08/15	1.04	ND	ND	--	ND
	07/15/15	1.24	--	--	--	ND
	07/29/15	0.45	--	--	--	ND
	08/05/15	1.93	--	--	--	ND
	08/19/15	2.15	ND	ND	--	ND
	09/18/15	20.0	ND	ND	--	ND
	11/18/15	0.15	ND	ND	--	ND
Trichloroethene	02/21/14	--	--	105	--	ND
PEL = 25,000 ppb	02/28/14	1.04	ND	ND	--	ND
	04/21/14	1,676	ND	ND	--	ND
	05/02/14	1,432	ND	ND	--	ND
	05/16/14	1.72	ND	ND	--	ND
	07/07/14	1.94	ND	ND	--	ND
	09/03/14	3.73	--	0.31	--	ND
	10/31/14	4.64	ND	ND	--	ND
	11/18/14	5.25	ND	ND	--	ND
	12/18/14	14.9	ND	ND	--	ND
	01/30/15	6.57	ND	ND	ND	ND
	04/02/15	3.53	ND	ND	--	ND
	06/11/15	8.20	ND	ND	--	ND
	06/17/15	3.66	--	--	--	ND
	06/24/15	2.58	--	--	--	ND
	07/01/15	27.9	--	--	--	ND
	07/08/15	761	ND	ND	--	ND
	07/15/15	1,050	--	--	--	ND
	07/29/15	149	--	--	--	ND
	08/05/15	262	--	--	--	ND
	08/19/15	275	0.74	ND	--	ND
	09/18/15	11,946	0.71	0.20	--	ND
	11/18/15	3.60	ND	0.24	--	ND

Table A-4

SVE Vapor Results - Historical
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Date	Concentration (ppb)				
		Influent	Midfluent	Effluent	Ambient	Blanks
Vinyl acetate	02/21/14	--	--	ND	--	ND
PEL = 10,000 ppb	02/28/14	ND	ND	ND	--	ND
	04/21/14	ND	ND	ND	--	ND
	05/02/14	ND	ND	ND	--	ND
	05/16/14	ND	ND	ND	--	ND
	07/07/14	ND	ND	ND	--	ND
	09/03/14	ND	--	ND	--	ND
	10/31/14	ND	ND	ND	--	ND
	11/18/14	ND	ND	ND	--	ND
	12/18/14	ND	ND	ND	--	ND
	01/30/15	ND	ND	ND	ND	ND
	04/02/15	ND	0.36	ND	--	ND
	06/11/15	ND	ND	ND	--	ND
	06/17/15	ND	--	--	--	ND
	06/24/15	ND	--	--	--	ND
	07/01/15	ND	--	--	--	ND
	07/08/15	ND	0.36	ND	--	ND
	07/15/15	ND	--	--	--	ND
	07/29/15	ND	--	--	--	ND
	08/05/15	ND	--	--	--	ND
	08/19/15	ND	0.43	ND	--	ND
	09/18/15	ND	0.97	ND	--	ND
	11/18/15	ND	0.42	ND	--	ND

Notes:

-- = No data available
ND = Result was below detection and/or reporting limit
ppb = Parts per billion by volume
PEL = Permissible Exposure Limit
* = No limit listed

Table A-5

SVE Wellhead PID Readings
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

DATE	NOTES	PID Concentrations (ppmv)																		
		ZONE 1							ZONE 2							ZONE 3				
		HF-2	HF-3	HF-4	HF-5	HF-6	IW-08	IW-10	HF-7	HF-8	HF-9	HF-10	HF-11[3]	SVE-1	IW-11	HF-1	BR-1	BR-2	BR-3	IW-14
09/10/14	--	0.1	1.5	0.9	2.5	2.4	0.0	0.0	0.5	1.9	1.6	2.0	*34.1*	1.3	0.0	1.8	0.5	2.0	0.7	0.0
09/11/14	1	2.2	6.7	6.7	10.8	10.3	0.0	3.9	3.2	7.8	7.6	10.7	*21.7*	7.3	7.6	11.1	8.0	8.8	4.2	6.8
10/16/14	1, 2	17.1	12.6	25.9	14.4	67.3	42.7	4.7	2.5	27.1	13.2	26.5	*44.6*	17.4	9.5	42.4	3.5	1.7	2.7	12.2
11/20/14	1, 2	180	0.0	8.0	0.0	4.9	72.9	33.4	0.0	6.7	0.0	0.2	*12.5*	0.0	7.6	3.6	1.1	6.8	2.9	1.2
12/17/14	1, 4	3.2	2.8	2.2	2.9	4.4	14.4	21.4	4.0	3.5	6.3	5.7	4.5	7.2	10.4	7.5	23.7	19.2	35.6	54.3
01/27/15	1	3.0	4.8	2.2	2.9	6.9	5.7	13.8	1.3	5.8	3.9	11.1	3.3	9.0	6.9	5.5	2.9	0.8	7.1	3.8
03/27/15	5a	1.9	9.4	1.3	2.2	6.1	11.8	0.4	0.6	14.2	4.5	9.3	*47.4*	4.5	4.6	7.4	10.8	12.3	24.3	97.8
04/02/15	6	1.2	0.1	2.2	0.5	0.3	0.6	0.2	0.6	0.5	0.5	1.8	*24.9*	0.5	1.8	0.4	0.0	0.1	0.0	0.5
04/15/15	1, 2	4.0	6.2	2.5	12.2	12.8	5.6	8.6	1.3	12.0	7.9	14.7	*40.8*	4.7	24.3	1.0	5.5	8.9	12..2	40.0
05/27/15	1, 2	19.6	18.3	19.5	65..2	43.1	26.6	14.2	12.1	50.2	34.5	59.9	6.6	33.2	45.4	8.2	1.2	1.0	0.6	18.3
06/12/15	1, 2	4.8	5.6	4.2	14.4	3.6	3.0	2.2	1.8	9.1	13.5	19.0	7.1	13.4	4.6	8.8	0.9	0.1	0.7	5.7
06/16/15	2, 5	43.2	138.2	41.8	211.8	125.8	78.9	68.1	31.9	60.9	123.8	51.9	*31.4*	127.2	151.5	42.8	51.8	17.3	40.6	61.6
06/18/15	1, 2	7.6	6.7	6.0	15.0	3.1	2.5	1.7	7.4	19.3	21.1	19.4	*26.5*	17.2	2.1	10.0	0.4	0.5	1.7	3.3
06/23/15	2, 5	35.6	10.9	42.9	88.4	63.0	34.8	5.2	24.3	61.8	72.9	35.2	*25.3*	43.0	66.9	30.9	45.1	12.5	22.9	22.5
06/25/15	1, 2	3.6	0.7	3.6	2.0	0.8	0.5	0.5	2.3	1.6	1.9	5.2	*21.0*	1.1	0.2	2.4	0.3	1.4	1.4	0.3
06/30/15	2, 5	14.2	5.6	4.4	55.9	26.7	4.1	2.1	3.4	47.1	34.1	21.6	*13.4*	23.6	5.4	18.0	2.3	2.4	4.5	13.1
07/02/15	1, 2	0.7	0.5	0.2	1.2	10.3	0.3	0.0	0.0	1.6	1.3	3.6	*20.8*	1.9	0.5	1.1	0.3	0.2	0.6	0.3
07/07/15	2, 5, 7	17.5	2.4	5.6	59.6	51.0	4.7	33.1	2.4	41.4	46.4	34.5	*6.1*	28.5	15.7	5.2	46.8	2.7	23.5	29.8
07/09/15	8	11.5	15.3	4.5	26.9	44.8	3.7	9.1	0.8	7.7	17.6	12.7	*8.6*	16.0	0.0	1.7	13.8	17.5	14.5	12.4
07/16/15	1, 2	2.6	0.6	0.7	5.0	10.1	0.0	0.1	0.1	2.2	2.8	5.2	*9.0*	2.0	0.0	1.2	0.0	0.0	0.3	0.0
07/28/15	2, 5	21.7	1.9	11.0	57.4	34.2	14.6	0.2	1.5	19.8	43.0	74.0	*10.7*	53.4	3.0	27.4	40.4	24.8	27.7	23.9
07/30/15	1, 2	0.3	0.4	0.3	1.9	4.4	0.0	0.0	0.0	1.3	1.4	2.6	*10.5*	1.2	0.0	1.8	0.0	0.0	0.0	0.0
08/04/15	2, 5	37.7	81.6	23.7	128.1	65.9	26.4	61.6	4.3	71.4	81.3	105.6	*33.4*	67.2	41.8	22.3	71.5	64.6	77.7	67.7
08/06/15	1, 2	10.5	3.3	3.7	9.5	5.9	1.0	1.3	1.6	7.8	7.2	10.4	*35.1*	6.2	1.1	11.5	0.4	0.4	0.9	0.9
08/17/15	2, 5	23.3	9.2	11.7	98.6	58.6	15.3	1.1	6.2	28.1	50.8	63.3	*19.2*	43.0	8.0	13.0	63.4	35.9	42.9	56.4
08/20/15	1, 2	0.8	1.3	0.4	4.6	4.8	0.0	0.0	0.0	1.6	3.5	4.0	*10.1*	3.0	0.0	5.2	0.0	0.0	0.0	0.0
09/14/15	2, 5	1.4	15.2	3.5	19.5	27.8	7.9	16.1	0.6	14.8	9.4	13.4	*4.8*	10.1	40.0	8.2	25.8	16.5	12.0	18.9
09/18/15	1, 2	0.1	0.1	1.5	7.8	19.7	1.3	0.3	0.0	0.1	0.3	0.3	*5.8*	1.4	0.3	3.5	0.0	0.0	0.0	0.4
09/29/15	2, 5	10.3	50.7	9.0	52.0	93.8	12.2	26.4	1.6	1.3	27.2	34.9	*5.7*	28.6	1.1	9.8	16.7	11.0	11.5	43.0
11/16/15	2, 5	14.3	15.8	4.0	11.9	21.8	31.4	2.6	0.9	0.3	10.2	18.2	*1.1*	15.7	0.6	3.4	14.8	11.5	20.0	17.2
03/09/16	2, 5	4.8	13.1	3.2	11.0	12.7	11.0	1.4	1.2	0.4	9.6	18.8	*1.4*	23.0	1.6	3.3	5.0	3.4	2.9	3.5
03/28/16	2, 5	4.5	14.1	1.4	11.1	11.2	11.2	0.2	0.0	0.0	8.6	20.4	*0.2*	16.3	0.7	1.3	1.2	3.0	0.8	8.6

NOTES:

ppmv = Parts per million by volume
HF = Hydraulically fractured well, 0.75" diam.
BR = Bedrock well, 6" open borehole
IW = Injection well, 6" open borehole
VAC = Wells under vacuum due to receding water level.
Italicized = Wellhead ball valve closed during system operation.

1) PID readings were taken after system shutdown; no vacuum at wellheads.
2) Wellhead ball valves closed after system shutdown. Concentrations are assumed to be independent for each well.
3) HF-11 was closed off from system (05/08/14) after vacuum pulled water/sand mixture into wellhead. Well depth gauged at 6.78' (solid bottom) on 09/11/14. Opened to system after PID concentrations were recorded on 11/20/14.
4) Wellheads remained open after auto-shutdown on 11/28/14, closed approximately 5 hours before readings on 12/17/14.
5) PID readings taken prior to system restart. (a) System not in operation (02/09/15-03/27/15) due to damaged PVC and necessary repairs to blower.
6) PID readings taken approximately 1 hour after system shutdown, wellhead ball valves closed. BR-1 and BR-3 were under vacuum due to receeding water level in well.
7) HF-11 was opened to the system between shutdown and restart to offgas any vapors that may have accumulated in the wellhead.
8) Wellheads closed approximately 7 hours after auto-shutdown. Readings taken 3.5 hours after valves were closed.

Table A-6

SVE System Mass Removal Rates
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Units	Year 1											
		Operating Period	Hours 119.6	Minutes 7176		Operating Period	Hours 15.4	Minutes 924		Operating Period	Hours 151.9	Minutes 9114	
		02/28/14	04/21/14	Average Influent Concentration	Mass Removed (lbs)	04/21/14	05/02/14	Average Influent Concentration	Mass Removed (lbs)	05/02/14	05/16/14	Average Influent Concentration	Mass Removed (lbs)
1,1,1,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1,1-Trichloroethane	ug/m3	ND	29.9	15.0	0.000836	29.9	19.6	24.7656637	0.000178	19.6	ND	9.803047151	
1,1,2,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1,2-Trichloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1-Dichloroethane	ug/m3	ND	38.8	19.4	0.001084	38.8	16.1	27.41911183	0.000197	16.1	ND	8.030259812	0.000570
1,1-Dichloroethene	ug/m3	ND	665	332.7	0.018599	665	382	523.5095745	0.003768	382	ND	190.8056453	0.013547
1,2,4-Trimethylbenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,2-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,2-Dichloroethane	ug/m3	ND	3,121	1560.4	0.087232	3,121	ND	1560.392956	0.011232	ND	ND	--	--
1,2-Dichloropropane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,3,5-Trimethylbenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,3-Butadiene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,4-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,4-Dioxane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
2,2,4-trimethylpentane	ug/m3	ND	31.6	15.8	0.000885	31.6	17.3	24.47944038	0.000176	17.3	ND	8.65446174	0.000614
2-Chlorotoluene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
2-Hexanone (Methyl butyl ketone)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
4-Ethyltoluene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Acetone	ug/m3	12.4	65.5	38.9	0.002176	65.5	64.0	64.73394501	0.000466	64.0	52.8	58.4	0.004148
Acetonitrile	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Acrolein	ug/m3	ND	ND	--	--	ND	2.11	1.056886597	0.000008	2.11	1.84	1.98	0.000140
Acrylonitrile	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Allyl chloride (3-chloropropene)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Benzene	ug/m3	ND	127	63.3	0.003537	127	75.8	101.1476904	0.000728	75.8	ND	37.87996526	0.002690
Bromoethene (Vinyl bromide)	ug/m3	ND	16.7	8.4	0.000468	16.7	5.42	11.08358477	0.000080	5.42	ND	2.711504233	0.000193
Bromomethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Carbon disulfide	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Carbon tetrachloride	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Chlorobenzene	ug/m3	ND	14.2	7.1	0.000397	14.2	8.46	11.33476277	0.000082	8.46	ND	4.230094713	0.000300
Chloroethane	ug/m3	ND	2.93	1.5	0.000082	2.93	ND	1.463112264	0.000011	ND	ND	--	--
Chloroethene (Vinyl chloride)	ug/m3	ND	10.7	5.4	0.000299	10.7	4.93	7.819617341	0.000056	4.93	ND	2.463905925	0.000175
Chloroform	ug/m3	ND	5,950	2975.1	0.166321	5,950	5,180	5565.371021	0.040061	5,180	ND	2590.24172	0.183911
Chloromethane	ug/m3	ND	ND	--	--	ND	1.76	0.87819053	0.000006	1.76	1.53	1.64	0.000117
cis-1,2-Dichloroethylene	ug/m3	3.93	24,008	12006.1	0.671185	24,008	20,404	22206.21569	0.159847	20,404	10.3	10,207	0.724728
Cyclohexane	ug/m3	ND	72.0	36.0	0.002012	72.0	35.7	53.82184632	0.000387	35.7	ND	17.83940279	0.001267
Ethanol	ug/m3	6.73	46.5	26.6	0.001488	46.5	33.4	39.95857016	0.000288	33.4	44.5	38.9	0.002764
Ethyl acetate	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	4.72	2.358894334	0.000167
Ethylbenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Freon 11 (CCl3F)	ug/m3	ND	130	65.2	0.003645	130	61.5	95.93332724	0.000691	61.5	ND	30.73710634	0.002182
Freon 113 (C2Cl3F3)	ug/m3	ND	ND	--	--	ND	23.0	11.47672259	0.000083	23.0	ND	11.47672259	0.000815
Freon 114 (C2Cl2F4)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Freon 12 (CCl2F2)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Heptane	ug/m3	ND	15.4	7.7	0.000430	15.4	ND	7.691041047	0.000055	ND	ND	--	--
Hexane	ug/m3	ND	85.6	42.8	0.002393	85.6	28.8	57.21566109	0.000412	28.8	ND	14.40307867	0.001023
Isopropyl alcohol	ug/m3	1.87	23.1	12.5	0.000699	23.1	20.6	21.86291637	0.000157	20.6	19.1	19.8	0.001409
m-/p-Xylenes	ug/m3	ND	12.9	6.5	0.000361	12.9	5.05	8.974703008	0.000065	5.05	2.80	3.92	0.000279
Methyl ethyl ketone (2-Butanone)	ug/m3	3.75	ND	1.9	0.000105	ND	196	98.23953678	0.000707	196	49.9	123	0.008746
Methyl isobutyl ketone	ug/m3	ND	8.66	4.3	0.000242	8.66	4.39	6.528583678	0.000047	4.39	4.81	4.60	0.000327
Methyl methacrylate	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Methyl tert-butyl ether	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Methylene chloride	ug/m3	10.3	49.5	29.9	0.001672	49.5	30.4	39.96957517	0.000288	30.4	9.17	19.8	0.001406
Naphthalene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
o-Xylene	ug/m3	ND	22.9	11.4	0.000640	22.9	7.34	15.11670376	0.000109	7.34	3.00	5.17	0.000367
Propylene	ug/m3	1.46	81.6	41.5	0.002323	81.6	15.9	48.74659841	0.000351	15.9	ND	7.9310777	0.000563
Styrene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Tetrachloroethene	ug/m3	ND	80.9	40.5	0.002262	80.9	44.1	62.53070542	0.000450	44.1	ND	22.06485785	0.001567
Tetrahydrofuran	ug/m3	7.18	654	330.5	0.018477	654	400	526.8901429	0.003793	400	93.8	247	0.017527
Toluene	ug/m3	ND	9.91	5.0	0.000277	9.91	3.89	6.899191106	0.000050	3.89	ND	1.944935003	0.000138
trans-1,2-Dichloroethene	ug/m3	ND	452	226.1	0.012639	452	279	365.7214875	0.002633	279	ND	139.6296339	0.009914
Trichloroethene	ug/m3	5.68	9,152	4579.0	0.255984	9,152	7,822	8487.051366	0.061092	7,822	9.40	3,916	0.278011
TOTALS					**1.25875**				**0.288553**				**1.259605**

Total Mass Removed (Lbs)		8.41
Year 1	(02/28/2014 - 01/30/2015)	3.37
Year 2	(01/30/2015 - 11/18/2015)	5.04

Notes:
ND = Analyte not detected at or above laboratory detection limit; assumed concentration is zero.
ug/m3 = microgram per cubic meter
1) Data reported in micrograms per cubic meter unless otherwise noted.

Table A-6

SVE System Mass Removal Rates
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

		Year 1											
		Operating Period	Hours 541.7	Minutes 32502		Operating Period	Hours 1148.6	Minutes 68916		Operating Period	Hours 1168.5	Minutes 70110	
Analyte	**Units**	**05/16/14**	**07/07/14**	**Average Influent Concentration**	**Mass Removed (lbs)**	**07/07/14**	**09/03/14**	**Average Influent Concentration**	**Mass Removed (lbs)**	**09/03/14**	**10/31/14**	**Average Influent Concentration**	**Mass Removed (lbs)**
1,1,1,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1,1-Trichloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1,2,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1,2-Trichloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1-Dichloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1-Dichloroethene	ug/m3	ND	ND	--	--	ND	ND		--	ND	0.429	0.214504678	0.000117
1,2,4-Trimethylbenzene	ug/m3	ND	ND	--	--	ND	3.77	1.884814999	0.001012	3.77	ND	1.884814999	0.001029
1,2-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,2-Dichloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	3.75	1.873819693	0.001023
1,2-Dichloropropane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,3,5-Trimethylbenzene	ug/m3	ND	ND	--	--	ND	1.85	0.923563271	0.000496	1.85	ND	0.923563271	0.000504
1,3-Butadiene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,4-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,4-Dioxane	ug/m3	ND	ND	--	--	ND	1.09	0.547264258	0.000294	1.09	ND	0.547264258	0.000299
2,2,4-trimethylpentane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
2-Chlorotoluene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
2-Hexanone (Methyl butyl ketone)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	0.597	0.298740228	0.000163
4-Ethyltoluene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Acetone	ug/m3	52.8	77.4	65.1	0.016485	77.4	83.6	80.47866194	0.043207	83.6	37.5	60.6	0.033073
Acetonitrile	ug/m3	ND	ND	--	--	ND	0.521	0.260582065	0.000140	0.521	0.761	0.6	0.000350
Acrolein	ug/m3	1.84	ND	0.921216074	0.000233	ND	2.26	1.131468054	0.000607	2.26	0.680	1.5	0.000804
Acrylonitrile	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Allyl chloride (3-chloropropene)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Benzene	ug/m3	ND	3.69	1.842556767	0.000467	3.69	4.56	4.124596683	0.002214	4.56	1.35	2.96	0.001616
Bromoethene (Vinyl bromide)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Bromomethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Carbon disulfide	ug/m3	ND	ND	--	--	ND	2.81	1.406968327	0.000755	2.81	1.58	2.20	0.001199
Carbon tetrachloride	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	0.682	0.340833413	0.000186
Chlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Chloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Chloroethene (Vinyl chloride)	ug/m3	ND	ND	--	--	ND	12.4	6.17533327	0.003315	12.4	8.58	10.5	0.005717
Chloroform	ug/m3	ND	ND	--	--	ND	3.74	1.870955793	0.001004	3.74	5.32	4.5	0.002474
Chloromethane	ug/m3	1.53	1.81	1.67	0.000423	1.81	2.78	2.295577899	0.001232	2.78	1.28	2.0	0.001107
cis-1,2-Dichloroethylene	ug/m3	10.3	32.1	21.2	0.005365	32.1	11.1	21.60511218	0.011599	11.1	16.5	13.8	0.007560
Cyclohexane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	0.367	0.183526766	0.000100
Ethanol	ug/m3	44.5	46.5	45.5	0.011512	46.5	61.0	53.73490662	0.028849	61.0	3.27	32.1	0.017552
Ethyl acetate	ug/m3	4.72	ND	2.358894334	0.000597	ND	11.1	5.540408268	0.002975	11.1	ND	5.540408268	0.003026
Ethylbenzene	ug/m3	ND	ND	--	--	ND	2.56	1.278895423	0.000687	2.56	ND	1.278895423	0.000699
Freon 11 (CCl3F)	ug/m3	ND	ND	--	--	ND	1.96	0.979859515	0.000526	1.96	1.57	1.76	0.000964
Freon 113 (C2Cl3F3)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Freon 114 (C2Cl2F4)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Freon 12 (CCl2F2)	ug/m3	ND	ND	--	--	ND	2.74	1.371811813	0.000736	2.74	2.51	2.63	0.001436
Heptane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Hexane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	1.24	0.621794696	0.000340
Isopropyl alcohol	ug/m3	19.1	27.6	23.3	0.005910	27.6	32.4	29.97313123	0.016092	32.4	1.49	16.9	0.009252
m-/p-Xylenes	ug/m3	2.80	6.59	4.69	0.001188	6.59	13.5	10.04691847	0.005394	13.5	1.21	7.4	0.004019
Methyl ethyl ketone (2-Butanone)	ug/m3	49.9	37.8	43.8	0.011099	37.8	21.9	29.83011536	0.016015	21.9	2.77	12.3	0.006727
Methyl isobutyl ketone	ug/m3	4.81	12.2	8.53	0.002159	12.2	9.39	10.81464215	0.005806	9.39	0.649	5.0	0.002742
Methyl methacrylate	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Methyl tert-butyl ether	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Methylene chloride	ug/m3	9.17	10.3	9.71	0.002459	10.3	9.52	9.887709012	0.005309	9.52	9.26	9.39	0.005129
Naphthalene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
o-Xylene	ug/m3	3.00	8.00	5.50	0.001393	8.00	14.4	11.19770397	0.006012	14.4	1.01	7.7	0.004208
Propylene	ug/m3	ND	1.60	0.800813985	0.000203	1.60	1.62	1.610780138	0.000865	1.62	1.85	1.7	0.000949
Styrene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Tetrachloroethene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Tetrahydrofuran	ug/m3	93.8	83.8	88.8	0.022478	83.8	92.9	88.33575623	0.047426	92.9	5.87	49.4	0.026970
Toluene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	0.668	0.334070665	0.000182
trans-1,2-Dichloroethene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Trichloroethene	ug/m3	9.40	10.6	9.99	0.002529	10.6	20.4	15.47529574	0.008308	20.4	25.3	22.8	0.012479
TOTALS					**0.084499**				**0.210878**				**0.153997**

Notes:
ND = Analyte not detected at or above laboratory detection limit; assumed concentration is zero.
ug/m3 = microgram per cubic meter
1) Data reported in micrograms per cubic meter unless otherwise noted.

Table A-6

SVE System Mass Removal Rates
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

		Year 1												
		Operating Period	Hours 436.8	Minutes 26208		Operating Period	Hours 218.7	Minutes 13122		Operating Period	Hours 186	Minutes 11160		Year 1 Total
Analyte	**Units**	**10/31/14**	**11/18/14**	**Average Influent Concentration**	**Mass Removed (lbs)**	**11/18/14**	**12/18/14**	**Average Influent Concentration**	**Mass Removed (lbs)**	**12/18/14**	**01/30/15**	**Average Influent Concentration**	**Mass Removed (lbs)**	**02/28/2014 to 01/30/2015**
1,1,1,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	0.689	0.344472721	0.000035	0.689	ND	0.344472721	0.000030	**0.000065**
1,1,1-Trichloroethane	ug/m3	ND	ND	--	--	ND	0.594	0.297240359	0.000030	0.594	ND	0.297240359	0.000026	**0.001071**
1,1,2,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	0.826	0.413032738	0.000042	0.826	ND	0.413032738	0.000036	**0.000078**
1,1,2-Trichloroethane	ug/m3	ND	ND	--	--	ND	0.503	0.251336195	0.000026	0.503	ND	0.251336195	0.000022	**0.000048**
1,1-Dichloroethane	ug/m3	ND	ND	--	--	ND	1.25	0.624013666	0.000064	1.25	0.452	0.85	0.000074	**0.001989**
1,1-Dichloroethene	ug/m3	0.429	0.491	0.460	0.000094	0.491	2.32	1.403	0.000143	2.32	0.934	1.62	0.000141	**0.036411**
1,2,4-Trimethylbenzene	ug/m3	ND	ND	--	--	ND	0.948	0.474196252	0.000048	0.948	ND	0.474196252	0.000041	**0.002131**
1,2-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	0.560	0.280242929	0.000029	0.560	ND	0.280242929	0.000024	**0.000053**
1,2-Dichloroethane	ug/m3	3.75	3.70	3.73	0.000761	3.70	25.5	14.60	0.001492	25.5	4.21	14.9	0.001291	**0.103031**
1,2-Dichloropropane	ug/m3	ND	ND	--	--	ND	0.490	0.244793908	0.000025	0.490	ND	0.244793908	0.000021	**0.000046**
1,3,5-Trimethylbenzene	ug/m3	ND	ND	--	--	ND	0.623	0.311643422	0.000032	0.623	ND	0.311643422	0.000027	**0.001059**
1,3-Butadiene	ug/m3	ND	ND	--	--	ND	0.353	0.176316703	0.000018	0.353	ND	0.176316703	0.000015	**0.000033**
1,4-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
1,4-Dioxane	ug/m3	ND	0.534	0.266966339	0.000055	0.534	0.776	0.655	0.000067	0.776	ND	0.387805273	0.000034	**0.000748**
2,2,4-trimethylpentane	ug/m3	ND	ND	--	--	ND	0.598	0.299078109	0.000031	0.598	ND	0.299078109	0.000026	**0.001732**
2-Chlorotoluene	ug/m3	ND	ND	--	--	ND	0.546	0.272831055	0.000028	0.546	ND	0.272831055	0.000024	**0.000052**
2-Hexanone (Methyl butyl ketone)	ug/m3	0.597	ND	0.298740228	0.000061	ND	1.10	0.550487545	0.000056	1.10	ND	0.550487545	0.000048	**0.000328**
4-Ethyltoluene	ug/m3	ND	ND	--	--	ND	0.609	0.304624869	0.000031	0.609	ND	0.304624869	0.000026	**0.000058**
Acetone	ug/m3	37.5	9.57	23.6	0.004810	9.57	44.0	26.79	0.002739	44.0	16.1	30.0	0.002612	**0.109715**
Acetonitrile	ug/m3	0.761	ND	0.380623639	0.000078	ND	0.457	0.228409579	0.000023	0.457	ND	0.228409579	0.000020	**0.000611**
Acrolein	ug/m3	0.680	0.409	0.545	0.000111	0.409	1.68	1.044	0.000107	1.68	ND	0.839320312	0.000073	**0.002083**
Acrylonitrile	ug/m3	ND	ND	--	--	ND	0.237	0.118410663	0.000012	0.237	ND	0.118410663	0.000010	**0.000022**
Allyl chloride (3-chloropropene)	ug/m3	ND	ND	--	--	ND	0.354	0.177185664	0.000018	0.354	ND	0.177185664	0.000015	**0.000034**
Benzene	ug/m3	1.35	2.13	1.74	0.000355	2.13	3.39	2.76	0.000282	3.39	3.60	3.50	0.000304	**0.012193**
Bromoethene (Vinyl bromide)	ug/m3	ND	ND	--	--	ND	1.04	0.518983922	0.000053	1.04	ND	0.518983922	0.000045	**0.000839**
Bromomethane	ug/m3	ND	ND	--	--	ND	0.644	0.32221249	0.000033	0.644	ND	0.32221249	0.000028	**0.000061**
Carbon disulfide	ug/m3	1.58	ND	0.788836922	0.000161	ND	1.50	0.7516547	0.000077	1.50	ND	0.7516547	0.000065	**0.002258**
Carbon tetrachloride	ug/m3	0.682	0.691	0.686	0.000140	0.691	1.45	1.068	0.000109	1.45	ND	0.722851256	0.000063	**0.000498**
Chlorobenzene	ug/m3	ND	ND	--	--	ND	1.20	0.600451925	0.000061	1.20	ND	0.600451925	0.000052	**0.000893**
Chloroethane	ug/m3	ND	ND	--	--	ND	0.450	0.225101772	0.000023	0.450	ND	0.225101772	0.000020	**0.000135**
Chloroethene (Vinyl chloride)	ug/m3	8.58	17.2	12.87	0.002628	17.2	32.6	24.9	0.002545	32.6	75.0	53.8	0.004677	**0.019414**
Chloroform	ug/m3	5.32	5.08	5.20	0.001062	5.08	32.8	19.0	0.001939	32.8	2.96	17.9	0.001556	**0.398328**
Chloromethane	ug/m3	1.28	1.38	1.33	0.000271	1.38	1.73	1.6	0.000159	1.73	1.01	1.4	0.000119	**0.003436**
cis-1,2-Dichloroethylene	ug/m3	16.5	20.2	18.38	0.003753	20.2	118	68.9	0.007040	118	50.8	84.2	0.007317	**1.598395**
Cyclohexane	ug/m3	0.367	0.411	0.389	0.000079	0.411	0.898	0.655	0.000067	0.898	0.977	0.938	0.000082	**0.003994**
Ethanol	ug/m3	3.27	201	101.98	0.020820	201	5.37	103	0.010532	5.37	10.7	8.01	0.000696	**0.094502**
Ethyl acetate	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.006765**
Ethylbenzene	ug/m3	ND	ND	--	--	ND	0.812	0.406164971	0.000042	0.812	ND	0.406164971	0.000035	**0.001462**
Freon 11 (CCl3F)	ug/m3	1.57	1.52	1.54	0.000315	1.52	2.22	1.87	0.000191	2.22	1.09	1.66	0.000144	**0.008658**
Freon 113 (C2Cl3F3)	ug/m3	ND	0.783	0.391508928	0.000080	0.783	1.36	1.07	0.000110	1.36	ND	0.68139948	0.000059	**0.001146**
Freon 114 (C2Cl2F4)	ug/m3	ND	ND	--	--	ND	0.813	0.406517194	0.000042	0.813	ND	0.406517194	0.000035	**0.000077**
Freon 12 (CCl2F2)	ug/m3	2.51	2.66	2.59	0.000529	2.66	3.17	2.92	0.000298	3.17	2.02	2.60	0.000226	**0.003225**
Heptane	ug/m3	ND	0.391	0.195667515	0.000040	0.391	1.40	0.89	0.000091	1.40	ND	0.697609438	0.000061	**0.000677**
Hexane	ug/m3	1.24	1.26	1.25	0.000255	1.26	2.08	1.67	0.000170	2.08	4.21	3.14	0.000273	**0.004866**
Isopropyl alcohol	ug/m3	1.49	1.52	1.51	0.000307	1.52	2.99	2.25	0.000230	2.99	1.94	2.46	0.000214	**0.034272**
m-/p-Xylenes	ug/m3	1.21	ND	0.60526209	0.000124	ND	1.90	0.949936691	0.000097	1.90	ND	0.949936691	0.000083	**0.011609**
Methyl ethyl ketone (2-Butanone)	ug/m3	2.77	1.92	2.34	0.000478	1.92	6.99	4.45	0.000455	6.99	2.71	4.85	0.000422	**0.044754**
Methyl isobutyl ketone	ug/m3	0.649	ND	0.324662395	0.000066	ND	0.748	0.373778611	0.000038	0.748	ND	0.373778611	0.000032	**0.011460**
Methyl methacrylate	ug/m3	ND	ND	--	--	ND	0.385	0.192601418	0.000020	0.385	ND	0.192601418	0.000017	**0.000036**
Methyl tert-butyl ether	ug/m3	ND	ND	--	--	ND	0.338	0.169242965	0.000017	0.338	ND	0.169242965	0.000015	**0.000032**
Methylene chloride	ug/m3	9.26	8.52	8.89	0.001815	8.52	9.96	9.24	0.000944	9.96	8.42	9.19	0.000799	**0.019821**
Naphthalene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
o-Xylene	ug/m3	1.01	ND	0.504655893	0.000103	ND	1.23	0.613519195	0.000063	1.23	ND	0.613519195	0.000053	**0.012947**
Propylene	ug/m3	1.85	2.12	1.99	0.000406	2.12	4.15	3.14	0.000320	4.15	23.7	13.92	0.001210	**0.007190**
Styrene	ug/m3	ND	ND	--	--	ND	0.429	0.214625118	0.000022	0.429	ND	0.214625118	0.000019	**0.000041**
Tetrachloroethene	ug/m3	ND	ND	--	--	ND	5.61	2.803496855	0.000287	5.61	ND	2.803496855	0.000244	**0.004809**
Tetrahydrofuran	ug/m3	5.87	2.95	4.41	0.000900	2.95	40.8	21.89	0.002237	40.8	10.2	25.5	0.002217	**0.142024**
Toluene	ug/m3	0.668	0.635	0.651	0.000133	0.635	1.59	1.111	0.000114	1.59	1.01	1.30	0.000113	**0.001006**
trans-1,2-Dichloroethene	ug/m3	ND	0.411	0.20546639	0.000042	0.411	1.55	0.982	0.000100	1.55	0.589	1.07	0.000093	**0.025421**
Trichloroethene	ug/m3	25.3	28.7	27.0	0.005514	28.7	81.7	55.2	0.005640	81.7	35.9	58.8	0.005110	**0.634668**
TOTALS					**0.046347**				**0.039547**				**0.031136**	**3.373310**

Notes:
ND = Analyte not detected at or above laboratory detection limit; assumed concentration is zero.
ug/m3 = microgram per cubic meter
1) Data reported in micrograms per cubic meter unless otherwise noted.

Table A-6

SVE System Mass Removal Rates
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

		Year 2											
		Operating Period	Hours 143.2	Minutes 8592		Operating Period	Hours 161.1	Minutes 9666		Operating Period	Hours 51.1	Minutes 3066	
Analyte	**Units**	**01/30/15**	**04/02/15**	**Average Influent Concentration**	**Mass Removed (lbs)**	**04/02/15**	**06/11/15**	**Average Influent Concentration**	**Mass Removed (lbs)**	**06/11/15**	**06/17/15**	**Average Influent Concentration**	**Mass Removed (lbs)**
1,1,1,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1,1-Trichloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1,2,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1,2-Trichloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1-Dichloroethane	ug/m3	0.452	ND	0.225988656	0.000015	ND	ND	--	--	ND	ND	--	--
1,1-Dichloroethene	ug/m3	0.934	0.654	0.794	0.000053	0.654	2.34	1.497	0.000113	2.34	1.11	1.73	0.000041
1,2,4-Trimethylbenzene	ug/m3	ND	0.773	0.386448742	0.000026	0.773	6.88	3.828	0.000288	6.88	1.99	4.44	0.000106
1,2-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,2-Dichloroethane	ug/m3	4.21	4.36	4.29	0.000287	4.36	5.16	4.76	0.000359	5.16	2.66	3.91	0.000093
1,2-Dichloropropane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,3,5-Trimethylbenzene	ug/m3	ND	ND	--	--	ND	2.00	1.00004888	0.000075	2.00	ND	1.00004888	0.000024
1,3-Butadiene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,4-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,4-Dioxane	ug/m3	ND	1.41	0.70701755	0.000047	1.41	10.1	5.74	0.000432	10.1	ND	5.035362402	0.000120
2,2,4-trimethylpentane	ug/m3	ND	ND	--	--	ND	1.26	0.632110455	0.000048	1.26	102	51.41	0.001228
2-Chlorotoluene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
2-Hexanone (Methyl butyl ketone)	ug/m3	ND	0.915	0.457487175	0.000031	0.915	2.21	1.561	0.000118	2.21	3.11	2.66	0.000064
4-Ethyltoluene	ug/m3	ND	ND	--	--	ND	1.38	0.689623406	0.000052	1.38	ND	0.689623406	0.000016
Acetone	ug/m3	16.1	80.8	48.5	0.003243	80.8	129	104.9	0.007901	129	98.7	114	0.002719
Acetonitrile	ug/m3	ND	0.511	0.255376061	0.000017	0.511	ND	0.255376061	0.000019	ND	0.561	0.280344186	0.000007
Acrolein	ug/m3	ND	2.54	1.268530551	0.000085	2.54	ND	1.268530551	0.000096	ND	3.83	1.91366476	0.000046
Acrylonitrile	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Allyl chloride (3-chloropropene)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Benzene	ug/m3	3.60	3.20	3.40	0.000228	3.20	4.28	3.74	0.000281	4.28	3.83	4.05	0.000097
Bromoethene (Vinyl bromide)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Bromomethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Carbon disulfide	ug/m3	ND	4.34	2.172434783	0.000145	4.34	4.68	4.51	0.000340	4.68	4.20	4.44	0.000106
Carbon tetrachloride	ug/m3	ND	ND	--	--	ND	0.755	0.377576911	0.000028	0.755	ND	0.377576911	0.000009
Chlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Chloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Chloroethene (Vinyl chloride)	ug/m3	75.0	8.24	41.6	0.002784	8.24	42.1	25.18	0.001896	42.1	31.1	36.6	0.000875
Chloroform	ug/m3	2.96	1.29	2.1	0.000142	1.29	3.75	2.52	0.000190	3.75	1.67	2.71	0.000065
Chloromethane	ug/m3	1.01	1.36	1.2	0.000079	1.36	2.77	2.06	0.000155	2.77	1.67	2.22	0.000053
cis-1,2-Dichloroethylene	ug/m3	50.8	31.9	41.3	0.002767	31.9	71.3	51.6	0.003885	71.3	46.0	58.66	0.001401
Cyclohexane	ug/m3	0.977	0.421	0.699	0.000047	0.421	2.20	1.311	0.000099	2.20	4.03	3.11	0.000074
Ethanol	ug/m3	10.7	8.16	9.4	0.000630	8.16	18.5	13.32	0.001003	18.5	23.3	20.9	0.000498
Ethyl acetate	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Ethylbenzene	ug/m3	ND	ND	--	--	ND	2.79	1.393870719	0.000105	2.79	3.10	2.94	0.000070
Freon 11 (CCl3F)	ug/m3	1.09	1.26	1.18	0.000079	1.26	1.90	1.58	0.000119	1.90	1.76	1.83	0.000044
Freon 113 (C2Cl3F3)	ug/m3	ND	ND	--	--	ND	0.896	0.447969128	0.000034	0.896	4.20	2.55	0.000061
Freon 114 (C2Cl2F4)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Freon 12 (CCl2F2)	ug/m3	2.02	2.40	2.21	0.000148	2.40	2.50	2.45	0.000185	2.50	2.47	2.49	0.000059
Heptane	ug/m3	ND	1.64	0.821077868	0.000055	1.64	5.13	3.39	0.000255	5.13	4.88	5.01	0.000120
Hexane	ug/m3	4.21	1.92	3.06	0.000205	1.92	15.4	8.66	0.000652	15.4	11.8	13.6	0.000325
Isopropyl alcohol	ug/m3	1.94	4.26	3.10	0.000208	4.26	8.88	6.57	0.000495	8.88	8.93	8.9	0.000213
m-/p-Xylenes	ug/m3	ND	1.28	0.642192742	0.000043	1.28	13.2	7.25	0.000546	13.2	17.7	15.4	0.000369
Methyl ethyl ketone (2-Butanone)	ug/m3	2.71	36.8	19.75	0.001322	36.8	33.7	35.2	0.002654	33.7	100	67.1	0.001602
Methyl isobutyl ketone	ug/m3	ND	1.67	0.835177279	0.000056	1.67	11.7	6.67	0.000502	11.7	26.4	19.0	0.000454
Methyl methacrylate	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Methyl tert-butyl ether	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Methylene chloride	ug/m3	8.42	ND	4.211173009	0.000282	ND	0.754	0.376789775	0.000028	0.754	0.893	0.824	0.000020
Naphthalene	ug/m3	ND	ND	--	--	ND	0.906	0.453192942	0.000034	0.906	ND	0.453192942	0.000011
o-Xylene	ug/m3	ND	1.29	0.643313606	0.000043	1.29	12.5	6.91	0.000520	12.5	23.0	17.8	0.000425
Propylene	ug/m3	23.7	5.57	14.6	0.000980	5.57	43.8	24.69	0.001859	43.8	34.8	39.3	0.000939
Styrene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Tetrachloroethene	ug/m3	ND	ND	--	--	ND	0.943	0.471518642	0.000036	0.943	1.95	1.447	0.000035
Tetrahydrofuran	ug/m3	10.2	91.2	50.7	0.003392	91.2	264	177.6	0.013375	264	303	283.461	0.006771
Toluene	ug/m3	1.01	0.481	0.74	0.000050	0.481	7.24	3.860	0.000291	7.24	1.44	4.340	0.000104
trans-1,2-Dichloroethene	ug/m3	0.589	ND	0.29464993	0.000020	ND	1.11	0.556061695	0.000042	1.11	ND	0.556061695	0.000013
Trichloroethene	ug/m3	35.9	19.0	27.4	0.001836	19.0	44.1	31.5	0.002373	44.1	19.7	31.9	0.000761
TOTALS					**0.019344**				**0.041481**				**0.020037**

Notes:
ND = Analyte not detected at or above laboratory detection limit; assumed concentration is zero.
ug/m3 = microgram per cubic meter
1) Data reported in micrograms per cubic meter unless otherwise noted.

Table A-6

SVE System Mass Removal Rates
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Units	Year 2											
		Operating Period	Hours 46	Minutes 2760		Operating Period	Hours 48.2	Minutes 2892		Operating Period	Hours 48.4	Minutes 2904	
		06/17/15	06/24/15	Average Influent Concentration	Mass Removed (lbs)	06/24/15	07/01/15	Average Influent Concentration	Mass Removed (lbs)	07/01/15	07/08/15	Average Influent Concentration	Mass Removed (lbs)
1,1,1,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1,1-Trichloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1,2,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	5.35	2.675385365	0.000061
1,1,2-Trichloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1-Dichloroethane	ug/m3	ND	ND	--	--	ND	0.271	0.135413133	0.000003	0.271	23.9	12.092	0.000274
1,1-Dichloroethene	ug/m3	1.11	ND	0.555350495	0.000012	ND	1.85	0.922770047	0.000021	1.85	128	65.144	0.001474
1,2,4-Trimethylbenzene	ug/m3	1.99	1.03	1.51	0.000032	1.03	0.360	0.70	0.000016	0.360	1.90	1.131	0.000026
1,2-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,2-Dichloroethane	ug/m3	2.66	2.55	2.60	0.000056	2.55	2.74	2.64	0.000060	2.74	70.4	36.58	0.000828
1,2-Dichloropropane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,3,5-Trimethylbenzene	ug/m3	ND	ND	--	--	ND	0.128	0.064045513	0.000001	0.128	0.765	0.447	0.000010
1,3-Butadiene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,4-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,4-Dioxane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	0.736	0.368215302	0.000008
2,2,4-trimethylpentane	ug/m3	102	ND	50.77405196	0.001092	ND	ND	--	--	ND	0.638	0.318790386	0.000007
2-Chlorotoluene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
2-Hexanone (Methyl butyl ketone)	ug/m3	3.11	0.536	1.82	0.000039	0.536	0.208	0.372	0.000008	0.208	5.49	2.847	0.000064
4-Ethyltoluene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Acetone	ug/m3	98.7	133	115.9	0.002493	133	26.3	79.76	0.001797	26.3	54.8	40.6	0.000918
Acetonitrile	ug/m3	0.561	0.359	0.5	0.000010	0.359	0.406	0.38	0.000009	0.406	0.316	0.4	0.000008
Acrolein	ug/m3	3.83	1.17	2.5	0.000054	1.17	2.28	1.73	0.000039	2.28	2.46	2.4	0.000054
Acrylonitrile	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Allyl chloride (3-chloropropene)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Benzene	ug/m3	3.83	1.29	2.56	0.000055	1.29	0.881	1.08	0.000024	0.881	23.8	12.331	0.000279
Bromoethene (Vinyl bromide)	ug/m3	ND	ND	--	--	ND	0.363	0.181254234	0.000004	0.363	27.4	13.896	0.000314
Bromomethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Carbon disulfide	ug/m3	4.20	1.13	2.66	0.000057	1.13	0.327	0.73	0.000016	0.327	1.15	0.736	0.000017
Carbon tetrachloride	ug/m3	ND	ND	--	--	ND	0.484	0.242181132	0.000005	0.484	77.8	39.158	0.000886
Chlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	10.7	5.354961701	0.000121
Chloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Chloroethene (Vinyl chloride)	ug/m3	31.1	7.37	19.3	0.000414	7.37	5.69	6.53	0.000147	5.69	29.7	17.70	0.000400
Chloroform	ug/m3	1.67	0.971	1.3	0.000028	0.971	2.30	1.64	0.000037	2.30	777	389.73	0.008817
Chloromethane	ug/m3	1.67	0.593	1.1	0.000024	0.593	0.577	0.58	0.000013	0.577	1.13	0.85	0.000019
cis-1,2-Dichloroethylene	ug/m3	46.0	17.0	31.5	0.000678	17.0	9.83	13.43	0.000303	9.83	509	259.56	0.005872
Cyclohexane	ug/m3	4.03	0.559	2.29	0.000049	0.559	0.714	0.637	0.000014	0.714	20.5	10.629	0.000240
Ethanol	ug/m3	23.3	9.59	16.4	0.000353	9.59	16.6	13.08	0.000295	16.6	20.4	18.5	0.000418
Ethyl acetate	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Ethylbenzene	ug/m3	3.10	1.60	2.35	0.000050	1.60	0.497	1.05	0.000024	0.497	3.35	1.923	0.000044
Freon 11 (CCl3F)	ug/m3	1.76	0.768	1.27	0.000027	0.768	0.303	0.54	0.000012	0.303	4.55	2.427	0.000055
Freon 113 (C2Cl3F3)	ug/m3	4.20	ND	2.099693408	0.000045	ND	ND	--	--	ND	ND	--	--
Freon 114 (C2Cl2F4)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Freon 12 (CCl2F2)	ug/m3	2.47	0.940	1.70	0.000037	0.940	0.482	0.711	0.000016	0.482	4.03	2.254	0.000051
Heptane	ug/m3	4.88	1.09	2.99	0.000064	1.09	0.704	0.897	0.000020	0.704	12.8	6.768	0.000153
Hexane	ug/m3	11.8	3.34	7.6	0.000163	3.34	4.30	3.82	0.000086	4.30	125	64.89	0.001468
Isopropyl alcohol	ug/m3	8.93	3.71	6.3	0.000136	3.71	2.81	3.26	0.000074	2.81	7.95	5.38	0.000122
m-/p-Xylenes	ug/m3	17.7	10.4	14.0	0.000302	10.4	3.02	6.71	0.000151	3.02	15.9	9.46	0.000214
Methyl ethyl ketone (2-Butanone)	ug/m3	100	176	138.3	0.002973	176	7.29	91.70	0.002066	7.29	25.4	16.35	0.000370
Methyl isobutyl ketone	ug/m3	26.4	13.6	20.0	0.000429	13.6	3.87	8.72	0.000196	3.87	21.5	12.67	0.000287
Methyl methacrylate	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Methyl tert-butyl ether	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Methylene chloride	ug/m3	0.893	ND	0.446710862	0.000010	ND	0.168	0.083782033	0.000002	0.168	2.61	1.389	0.000031
Naphthalene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
o-Xylene	ug/m3	23.0	13.1	18.1	0.000388	13.1	4.08	8.6	0.000194	4.08	22.9	13.51	0.000306
Propylene	ug/m3	34.8	6.74	20.8	0.000447	6.74	9.46	8.1	0.000182	9.46	76.1	42.79	0.000968
Styrene	ug/m3	ND	0.553	0.276448946	0.000006	0.553	ND	0.276448946	0.000006	ND	ND	--	--
Tetrachloroethene	ug/m3	1.95	ND	0.975503903	0.000021	ND	1.00	0.500843499	0.000011	1.00	134	67.69	0.001531
Tetrahydrofuran	ug/m3	303	1,011	657	0.014126	1,011	26.8	518.91	0.011691	26.8	32.3	29.53	0.000668
Toluene	ug/m3	1.44	0.472	1	0.000021	0.472	0.198	0.33	0.000008	0.198	1.15	0.68	0.000015
trans-1,2-Dichloroethene	ug/m3	ND	ND	--	--	ND	0.122	0.061146711	0.000001	0.122	4.11	2.12	0.000048
Trichloroethene	ug/m3	19.7	13.9	16.8	0.000361	13.9	27.9	20.87	0.000470	27.9	4,091	2059.7	0.046596
TOTALS					**0.025052**				**0.018023**				**0.074042**

Notes:
ND = Analyte not detected at or above laboratory detection limit; assumed concentration is zero.
ug/m3 = microgram per cubic meter
1) Data reported in micrograms per cubic meter unless otherwise noted.

Table A-6

SVE System Mass Removal Rates
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Units	Year 2											
		Operating Period	Hours 32.7	Minutes 1962		Operating Period	Hours 49.7	Minutes 2982		Operating Period	Hours 43.3	Minutes 2598	
		07/08/15	**07/15/15**	**Average Influent Concentration**	**Mass Removed (lbs)**	**07/15/15**	**07/29/15**	**Average Influent Concentration**	**Mass Removed (lbs)**	**07/29/15**	**08/05/15**	**Average Influent Concentration**	**Mass Removed (lbs)**
1,1,1,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1,1-Trichloroethane	ug/m3	ND	0.884	0.884087602	0.000014	0.884	ND	0.442043801	0.000010	ND	0.736	0.368205175	0.000007
1,1,2,2-Tetrachloroethane	ug/m3	5.35	ND	5.350770731	0.000082	ND	ND	--	--	ND	ND	--	--
1,1,2-Trichloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,1-Dichloroethane	ug/m3	23.9	25.0	24.44997034	0.000374	25.0	7.360	16.17361004	0.000376	7.360	ND	3.679910774	0.000074
1,1-Dichloroethene	ug/m3	128	194	161.3175534	0.002466	194	40	117.1640469	0.002722	40	ND	20.06786062	0.000406
1,2,4-Trimethylbenzene	ug/m3	1.90	1.94	1.921196367	0.000029	1.94	2.04	1.987428201	0.000046	2.04	2.240	2.137709924	0.000043
1,2-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,2-Dichloroethane	ug/m3	70.4	44.4	57.41609514	0.000878	44.4	6.1	25.25241664	0.000587	6.1	11.370	8.734176335	0.000177
1,2-Dichloropropane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,3,5-Trimethylbenzene	ug/m3	0.765	0.713	0.738994213	0.000011	0.713	0.823	0.767839084	0.000018	0.823	0.835	0.829159656	0.000017
1,3-Butadiene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
1,4-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	0.7515	0.375738812	0.000009	0.7515	ND	0.375738812	0.000008
1,4-Dioxane	ug/m3	0.736	0.703	0.719549859	0.000011	0.703	ND	0.351334557	0.000008	ND	ND	--	--
2,2,4-trimethylpentane	ug/m3	0.638	ND	0.637580772	0.000010	ND	ND	--	--	ND	ND	--	--
2-Chlorotoluene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
2-Hexanone (Methyl butyl ketone)	ug/m3	5.49	2.62	4.053634101	0.000062	2.62	1.58	2.099974183	0.000049	1.58	0.987	1.282365895	0.000026
4-Ethyltoluene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Acetone	ug/m3	54.8	86.7794	70.78332763	0.001082	86.7794	48.6724	67.72587335	0.001573	48.6724	43.396	46.03419905	0.000932
Acetonitrile	ug/m3	0.316	0.9947	0.655192808	0.000010	0.9947	0.7324	0.863539208	0.000020	0.7324	1.027	0.879700619	0.000018
Acrolein	ug/m3	2.46	2.5411	2.498852055	0.000038	2.5411	2.9599	2.750536965	0.000064	2.9599	2.142	2.551035289	0.000052
Acrylonitrile	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Allyl chloride (3-chloropropene)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Benzene	ug/m3	23.8	13.9610	18.87125567	0.000288	13.9610	11.458	12.70961073	0.000295	11.458	4.118	7.788137557	0.000158
Bromoethene (Vinyl bromide)	ug/m3	27.4	18.9	23.15028482	0.000354	18.9	15.6	17.26074598	0.000401	15.6	ND	7.824726348	0.000158
Bromomethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Carbon disulfide	ug/m3	1.15	0.794	0.969841959	0.000015	0.794	1.140	0.967119586	0.000022	1.140	1.471	1.305229892	0.000026
Carbon tetrachloride	ug/m3	77.8	130	104.0042944	0.001590	130	11	70.80004548	0.001645	11	ND	5.711167723	0.000116
Chlorobenzene	ug/m3	10.7	8.03	9.367610248	0.000143	8.03	1.98	5.002462387	0.000116	1.98	ND	0.98981384	0.000020
Chloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Chloroethene (Vinyl chloride)	ug/m3	29.7	35.5	32.59988013	0.000498	35.5	38.7	37.07391208	0.000861	38.7	23.628	31.14639868	0.000630
Chloroform	ug/m3	777	996	886.5661072	0.013551	996	75	535.4874176	0.012440	75	130.040	102.5166689	0.002075
Chloromethane	ug/m3	1.13	1.57	1.346755498	0.000021	1.57	1.73	1.646481851	0.000038	1.73	1.487	1.606766212	0.000033
cis-1,2-Dichloroethylene	ug/m3	509	589	549.0112147	0.008391	589	137	362.6670522	0.008425	137	205.794	171.198458	0.003465
Cyclohexane	ug/m3	20.5	29.8	25.17201116	0.000385	29.8	15.3	22.53191523	0.000523	15.3	ND	7.631682415	0.000154
Ethanol	ug/m3	20.4	26.6	23.45966485	0.000359	26.6	24.8	25.69701607	0.000597	24.8	18.942	21.88741935	0.000443
Ethyl acetate	ug/m3	ND	ND	--	--	ND	5.16	2.580238329	0.000060	5.16	5.341	5.250809056	0.000106
Ethylbenzene	ug/m3	3.35	2.46	2.904019382	0.000044	2.46	4.37	3.415584226	0.000079	4.37	5.231	4.801927866	0.000097
Freon 11 (CCl3F)	ug/m3	4.55	5.29	4.920287475	0.000075	5.29	2.58	3.934390417	0.000091	2.58	2.515	2.547389732	0.000052
Freon 113 (C2Cl3F3)	ug/m3	ND	0.895	0.895293315	0.000014	0.895	ND	0.447646657	0.000010	ND	ND	--	--
Freon 114 (C2Cl2F4)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Freon 12 (CCl2F2)	ug/m3	4.03	4.48	4.250715811	0.000065	4.48	2.79	3.634096179	0.000084	2.79	2.295	2.543998003	0.000051
Heptane	ug/m3	12.8	15.3	14.07164359	0.000215	15.3	11.5	13.42907364	0.000312	11.5	3.549	7.548281447	0.000153
Hexane	ug/m3	125	141	133.0269461	0.002033	141	80	110.1393551	0.002559	80	14.823	47.26952684	0.000957
Isopropyl alcohol	ug/m3	7.95	8.36	8.155961895	0.000125	8.36	9.53	8.943000672	0.000208	9.53	8.574	9.049853148	0.000183
m-/p-Xylenes	ug/m3	15.9	14.2	15.06219694	0.000230	14.2	26.3	20.25917642	0.000471	26.3	33.104	29.69715588	0.000601
Methyl ethyl ketone (2-Butanone)	ug/m3	25.4	132	78.87484057	0.001206	132	25	78.86112793	0.001832	25	36.381	30.87868118	0.000625
Methyl isobutyl ketone	ug/m3	21.5	18.8	20.12961124	0.000308	18.8	34.0	26.39174671	0.000613	34.0	55.361	44.67436656	0.000904
Methyl methacrylate	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Methyl tert-butyl ether	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
Methylene chloride	ug/m3	2.61	2.09	2.353042477	0.000036	2.09	1.07	1.582302741	0.000037	1.07	0.75	0.909877385	0.000018
Naphthalene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--
o-Xylene	ug/m3	22.9	20.3	21.59632366	0.000330	20.3	40.2	30.24882063	0.000703	40.2	52.04	46.13802515	0.000934
Propylene	ug/m3	76.1	128	102.1644909	0.001562	128	87	107.6741475	0.002501	87	31.01	59.0714088	0.001196
Styrene	ug/m3	ND	0.752	0.752454754	0.000012	0.752	1.256	1.004414739	0.000023	1.256	ND	0.628187362	0.000013
Tetrachloroethene	ug/m3	134	195	164.4724875	0.002514	195	38	116.3871413	0.002704	38	16.00	27.10598174	0.000549
Tetrahydrofuran	ug/m3	32.3	88.1	60.21047858	0.000920	88.1	105.6	96.88063039	0.002251	105.6	147.06	126.3518374	0.002557
Toluene	ug/m3	1.15	1.10	1.127183695	0.000017	1.10	1.45	1.275402238	0.000030	1.45	1.09	1.270589243	0.000026
trans-1,2-Dichloroethene	ug/m3	4.11	4.92	4.513453671	0.000069	4.92	1.79	3.351605305	0.000078	1.79	7.64	4.711991296	0.000095
Trichloroethene	ug/m3	4,091	5,640	4865.651963	0.074370	5,640	798	3219.097989	0.074782	798	1407.42	1102.889446	0.022322
TOTALS					**0.114805**				**0.120274**				**0.040476**

Notes:
ND = Analyte not detected at or above laboratory detection limit; assumed concentration is zero.
ug/m3 = microgram per cubic meter
1) Data reported in micrograms per cubic meter unless otherwise noted.

Table A-6

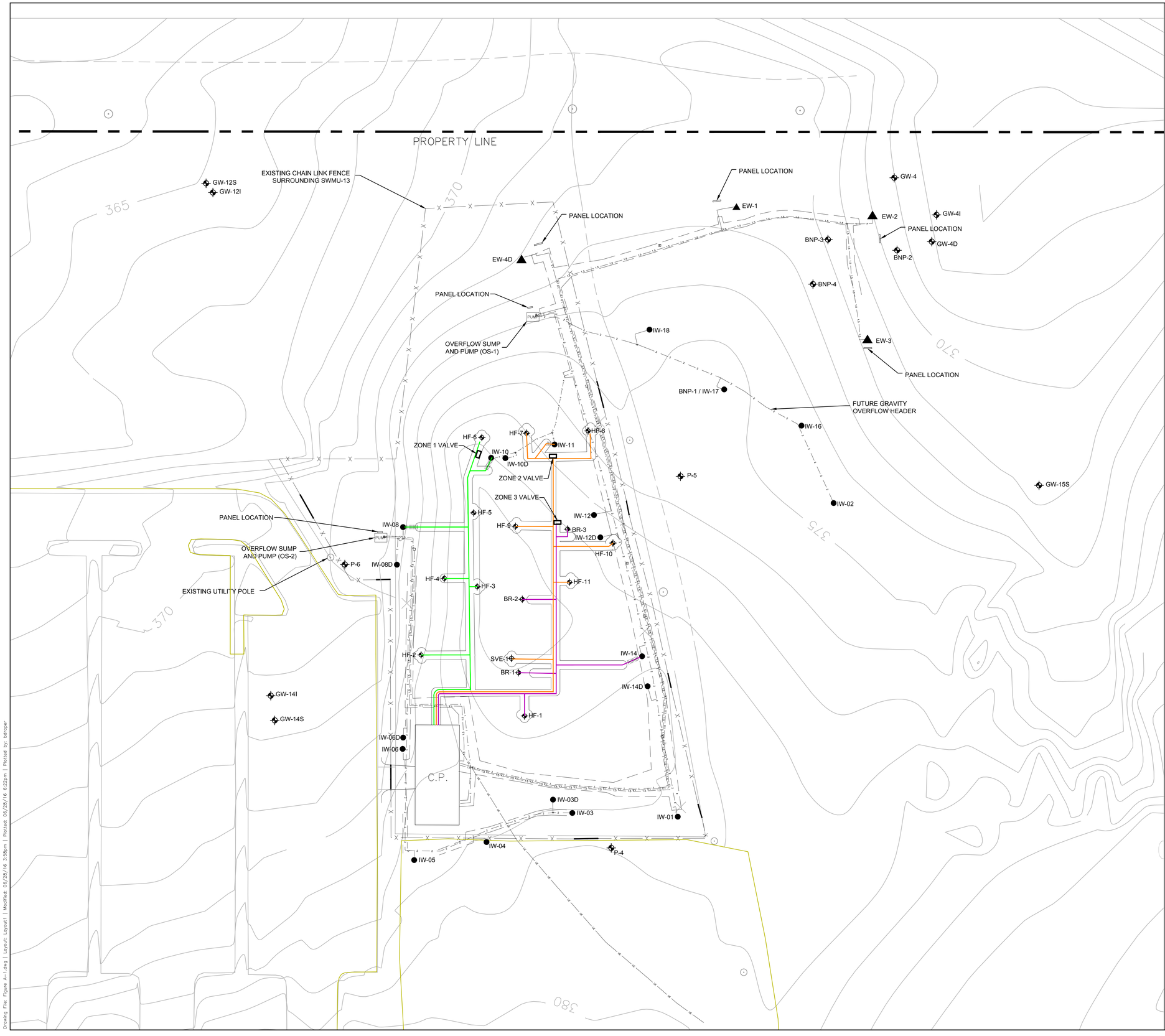
SVE System Mass Removal Rates
GlaxoSmithKline -- Research Triangle Park, NC
South Campus, North Complex

Analyte	Units	Year 2												Year 2 Total
		Operating Period	Hours 70.5	Minutes 4230		Operating Period	Hours 133.1	Minutes 7986		Operating Period	Hours 52	Minutes 3120		
		08/05/15	08/19/15	Average Influent Concentration	Mass Removed (lbs)	08/19/15	09/18/15	Average Influent Concentration	Mass Removed (lbs)	09/18/15	11/18/15	Average Influent Concentration	Mass Removed (lbs)	01/30/2015 to 11/18/2015
1,1,1,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
1,1,1-Trichloroethane	ug/m3	0.736	0.930	0.832988279	0.000027	0.9296	11.586	6.257707895	0.000389	11.5858	ND	5.79292479	0.000141	**0.000589**
1,1,2,2-Tetrachloroethane	ug/m3	ND	ND	--	--	ND	2.664	1.331974583	0.000083	2.66	ND	1.331974583	0.000032	**0.000258**
1,1,2-Trichloroethane	ug/m3	ND	ND	--	--	ND	4.230	2.115198229	0.000132	4.2304	ND	2.115198229	0.000051	**0.000183**
1,1-Dichloroethane	ug/m3	ND	2.9	1.471061091	0.000048	2.9	460.1	231.5257991	0.014404	460.1	ND	230.054738	0.005592	**0.021160**
1,1-Dichloroethene	ug/m3	ND	20	9.997653148	0.000329	20	2,513	1266.627746	0.078802	2,513	1.25	1257.254906	0.030559	**0.116997**
1,2,4-Trimethylbenzene	ug/m3	2.240	2.14	2.187777237	0.000072	2.14	2.49	2.31042439	0.000144	2.49	4.06	3.270638521	0.000079	**0.000908**
1,2-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	1.83461	0.917307303	0.000057	1.8346	0.698767701	1.266691154	0.000031	**0.000088**
1,2-Dichloroethane	ug/m3	11.370	7.3	9.31687364	0.000307	7.3	1774.3	890.8013978	0.055420	1774.3	3.9	889.1134129	0.021611	**0.080661**
1,2-Dichloropropane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
1,3,5-Trimethylbenzene	ug/m3	0.835	0.824	0.829350653	0.000027	0.824	1.168	0.995902256	0.000062	1.168	1.562	1.365023676	0.000033	**0.000279**
1,3-Butadiene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
1,4-Dichlorobenzene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	0.66976	0.334879816	0.000008	**0.000024**
1,4-Dioxane	ug/m3	ND	ND	--	--	ND	4.333	2.166563578	0.000135	4.333	ND	2.166563578	0.000053	**0.000815**
2,2,4-trimethylpentane	ug/m3	ND	ND	--	--	ND	1.25608	0.628040302	0.000039	1.256	ND	0.628040302	0.000015	**0.002438**
2-Chlorotoluene	ug/m3	ND	ND	--	--	ND	1.67203	0.836014415	0.000052	1.672	ND	0.836014415	0.000020	**0.000072**
2-Hexanone (Methyl butyl ketone)	ug/m3	0.987	0.83	0.906707366	0.000030	0.83	ND	0.413435553	0.000026	ND	2.14	1.069418524	0.000026	**0.000542**
4-Ethyltoluene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	1.144260	0.572130075	0.000014	**0.000082**
Acetone	ug/m3	43.396	42.9613	43.1786515	0.001423	43.0	35.7950	39.37814778	0.002450	35.8	312.4632	174.1291136	0.004232	**0.030763**
Acetonitrile	ug/m3	1.027	1.2884	1.157681875	0.000038	1.288	5.8717	3.580004384	0.000223	5.872	0.7708	3.321228	0.000081	**0.000459**
Acrolein	ug/m3	2.142	2.2938	2.217959836	0.000073	2.29	2.3948	2.344280883	0.000146	2.39	2.6015	2.49812169	0.000061	**0.000806**
Acrylonitrile	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
Allyl chloride (3-chloropropene)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
Benzene	ug/m3	4.118	5.0279	4.572964275	0.000151	5.0	180.9428	92.98533106	0.005785	180.9	2.8127	91.87773101	0.002233	**0.009874**
Bromoethene (Vinyl bromide)	ug/m3	ND	2.9	1.459047716	0.000048	2.9	282.5	142.7021832	0.008878	282.5	ND	141.2431354	0.003433	**0.013591**
Bromomethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
Carbon disulfide	ug/m3	1.471	1.291	1.380603818	0.000045	1.29	1.571	1.430958523	0.000089	1.57	0.665	1.118197114	0.000027	**0.000907**
Carbon tetrachloride	ug/m3	ND	7	3.276455039	0.000108	6.6	1,437	721.5421559	0.044890	1436.5	0.977	718.7541709	0.017470	**0.066747**
Chlorobenzene	ug/m3	ND	ND	--	--	ND	131.04	65.52135057	0.004076	131.0	0.78	65.9103029	0.001602	**0.006079**
Chloroethane	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
Chloroethene (Vinyl chloride)	ug/m3	23.628	9.2	16.4256435	0.000541	9.2	66.8	37.99859232	0.002364	66.8	14.2	40.49065938	0.000984	**0.012396**
Chloroform	ug/m3	130.040	220	175.1828472	0.005773	220	14,400	7310.298213	0.454802	14,400	3	7201.643926	0.175043	**0.672962**
Chloromethane	ug/m3	1.487	1.79	1.639428948	0.000054	1.79	1.54	1.667725316	0.000104	1.54	1.52	1.530990664	0.000037	**0.000631**
cis-1,2-Dichloroethylene	ug/m3	205.794	279	242.493936	0.007991	279	12,219	6248.85113	0.388765	12,219	49	6133.668522	0.149085	**0.581027**
Cyclohexane	ug/m3	ND	2.5	1.238810178	0.000041	2.5	65.1	33.7645462	0.002101	65.1	ND	32.52573602	0.000791	**0.004519**
Ethanol	ug/m3	18.942	27.4	23.17465399	0.000764	27.4	25.9	26.66930995	0.001659	25.9	16.4	21.15375921	0.000514	**0.007532**
Ethyl acetate	ug/m3	5.341	ND	2.670570726	0.000088	ND	ND	--	--	ND	ND	--	--	**0.000254**
Ethylbenzene	ug/m3	5.231	2.31	3.771472805	0.000124	2.31	3.40	2.855791443	0.000178	3.40	0.65	2.026198802	0.000049	**0.000865**
Freon 11 (CCl3F)	ug/m3	2.515	2.09	2.303948007	0.000076	2.09	21.76	11.92502977	0.000742	21.76	1.58	11.66732457	0.000284	**0.001655**
Freon 113 (C2Cl3F3)	ug/m3	ND	ND	--	--	ND	1.735	0.867332308	0.000054	1.735	ND	0.867332308	0.000021	**0.000239**
Freon 114 (C2Cl2F4)	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
Freon 12 (CCl2F2)	ug/m3	2.295	2.62	2.457741597	0.000081	2.62	6.99	4.805197038	0.000299	6.99	2.65	4.819824512	0.000117	**0.001194**
Heptane	ug/m3	3.549	0.7	2.139611625	0.000071	0.7	6.8	3.785549256	0.000236	6.8	1.1	3.979686465	0.000097	**0.001750**
Hexane	ug/m3	14.823	7	10.83294331	0.000357	7	93	49.94838809	0.003107	93	2	47.34510602	0.001151	**0.013063**
Isopropyl alcohol	ug/m3	8.574	8.95	8.76061599	0.000289	8.95	8.16	8.554594868	0.000532	8.16	5.61	6.887873275	0.000167	**0.002750**
m-/p-Xylenes	ug/m3	33.104	13.9	23.51043484	0.000775	13.9	9.6	11.73972937	0.000730	9.6	2.4	5.983786801	0.000145	**0.004576**
Methyl ethyl ketone (2-Butanone)	ug/m3	36.381	20	27.96234123	0.000921	19.5	195	107.2576414	0.006673	195.0	164	179.7038618	0.004368	**0.026613**
Methyl isobutyl ketone	ug/m3	55.361	18.4	36.85696566	0.001215	18.4	9.0	13.66136272	0.000850	9.0	2.1	5.531525663	0.000134	**0.005948**
Methyl methacrylate	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
Methyl tert-butyl ether	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000000**
Methylene chloride	ug/m3	0.75	1.59	1.167514375	0.000038	1.59	189.63	95.60874923	0.005948	189.63	0.62	95.12708595	0.002312	**0.008763**
Naphthalene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000045**
o-Xylene	ug/m3	52.04	20.6	36.32155338	0.001197	20.6	20.1	20.36468027	0.001267	20.1	2.5	11.31439467	0.000275	**0.006582**
Propylene	ug/m3	31.01	9	20.00261401	0.000659	9.0	93	50.80489573	0.003161	92.6	4	48.4684184	0.001178	**0.015632**
Styrene	ug/m3	ND	ND	--	--	ND	ND	--	--	ND	ND	--	--	**0.000060**
Tetrachloroethene	ug/m3	16.00	26	21.24017084	0.000700	26	3,008	1517.207444	0.094391	3,008	2	1505.088729	0.036583	**0.139074**
Tetrahydrofuran	ug/m3	147.06	41.2	94.13554741	0.003102	41.2	138.4	89.80147051	0.005587	138.4	727.3	432.8557588	0.010521	**0.074960**
Toluene	ug/m3	1.09	0.87	0.977714852	0.000032	0.87	18.04	9.452364574	0.000588	18.04	1.38	9.707380641	0.000236	**0.001416**
trans-1,2-Dichloroethene	ug/m3	7.64	8.51	8.072035597	0.000266	8.51	79.49	43.99723123	0.002737	79.49	0.61	40.04825216	0.000973	**0.004343**
Trichloroethene	ug/m3	1407.42	1,480	1443.93906	0.047582	1,480	64,193	32836.75968	2.042902	64,193	19	32106.20413	0.780372	**3.094728**
TOTALS					**0.075465**				**3.236059**				**1.252842**	**5.037899**

Notes:
ND = Analyte not detected at or above laboratory detection limit; assumed concentration is zero.
ug/m3 = microgram per cubic meter
1) Data reported in micrograms per cubic meter unless otherwise noted.

APPENDIX A

FIGURES



LEGEND

X — X	ESTIMATED LOCATION OF EXISTING CHAIN LINK FENCE
IW-16	NZVI INJECTION WELL
BR-2	BEDROCK NZVI INJECTION WELL
GW-4D	EXISTING MONITORING WELL
	EXISTING UTILITY POLE
	NEW UTILITY POLE
	EXISTING OVERHEAD POWER LINE
	PROPOSED UNDERGROUND POWER FEED LINE
	PROPERTY LINE
	1' CONTOUR INTERVAL
	FENCE GATE
	SHALLOW EXTRACTED GROUNDWATER AND OVERFLOW FORCEMAIN
	DEEP EXTRACTED GROUNDWATER FORCEMAIN
	GRAVITY OVERFLOW HEADER
	INJECTION WATER FORCEMAIN
	INJECTION WATER HOSE CONNECTION LOCATIONS
EW-3	EXTRACTION WELL
EC — EC — EC	UNDERGROUND ELECTRICAL CONDUIT
CC — CC — CC	UNDERGROUND CONTROL CONDUIT
	POTENTIAL GRAVITY OVERFLOW HEADER (N.I.S)
SVE-1	PROPOSED SHALLOW SVE WELL
HF-10	PROPOSED HYDRAULICALLY FRACTURED SHALLOW SVE WELL
	PROPOSED ABOVE GRADE 3" SVE PIPING (ZONE 1)
	PROPOSED ABOVE GRADE 3" SVE PIPING (ZONE 2)
	PROPOSED ABOVE GRADE 3" SVE PIPING (ZONE 3)

NOTES

1. CONTRACTOR TO STRAW, SPREAD AND RESEED OR REVEGETATE ANY DISTURBED SOIL IN GRASSED LOCATIONS UPON COMPLETION OF WORK.
2. SOILS WITHIN THE VICINITY OF SWMU-13 ARE KNOWN TO BE CONTAMINATED WITH VOCs AND PCBs.
3. CONTRACTOR SHALL NOT DISTURB EXISTING WETLANDS. PRIOR TO THE START OF WORK, WETLANDS WILL BE FLAGGED BY ENGINEER.
4. TO THE EXTENT POSSIBLE, LATERAL SVE PIPES WILL SLOPE A MINIMUM OF 0.5% TOWARDS THE SVE WELLS AND THE HEADER PIPES WILL SLOPE A MINIMUM OF 1.0% TOWARDS THE SVE SYSTEM SKID.
5. IW-14,IW-08, IW-10, IW-11, BR-1, BR-2 AND BR-3 WELL HEADS ARE TO BE OFFSET FROM WELL BY 5 FEET TO FACILITATE NZVI INJECTIONS.
6. PROPOSED 3" ABOVE GRADE SVE PIPING WILL HAVE TYPICAL 8"X8"X16" CONCRETE BLOCK SUPPORTS EVERY APPROXIMATELY 8 LATERAL FEET PER PIPE MANUFACTURE SPECIFICATIONS. PIPING SUPPORTS MUST CONFORM TO THE GSK PIPING DESIGN GUIDES.
7. PROPOSED GRAVEL FOR SVE SYSTEM MAINTENANCE WILL BE A MINIMUM OF 18" ON EITHER SIDE OF THE ABOVE GRADE 3" SVE PIPING AND AROUND SVE WELLS.

REFERENCES

1.) RFI MONITORING WELLS TAKEN FROM CADD FILE TITLED "554/00JAN-DG-FIG5-15", DATED 06/22/00.

2.) PLANIMETRIC FEATURES TAKEN FROM CADD FILE TITLED "S&ME", DATED 11/10/99. ALL FEATURES WERE SHIFTED 208.71 FEET AND 223d35'39.423" TO ALIGN WITH GROUNDWATER MONITORING WELLS.

3.) ALL BASE CADD FILES USED DURING DRAWING PROTOTYPE CONSTRUCTION WERE TAKEN FROM COMPACT DISK SUPPLIED BY GSK.

4.) COORDINATE SYSTEM SHOWN IS NORTH CAROLINA STATE PLANE NAD 27.

5.) NZVI SYSTEM AS-BUILT PIPING AND WELL LOCATIONS PROVIDED BY J.R. McADAMS.

20 0 20 40
SCALE FEET

GlaxoSmithKline

CONTRACTOR FIRM ID

Golder Associates
Golder Associates NC, Inc.
5B Oak Branch Drive
Greensboro, NC 27407
(336) 852-4903
Firm License No. C-2862

CONTRACTOR PROJ No: 073-96115

Designed By: JAD
Drawn By: LKB
Checked By: BJE
Project Manager: BRIAN EICHLIN, P.E.

GSK PROJECT INFORMATION

GSK PROJECT NO: RE10614
PROJECT NAME: RCRA CORRECTIVE MEASURES
GSK PROJECT MGR: TOM HILLIARD, P.E.
EHS CONTACT: LINDSEY WALATA, P.G.

SECOND ANNUAL REPORT

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No	Revision	Date
3	SECOND ANNUAL REPORT	06/28/2014
2	AS-BUILT LOCATION	02/06/2014
1	ADDED WELLHEADS TO PHASE II INJECTION WELLS IW-10 AND IW-11	02/14/2012
0	ISSUED FOR BIDDING	08/19/2011

Bldg Operations/ Project Mgr:
CAD: BSD
Site: GSK S. CAMPUS, N. COMPLEX
Scale: AS SHOWN

Title:
SVE SYSTEM LAYOUT

FIGURE A-1

Drawing Number:
Rev: 3

Drawing File: Figure A-1.dwg | Layout: Layout1 | Modified: 06/28/16 3:58pm | Plotted: 06/28/16 6:22pm | Plotted by: bdraper

APPENDIX B

PERMIT CORRESPONDENCE

APPENDIX B-1

JULY 22, 2015 APPROVAL FOR MODIFICTAION OF INJECTION PROGRAM

From: Mcdaniel, Robert
To: Eichlin, Brian
Subject: RE: Injection Program, RCRA Corrective Actions - GlaxoSmithKline, South Campus, North Complex,
Date: Wednesday, August 19, 2015 6:05:14 AM

Brian,

Sounds good, I do not disagree with anything you have done at the site with the ZVI injection program. I am glad to see the influence of the ZVI on the contaminants in the ground water at GSK.

Thanks,
Rob

From: Eichlin, Brian [mailto:brian_eichlin@golder.com]
Sent: Tuesday, August 18, 2015 3:38 PM
To: Mcdaniel, Robert
Cc: Lindsey Walata (lindsey.c.walata@gsk.com); Childress, Daniel
Subject: Injection Program, RCRA Corrective Actions - GlaxoSmithKline, South Campus, North Complex,

Rob,

On May 15 2015 Golder Associates, on behalf of GSK, submitted to the Waste Management and Water Resources Divisions of NCDENR the First Annual Assessment Report (Annual Report) (Golder Associates, May 2015).

The first year of the ZVI injection program has significantly reduced Site-wide concentrations of TCE including an order of magnitude reduction in portions of the SWMU 13 shallow zone. While concentration increases of breakdown compounds cis 1,2-DCE and VC have been observed in select wells, total c-VOCs on a carbon molar base are declining. The Annual Report recommended continued injections of ZVI with the following enhancements to the remedy to include:

- The moderate increases in ethene may indicate that an insufficient micro-organism colony exists or that carbon in the soy and propylene glycol previously injected is too complex for the existing micro-organisms to readily assimilate. The use of sodium lactate as an alternative carbon source is proposed. A microcosm study will be completed in the SWMU 15/16 (GW-16S), SWMU 13 shallow (GW-4) and SWMU 13 deep (GW-4I or P-6) treatment zone to evaluate if an inoculation of micro-bacteria is needed to enhance bioremediation of the c-VOCs;
- The installation of a new injection well (IW-02) is proposed to the east of IW-16 to improve the radius of influence within the SWMU 13 shallow injection network (shown on the attached revised Figure 6B from the Non-Discharge Permit Application (Permit Application) (Golder Associates, November 2010);
- Injections in GW-4 are recommended to enhance remediation in the SWMU 13 shallow zone down-gradient of the BNP-1/IW-17 area as well as down-gradient of GW-4; (shown on revised Figure 6B); and,
- The AOC GW-6 injection well network be expanded to include injection up-gradient of

GW-6 at monitoring well GW-32S (shown on revised Figure 6B).

GSK has obtained approval from the Division of Water Resources for these changes and we are making plans to construct the new injection. During the next injection event we plan to inject in GW-4 and GW-32S. GW-4 and GW-32S will continue to be monitored as part of the approved monitoring well network presented in the April 25, 2013 letter from Golder and approved by the Division of Waste Management on June 25, 2013, and. The use of GW-4 and GW-32S for both injections and groundwater monitoring is appropriate since these wells are included in the monitoring well network for the purpose of monitoring remedy performance and are not used for the purpose of monitoring the extent of groundwater impacts.

Please let Lindsey Walata or me know if you have any questions or concerns regarding these changes to the injection program.

Brian Eichlin

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From: Eichlin, Brian
To: "Rogers, Michael"
Cc: Lindsey Walata (lindsey.c.walata@gsk.com)
Subject: RE: Groundwater Remediation Permit No. WQ0034465
Date: Wednesday, July 22, 2015 2:12:00 PM

Michael,

Thanks for the response. We will move forward with the work. The work and results will be summarized in the next annual report. Thanks for your assistance.

Have a great day!

Brian

From: Rogers, Michael [mailto:michael.rogers@ncdenr.gov]
Sent: Wednesday, July 22, 2015 1:21 PM
To: Eichlin, Brian
Subject: RE: Groundwater Remediation Permit No. WQ0034465

Thanks for the additional info. I'll add this to the file as supplemental work under the existing permit. Please provide GW1s/GW-30s for injection wells and Injection Event Records when and where applicable.

From: Eichlin, Brian [mailto:brian_eichlin@golder.com]
Sent: Wednesday, July 22, 2015 8:44 AM
To: Rogers, Michael
Cc: Lindsey Walata (lindsey.c.walata@gsk.com)
Subject: RE: Groundwater Remediation Permit No. WQ0034465

Hi Michael.

Hope you are doing well. I left you message this morning. If you have an opportunity I would like get an update on your review and try to answer any questions you may have. We are interested in moving forward with this work as soon as possible. Thank you

Brian Eichlin (336) 852-4903

From: Eichlin, Brian
Sent: Wednesday, July 01, 2015 4:17 PM
To: 'Rogers, Michael'
Cc: Lindsey Walata (lindsey.c.walata@gsk.com)
Subject: Groundwater Remediation Permit No. WQ0034465

Michael,

Please find attached the requested information. The text of this email is also provided as an attached PDF to facilitate your review. Please let me know if you have any questions.

Golder Associates, on behalf of GSK, submitted to the Waste Management and Water Resources

Divisions of NCDENR the First Annual Assessment Report (Annual Report) (Golder Associates, May 2015) covering the December 2013 to March 2015 reporting period in accordance with the requirements of the Groundwater Remediation Permit #WQ0034465 (Permit) dated December 10, 2010. The Permit includes 41 injection wells for injection of zero valent iron (ZVI) and soy powder of which 35 wells have been constructed. As requested in your email, below is a brief discussion on the compliance monitoring trends, recommendations, and proposed changes to the injection program as detailed in the Annual Report.

The first year of the ZVI injection program has significantly reduced Site-wide concentrations of TCE including an order of magnitude reduction in portions of the SWMU 13 shallow zone. While concentration increases of breakdown compounds cis 1,2-DCE and VC have been observed in select wells, total c-VOCs on a carbon molar base are declining. The Annual Report recommended continued injections of ZVI with the following enhancements to the remedy to include:

- The moderate increases in ethene may indicate that an insufficient micro-organism colony exists or that carbon in the soy and propylene glycol previously injected is too complex for the existing micro-organisms to readily assimilate. The use of sodium lactate as an alternative carbon source is proposed. A microcosm study will be completed in the SWMU 15/16 (GW-16S), SWMU 13 shallow (GW-4) and SWMU 13 deep (GW-4I or P-6) treatment zone to evaluate if an inoculation of micro-bacteria is needed to enhance bioremediation of the c-VOCs;
- The installation of a new injection well (IW-02) is proposed to the east of IW-16 to improve the radius of influence within the SWMU 13 shallow injection network (shown on the attached revised Figure 6B from the Non-Discharge Permit Application (Permit Application) (Golder Associates, November 2010);
- Injections in GW-4 are recommended to enhance remediation in the SWMU 13 shallow zone down-gradient of the BNP-1/IW-17 area as well as down-gradient of GW-4; (shown on revised Figure 6B); and,
- The AOC GW-6 injection well network be expanded to include injection up-gradient of GW-6 at monitoring well GW-32S (shown on revised Figure 6B).

SWMU-13 and SWMU-15/16

Since extracted groundwater is used to mix the injectant slurry, as shown on the revised Figure 6B, the Permit established a Compliance and Review Boundary around the combined Area of Influence/Waste Boundary for the SWMU 13 and SWMU 15/16 target injection zones. As specified by Permit Condition VIII (3), the Compliance Boundary applies only to the constituents of the injectant slurry (i.e. extracted groundwater and ZVI) and does not apply to existing groundwater impacts. The Permit identified eight (8) monitoring wells (GW-1A, GW-1A-D, GW-18S, MW-10, MW-12, GW-30S, GW-30I and MW-13) to be monitored to assess the potential migration of injectants and spread of the existing contamination as a result of injection activities.

As presented on Figure 4A and Figure 4B of the Annual Report, the trends for reported concentrations for TCE in the SWMU 13 and SWMU 15/16 compliance monitoring demonstrate that the injections of a slurry of treated groundwater is not causing an exceedance of an NC2L standard for VOCs at the Compliance Boundary and is not causing the migration of existing contamination into undesired areas. As presented on Figure 8 of the Annual Report, the reported concentrations for total iron in the SWMU 13 and SWMU 15/16 compliance monitoring wells fluctuated during the reporting period but were reported to be less than the baseline monitoring event and/or the historical Site-wide arithmetic mean with the exception of GW-1A and GW-1AS which are proposed for additional purging/well redevelopment.

GSK proposes to construct the permitted but unconstructed SWMU 13 contingent injection well IW-02 at the location shown on revised Figure 6B. The constructed IW-02 will be a Class 5L well for injection of injectants mixed with extracted and partially treated groundwater as defined in the Permit. The permitted maximum ZVI slurry volume for IW-02, as shown on Table S-1 of the Permit Application, is 1,014 gallons

per year. It is requested that the maximum ZVI slurry volume for IW-02 be increased to the same permit limit as IW-16 of 3,550 gallons per year. This increase will not impact the overall permitted volume of injection slurry since SWMU 13 contingent injections wells IW-07, IW-09, IW-13 and IW-15 have not been constructed. A revised Table S-1 showing this change is attached and in Appendix I of the Annual Report.

GSK proposes the designation of existing monitoring well GW-4 as a Class 5L injection well for injection of injectants mixed with extracted and partially treated groundwater. GW-4 will replace unconstructed SWMU 13 contingent injection well IW-04 as shown on the revised Figure 6B. The maximum permitted ZVI slurry volume for IW-04 as shown on Table S-1 of the Permit Application is 1,014 gallons per year. The boring log for GW-4 from the RFI is attached.

As shown on the revised Figure 6B, the proposed new location of IW-02 and existing monitoring GW-4 (proposed IW-04) are located with the Permit defined Zone of Influence/Waste Boundary. As described above the Compliance Boundary monitoring results for the reporting period do not indicate a migration of injectants or the spread of the existing contamination as a result of injection activities at SMWU 13. Rather, the monitoring results for GW-22S (down-gradient from GW-4) and GW-20S (down-gradient from proposed new location of IW-02) show declining trends of total c-VOCs. The existing compliance monitoring well network should be sufficient to monitor for impacts associated with these injections. In addition, as presented on Figure 2 of the Annual Report, down-gradient monitoring wells GW-22S and GW-20S will continue to be monitored quarterly for VOCs and for the next year will be monitored quarterly for methane/ethane/ethene gases, TOC and total iron.

AOC GW-6 and AOC GW-6 Strike

Since potable water is used to mix the injectant slurry, AOC GW-6 and AOC GW-6 Strike do not have a Compliance or Review Boundary. The Permit identified three monitoring wells (GW-7, GW-8 and MW-11) to assess the potential migration of injectants and spread of the existing contamination as a result of injection activities.

GSK is requesting that GW-32S be designated as a Class 5I injection well for potable water injections at AOC GW-6. As presented on revised Figure 6B, monitoring well GW-32S is located within the permitted Target ZVI Injection Area for the AOC GW-6 and AOC GW-6 Strike treatment zones. The boring log for GW-32S is attached.

As presented on Table S-1 of the Permit Application, the maximum permitted yearly volume of ZVI slurry for AOC GW-6 and AOC GW-6 Strike is 4,058 gallons. As presented in the revised Table S-1, a decrease in the maximum permitted yearly volume of ZVI slurry for injection wells IW-30 and IW-31 is proposed to offset the addition of GW-32S as a Class 5I injection well. Reduced injection quantities at IW-30 and IW-31 should be acceptable since the baseline concentrations for TCE were reported to be below the NC2L standards for IW-30 and IW-31.

As described in Section 5 of the Annual Report, the compliance well monitoring results at AOC GW-6 and AOC GW-6 Strike for the reporting period do not indicate migration of injectants or the spread of the existing contamination as a result of injection activities. Rather, monitoring results at GW-6 show a declining trend of total c-VOCs. The existing compliance monitoring well network should be sufficient to monitor for impacts associated with injections at GW-32S since it is located up-gradient of the existing AOC GW-6 injection wells. In addition, as presented on Figure 2 of the Annual Report, GW-6 will continue to be monitored quarterly for VOCs, and for the next year GW-6 will be monitored quarterly for methane/ethane/ethene gases, TOC, and total iron.

Injection of Alternative Carbon Sources and Micro-Bacteria

GSK is requesting the ability, as needed based on a review of analytical data and the planned microcosm study, to inject sodium lactate as a substitute for soy powder during future injections and add microorganisms listed on NCDENR's approved injectant list. Sodium lactate will be added to increase available TOC concentrations in the treatment zones by 20 mg/l. Repeat injections will be required to

replace available TOC that is consumed by micro-organisms. It is expected that up to 1,200 lbs of sodium lactate will be required for the initial injection and up to 600 lbs for follow-up injections that will be completed at frequency no greater than quarterly. The estimated yearly injections of sodium lactate will be less than the Permit yearly estimated value of 3,200 lbs of soy. Sodium lactate will be mixed in injection water at up to 20% by volume of injection water. Future injection events may periodically include the injection of potable water (AOC GW-6 Strike, AOC GW-6 and AOC W-1) or extracted treated groundwater (SWMU 13 shallow, SWMU 13 deep and SWMU 15/16) mixed with sodium lactate or soy powder only (i.e. without the addition of ZVI materials) at Permit injection volumes presented on revised Table S-1 as attached and in the Annual Report. A Safety Data Sheet for the sodium lactate is attached.

Summary

With your approval, we would like to move forward with the injection of sodium lactate during the next quarterly event scheduled for August 2015, including injection at GW-32S and IW-04 (GW-4), and would like to initiate construction of injection well IW-02. The construction of injection well IW-02 will follow construction details as described in Section 3.1 and as shown on Figure 9 of the Permit Application. The construction will be conducted in accordance with the Permit requirements including:

Item 7: Pursuant to rule 15A NCAC 2C .0211(h), following completion of construction of IW-02, GSK will submit a notice of completion of construction to the Raleigh Regional Office prior to injection. Injection will not commence until the regional office staff has inspected or otherwise reviewed the injection well and finds it in compliance with the permit. If GSK has not received notice from the Raleigh Regional Office of the intent to inspect or otherwise review the injection well within 10 days after the regional office has received the notice, GSK may commence operation of the injection well. Additionally, in accordance with 15A NCAC 2C .0114(b)(2), GSK will submit a GW-1 Well Construction Record to the Raleigh Regional Office within 30 days after completion.

Item 9: GSK will notify the Raleigh Regional Office at least 48 hours prior to the construction of injection well IW-02 so that an inspection can be made of the well location. Notification will be made during normal office hours from 8 am to 5 pm, Monday through Friday.

Item 10: Within 60 days of completion of injection well IW-02, GSK will submit two (2) original copies of a scaled site map to include this well and include the information described in Item 10 (a) through (f).

Should you have any questions or comments regarding this request or require additional information please do not hesitate to contact Lindsey Walata of GSK at (919) 483-4640 or me at (336) 852-4903.

Thank you.

Brian

From: Rogers, Michael [mailto:michael.rogers@ncdenr.gov]
Sent: Tuesday, June 23, 2015 2:18 PM
To: Eichlin, Brian
Cc: Lindsey Walata (lindsey.c.walata@gsk.com)
Subject: RE: Groundwater Remediation Permit No. WQ0034465

Brian-

I discussed this with Thomas as he was handling this issue before he transferred to DWM. A permit mod is not necessary along as the compliance boundary will not be affected by this revised injection plan. If the boundary will not be affected, just indicate in reply to this email the following:

1. The proposed revision in wells you are going to be using for injection (attach GW-1s if available).
2. Injectant (attach MSDS sheets).
3. Brief explanation/assurance on how the CB will not be affected.

Thanks

From: Eichlin, Brian [mailto:brian_eichlin@golder.com]
Sent: Monday, June 22, 2015 3:25 PM
To: Rogers, Michael
Cc: Lindsey Walata (lindsey.c.walata@gsk.com)
Subject: Groundwater Remediation Permit No. WQ0034465

Michael

Thank you for taking the time to discuss the GlaxoSmithKline South Campus, North Complex Site in Research Triangle Park (Permit No. WQ0034465). On-behalf of GSK, Golder submitted the First Annual Assessment Report to NCDENR on May 15, 2015. The Report included a request to modify the injection program to include new injection locations and supplement the injections with sodium lactate as an alternative carbon source to the permitted soy powder. The proposed modifications to the injection program will not increase the annual volume of injection slurry or total number of permitted injection wells. The additional injection locations would replace unconstructed contingent injection wells that are included in the permit. We would like NCDENR's approval to move forward with the recommendations outlined in the report. If it would be helpful for your review, we will come to your office to discuss the project.

Please let me know if you have any questions.

Thank you

Brian Eichlin, P.E. | Principal | **Golder Associates NC, Inc.**
5B Oak Branch Drive, Greensboro, North Carolina, USA 27407
T: +1 (336) 852-4903 | **D:** (336) 398-2809 | **F:** +1 (336) 852-4904 | **C:** (336) 402-9964 | **E:** brian_eichlin@golder.com | **www.golder.com**

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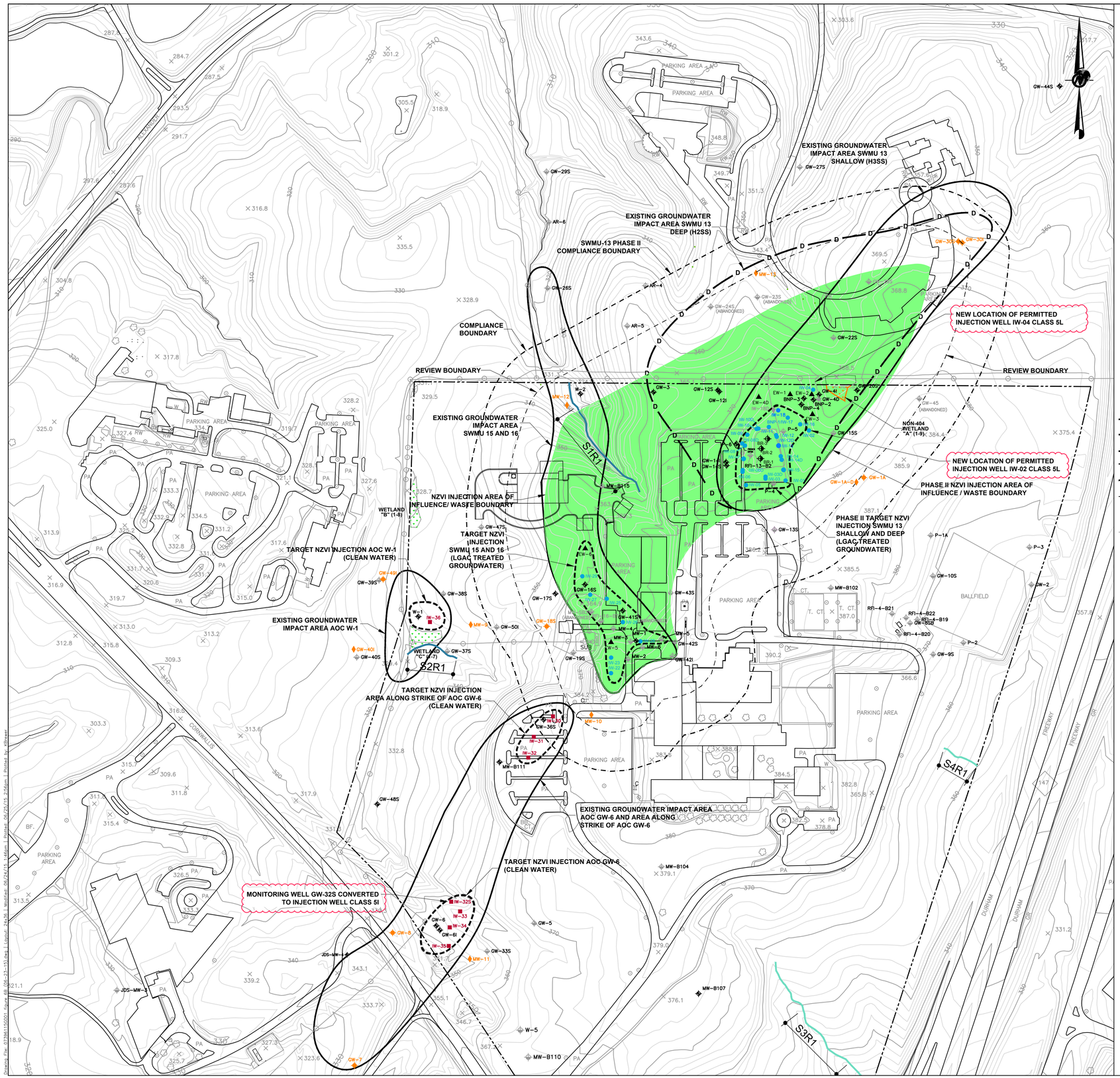

LEGEND

GW-30I	EXISTING GROUNDWATER MONITORING WELL
GW-10S	MONITORING WELL NOT SAMPLED
IW-03	PROPOSED PHASE II NZVI INJECTION WELL – CLASS 5L
IW-31	PROPOSED NZVI INJECTION WELL – CLASS 5I
BR-3	PROPOSED HYDRAULICALLY FRACTURED BEDROCK SVE WELL ALSO USED AS NZVI INJECTION WELL
▲	PROPOSED PHASE I EXTRACTION WELL
MW-9	EXISTING WELLS FOR COMPLIANCE MONITORING
GW-40I	NEW WELLS FOR COMPLIANCE MONITORING (NOTE 7)
MW-14	MONITORING WELL USED ONLY FOR PHASE 1 COMPLIANCE MONITORING

FOR INJECTION WELLS "D" DENOTE DEEP WELLS OTHER INJECTION WELLS ARE IN THE SHALLOW ZONE; FOR MONITORING WELLS "S" DENOTE SHALLOW AND "I" INTERMEDIATE WELLS OTHER MONITORING WELLS ARE IN THE DEEP ZONE.

	NZVI INJECTION AREA OF INFLUENCE/WASTE BOUNDARY (NOTE 4)
	GPS–LOCATED WETLAND LIMITS
	GPS–LOCATED NON–404 WETLAND LIMITS
S4R1	NCDWQ STREAM DETERMINATION ASSESSMENT REACH LOCATION
	INTERMITTENT STREAM CHANNEL
	NON–404 EPHEMERAL STORMWATER CHANNEL
	TARGET NZVI INJECTION (AREA) (NOTE 2)
	EXISTING GROUNDWATER IMPACT AREA (NOTE 3)
D	EXISTING GROUNDWATER IMPACT AREA SMWU–13 DEEP (NOTE 3)
	PROPERTY BOUNDARY
	COMPLIANCE BOUNDARY (NOTE 5)
	REVIEW BOUNDARY (NOTE 6)
	2' CONTOUR INTERVAL
	10' CONTOUR INTERVAL

NOTES

1. TOPOGRAPHIC CONTOUR INTERVAL IS TWO FEET.
2. TARGET NZVI INJECTION AREA SHOWS THE LOCATION WHERE INJECTION WELLS WILL BE INSTALLED IN COMPLIANCE WITH APPLICABLE NCDENR SETBACK CRITERIA.
3. EXISTING GROUNDWATER IMPACT AREA SHOWS THE EXTENT, BASED ON HISTORICAL GROUNDWATER MONITORING DATA, THAT GROUNDWATER IMPACTS ASSOCIATED WITH HISTORICAL RELEASES EXCEED NC 2L STANDARDS. GROUNDWATER IMPACTS FOR SWMU–13 ARE SHOWN FOR THE DEEPER AND SHALLOWER GROUNDWATER AS PRESENTED ON FIGURE 3.
4. THE NZVI AREA OF INFLUENCE IS THE DIRECTION AND DISTANCE AT WHICH THE NZVI IS EXPECTED TO TRAVEL FROM THE INJECTION WELLS WHILE PROVIDING SUBSURFACE TREATMENT OF THE EXISTING GROUNDWATER IMPACT AREA. FOR PERMITTING PURPOSES THE NZVI AREA OF INFLUENCE IS THE WASTE BOUNDARY AS DEFINED IN 15A NCAC 02L .0102.
5. THE COMPLIANCE BOUNDARY IS THE MAXIMUM DISTANCE FROM A WASTE BOUNDARY THAT THE NC 2L STANDARDS MUST BE MET. FOR THE PROPOSED REMEDIATION SYSTEM THE COMPLIANCE BOUNDARY APPLIES ONLY TO THE INJECTED WASTEWATER (I.E. THE EXTRACTED GROUNDWATER) AND INJECTANTS.
6. A REVIEW BOUNDARY IS ESTABLISHED AROUND A DISPOSAL SYSTEM MIDWAY BETWEEN THE COMPLIANCE BOUNDARY AND THE WASTE BOUNDARY IN ACCORDANCE WITH 15A NCAC 02L .0108.
7. PROPOSED NEW WELL LOCATIONS ARE SUBJECT TO CHANGE DEPENDING ON LOCATION OF SUBSURFACE UTILITIES AND POTENTIAL ACCESS RESTRICTIONS.

REFERENCES

1. GROUNDWATER MONITORING WELLS TAKEN FROM CADD FILE TITLED "554/00JAN–DG–FIG5–15", DATED 06/22/00.
2. PLANIMETRIC FEATURES TAKEN FROM CADD FILE TITLED "S&ME", DATED 11/10/99. ALL FEATURES WERE SHIFTED 208.71 FEET AND 223D35'39.423" TO ALIGN WITH GROUNDWATER MONITORING WELLS.
3. ALL BASE CADD FILES USED DURING DRAWING PROTOTYPE CONSTRUCTION WERE TAKEN FROM COMPACT DISK SUPPLIED BY GSK.
4. BNP–1 AND GW–8 WERE SURVEYED IN NOVEMBER 2008 BY STANTEC CONSULTING.
5. COORDINATE SYSTEM SHOWN IS NORTH CAROLINA STATE PLANE NAD27.
6. BNP–2, BNP–3, BNP–4, GW–47S, GW–48S, AND W–2 WERE SURVEYED ON 09/11/02 AND GW–49I AND GW–50I WERE SURVEYED ON 11/15/02 BY TAYLOR WISEMAN AND TAYLOR.
7. WETLAND FEATURES AS PRESENTED IN REVISED FIGURE 3 OF REQUEST FOR JURISDICTIONAL DETERMINATION DATED JUNE 8, 2009 (GOLDER ASSOCIATES). APPROVED BY USACE ON OCTOBER 17, 2009 AND NCDENR ON JULY 16, 2009.

150 0 150 300
SCALE FEET

GlaxoSmithKline

CONTRACTOR FIRM ID
Golder Associates
GREENSBORO, NC

CONTRACTOR PROJ No: 073–96115

Designed By: JAD
Drawn By: LKB
Checked By: BJE
Project Manager: BRIAN EICHLIN, P.E.

GSK PROJECT INFORMATION
GSK PROJECT NO: RE10614
PROJECT NAME: RCRA CORRECTIVE MEASURES
GSK PROJECT MGR: TOM HILLIARD, P.E.
EHS CONTACT: LINDSEY WALATA, P.G.

NON–DISCHARGE PERMIT APPLICATION

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No	Revision	Date
4	RE–LOC IW–02; ADD IW–04, GW–32S	06/24/15
3	REVISION NO. 3	10/18/10
2	REVISION NO. 2	10/5/10
1	REVISION NO. 1	07/30/10
0	NON – DISCHARGE PERMIT	10/5/09

Bldg Operations/ Project Mgr:
CAD: LKB
Site: GSK S. CAMPUS, N. COMPLEX
Scale: 1" = 150'

Title:
SITE AREA
NZVI INJECTION WELL LAYOUT
PHASE II

FIGURE 6B

GSK Drawing Number: **RE10164-G-1 06**
Rev: 1

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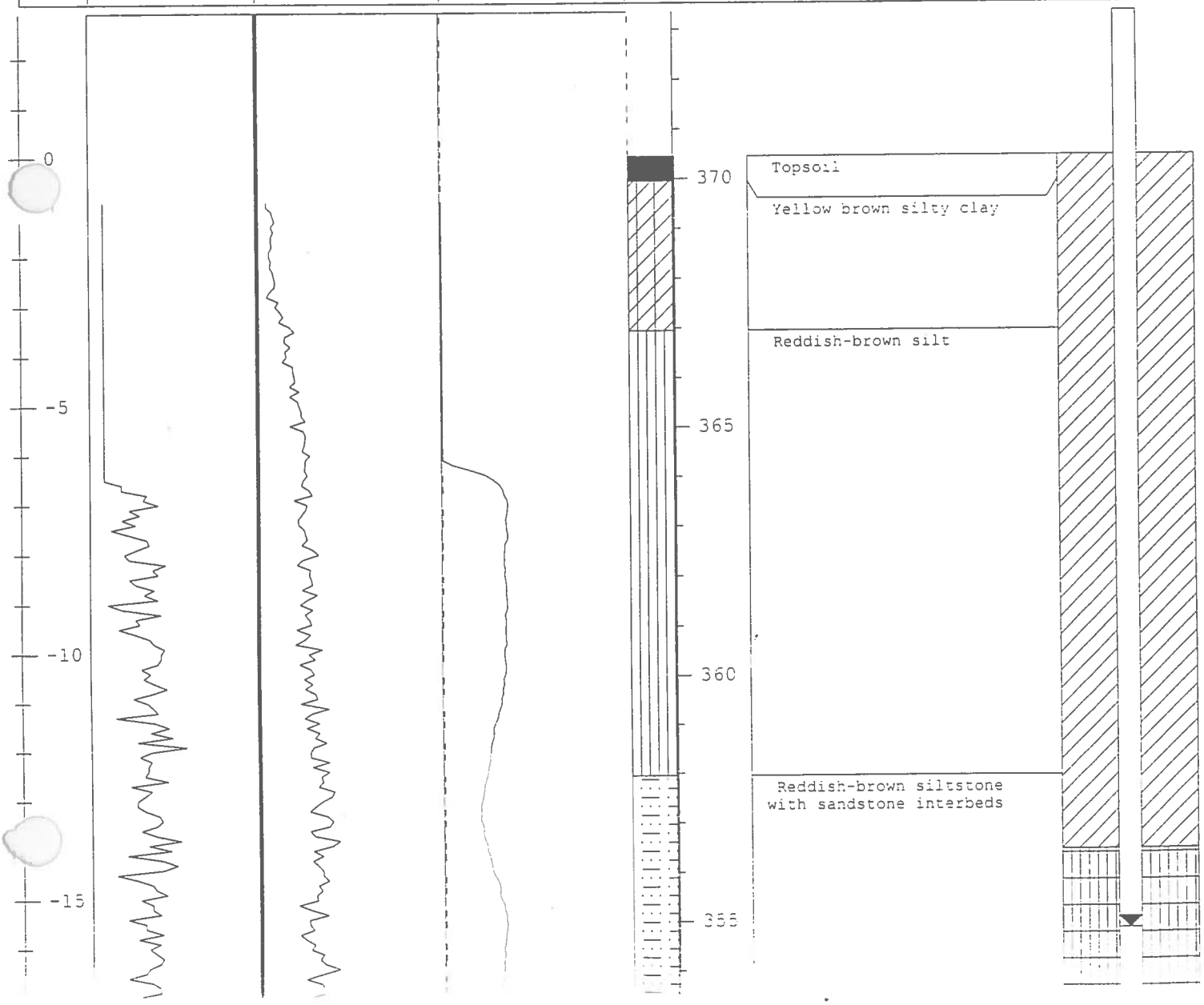
Boring Log
GW-4

PROJECT NO. : 1054-96-554	SITE :Glaxo Wellcome South Campus, North Complex	COUNTY : Durham
WELL LOCATION : SWMU 13		GEOLOGIST : Matt Scott
DATE DRILLED : 11-15-96	DRILL METHOD : Air Rotary	RIG : CME 850
TOTAL DEPTH : 30 FT. bgs	GROUND ELEV. : 370.45 FT.	TOC ELEV. : 373.39 FT.
STATIC WATER LEVEL : 15.6 FT. bgs	NORTHING : 790139.25	EASTING : 2039938.14
SURFACE CASING : 4 " ID. FROM 2.9 FT. TO -2.1 FT.		CASING TYPE : Schedule 10 Steel
WELL RISER : 2 " ID. FROM 2.9 FT. TO -19.5 FT.		CASING TYPE : Schedule 40 PVC
WELL SCREEN : 2 " ID. FROM -19.5 FT. TO -29.5 FT.		SCREEN TYPE : Sch. 40 PVC 0.010 slot

Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.



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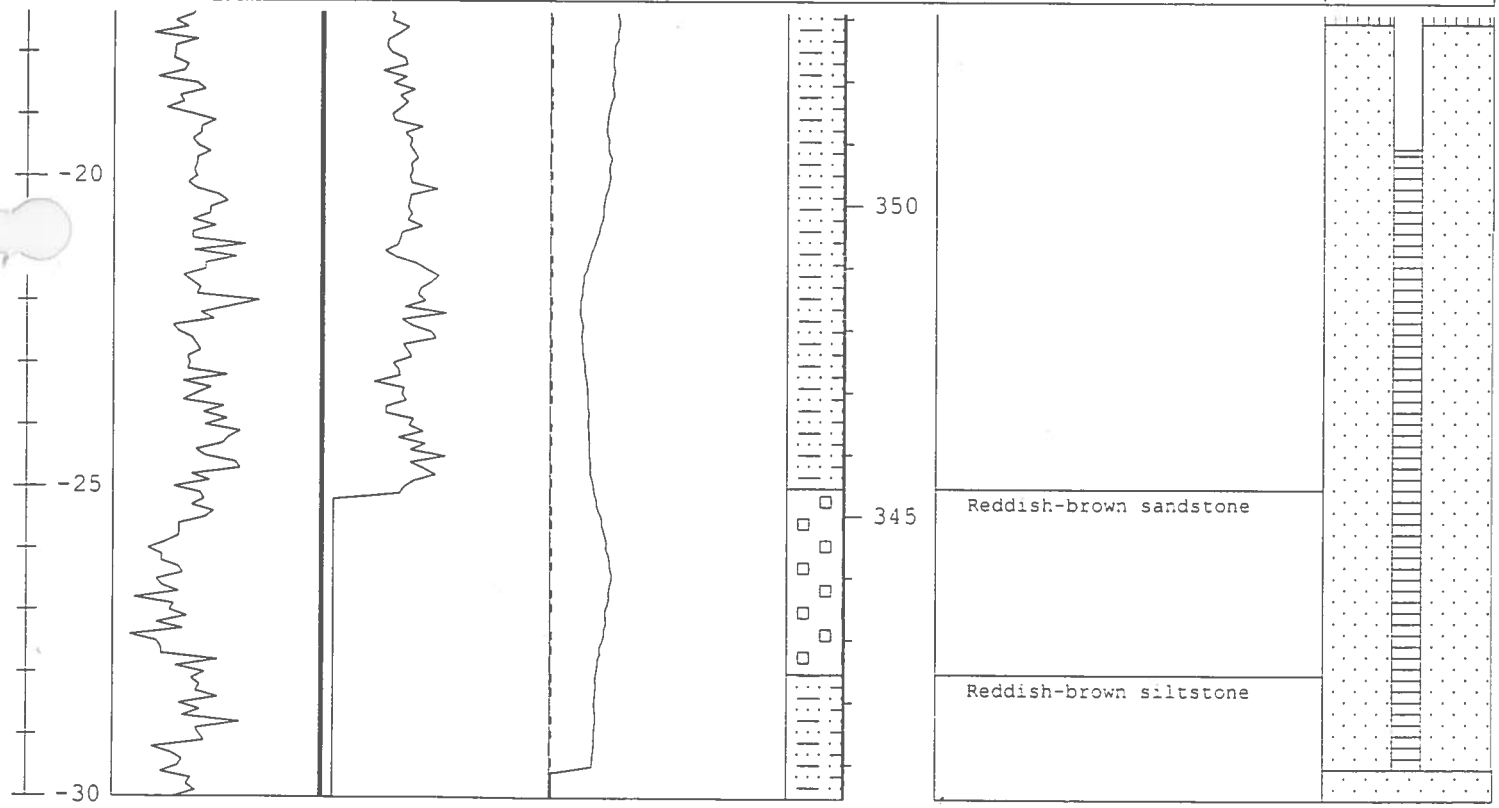
Boring Log

GW-4

PROJECT NO. : 1054-96-554	SITE :Glaxo Wellcome South Campus, North Complex	COUNTY : Durham
WELL LOCATION : SWMU 13		GEOLOGIST : Matt Scott
DATE DRILLED : 11-15-96	DRILL METHOD : Air Rotary	RIG : CME 850
TOTAL DEPTH : 30 FT. bgs	GROUND ELEV. : 370.45 FT.	TOC ELEV. : 373.39 FT.
STATIC WATER LEVEL : 15.6 FT. bgs	NORTHING : 790139.25	EASTING : 2039938.14
SURFACE CASING : 4 " ID. FROM 2.9 FT. TO -2.1 FT.		CASING TYPE : Schedule 10 Steel
WELL RISER : 2 " ID. FROM 2.9 FT. TO -19.5 FT.		CASING TYPE : Schedule 40 PVC
WELL SCREEN : 2 " ID. FROM -19.5 FT. TO -29.5 FT.		SCREEN TYPE : Sch. 40 PVC 0.010 slot

Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.



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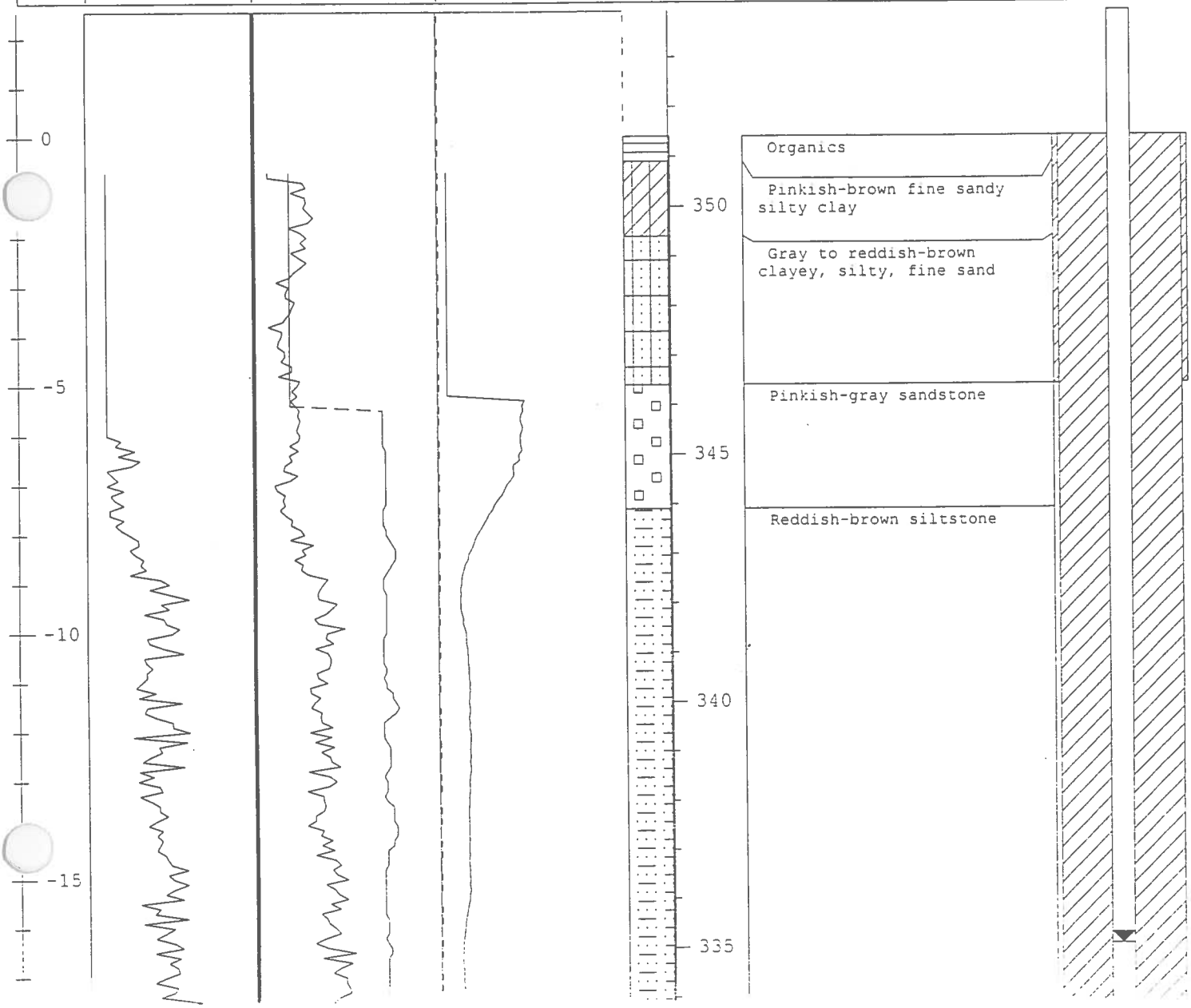
Boring Log
GW-32S

PROJECT NO. : 1054-96-554	SITE :Glaxo Wellcome South Campus, North Complex	COUNTY : Durham
WELL LOCATION : NNW of GW-6		GEOLOGIST : Samuel Watts
DATE DRILLED : 8-30-99	DRILL METHOD : Air Rotary	RIG : CME 850
TOTAL DEPTH : 32 FT. bgs	GROUND ELEV. : 350.8 FT.	TOC ELEV. : 353.33 FT.
STATIC WATER LEVEL : 16.34 FT. bgs	NORTHING : 788494.72	EASTING : 2038775.41
SURFACE CASING : 6.25" ID. FROM 0 FT. TO -5 FT.		CASING TYPE : Schedule 40 PVC
WELL RISER : 2 " ID. FROM 2.53 FT. TO -22 FT.		CASING TYPE : Schedule 40 PVC
WELL SCREEN : 2 " ID. FROM -22 FT. TO -32 FT.		SCREEN TYPE : Sch. 40 PVC 0.010 slot

Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.



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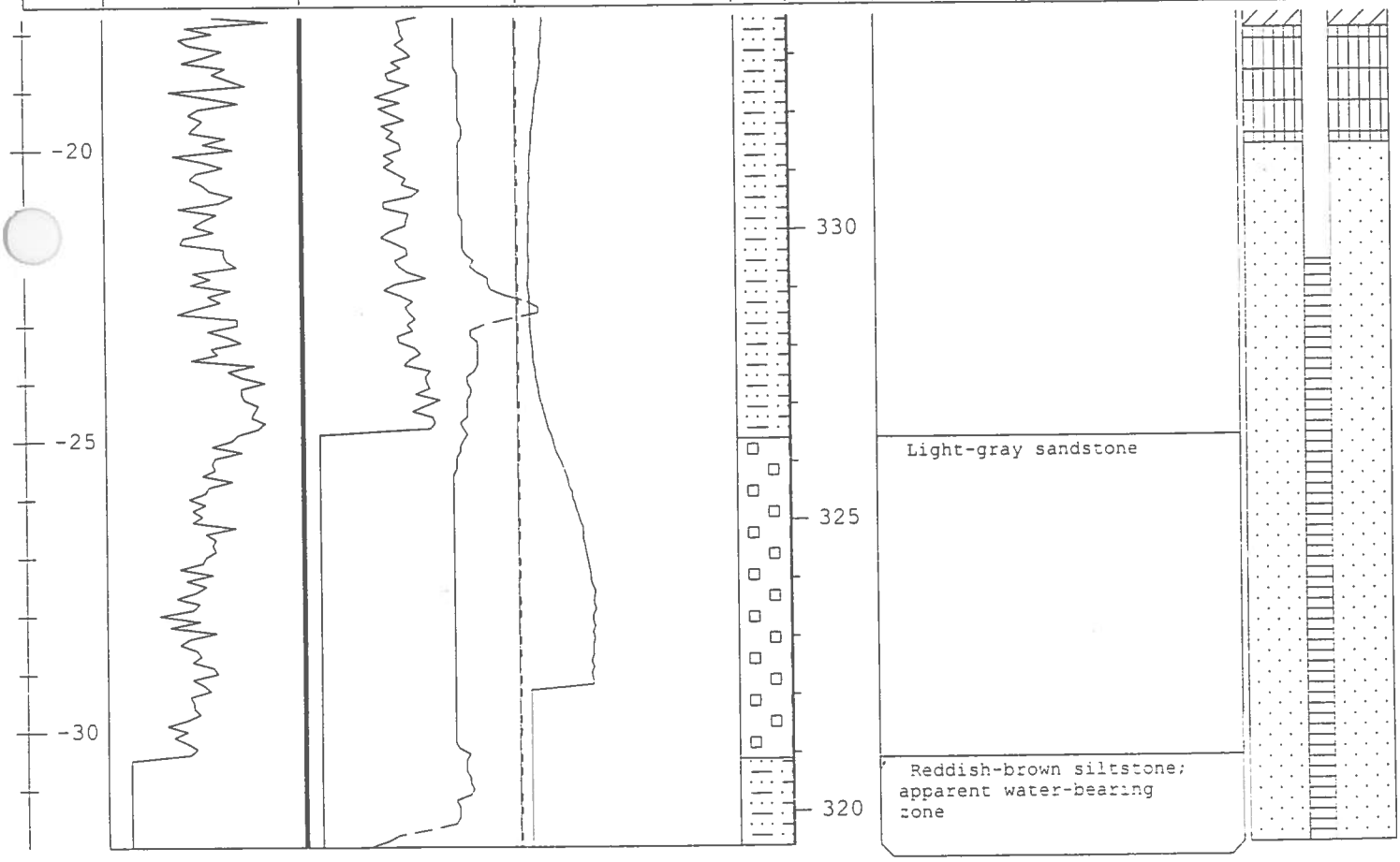
Boring Log
GW-32S

PROJECT NO. : 1054-96-554	SITE :Glaxo Wellcome South Campus, North Complex	COUNTY : Durham
WELL LOCATION : NNW of GW-6		GEOLOGIST : Samuel Watts
DATE DRILLED : 8-30-99	DRILL METHOD : Air Rotary	RIG : CME 850
TOTAL DEPTH : 32 FT. bgs	GROUND ELEV. : 350.8 FT.	TOC ELEV. : 353.33 FT.
STATIC WATER LEVEL : 16.34 FT. bgs	NORTHING : 788494.72	EASTING : 2038775.41
SURFACE CASING : 6.25" ID. FROM 0 FT. TO -5 FT.		CASING TYPE : Schedule 40 PVC
WELL RISER : 2 " ID. FROM 2.53 FT. TO -22 FT.		CASING TYPE : Schedule 40 PVC
WELL SCREEN : 2 " ID. FROM -22 FT. TO -32 FT.		SCREEN TYPE : Sch. 40 PVC 0.010 slot



Revised Table S-1
Summary of Groundwater Injection Wells
GlaxoSmithKline Permit Application No.WQ0034465

Site Area	SWMU 13														
Injection Well	**IW-01**	**IW-03**	**IW-05**	**IW-06**	**IW-08**	**IW-10**	**IW-11**	**IW-12**	**IW-14**	**IW-16**	**BNP-1/IW-17**	**IW-18**	**BR-1**	**BR-2**	**BR-3**
Characteristics	Class 5L	Class 5L	Class 5L	Class 5L	Class 5L	Class 5L Phase II	Class 5L Phase II	Class 5L Phase II	Class 5L	Class 5L Phase II	Class 5L Phase II	Class 5L Phase II	Class 5L	Class 5L	Class 5L
Groundwater VOC Concentration Range (Note 1)	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Injection Rate [gpm] (Note 2)	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20
Injection Pressure [PSI] (Note 3)	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150
nZVI Per Injection [kg/event] (Note 4)	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Water Source	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater
Soy Additions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
nZVI Slurry/Water Volume [gal/event] (Note 5)	740	740	740	740	740	740	740	740	740	740	740	740	740	740	740
Injection Events Per Year (Note 6)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total nZVI Injection Per Year (kg) (Note 7)	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
Total nZVI Injection Slurry per Year (gallons) (Note 8)	2959	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958
Maximum nZVI Injection Per Year [kg] (Note 9)	336	336	336	336	336	336	336	336	336	336	336	336	336	336	336
Maximum nZVI Slurry Per Year [gallons] (Note 9)	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550

Notes :
Information is summarized from the October 2009 Non-Discharge Permit Application, Revised July 2010 (Permit Application)
1. Concentration Ranges Per Table 3 of the Permit Application:
- •Concentrations for wells with high contamination are: in excess of 10,000 ug/L, typically 100,000 ug/L
- •Concentrations for wells with medium contamination are: total VOC in the order of 1,000 ug/L and less than 10,000 ug/L
- •Concentrations for wells with low contamination are: total VOC less than 1,000 ug/L

2. Injection Rate - based on solute tranport model results as described in Section 3 and Table 4 of the Permit Application.
3. Injection Pressure - The nZVI slurry injection pressures are based on pilot test results and correlation of fracture jacking/re-opening pressure and lithostaticpressure per Table 3 of the Permit Application.
4. nZVI per Injection - mass of nZVI required to achieve a slurry concentration of 25 g/L as described in Table 4 of the Permit Application.
5. nZVI Slurry/Water Volume - volume of nZVI slurry per Table 4 of the Permit Application.
6. Injections per Year - number of injections per year required to meet the contaminant reduciton goals within the area of nZVI influence per Table 4 of the Permit Application.
7. Total nZVI Injection per Year - mass of nZVI injected on an annual basis per Table 4 of the Permit Application.
8. Total nZVI Injection Slurry per Year - Estimated volume of nZVI slurry injected into the aquifer through a specific injection well per Table 4 of the Permit Application.
9. Maximum nZVI values include a 20% increase per Table 6 of the Permit Application.

Revised Table S-1
Summary of Groundwater Injection Wells
GlaxoSmithKline Permit Application No.WQ0034465

Site Area	SWMU 13											
Injection Well	**IW-02**	**IW-04/GW-04**	**IW-07**	**IW-09**	**IW-13**	**IW-15**	**IW-03D**	**IW-06D**	**IW-08D**	**IW-10D**	**IW-12D**	**IW-14D**
Characteristics	Class 5L Contingent	Class 5L Contingent	Class 5L Contingent	Class 5L Phase II Contingent	Class 5L Phase II Contingent	Class 5L Contingent	Class 5L	Class 5L	Class 5L	Class 5L Phase II	Class 5L Phase II	Class 5L
Groundwater VOC Concentration Range (Note 1)	High	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Injection Rate [gpm] (Note 2)	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20
Injection Pressure [PSI] (Note 3)	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150
nZVI Per Injection [kg/event] (Note 4)	70	40	40	40	40	40	40	40	40	40	40	40
Water Source	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater
Soy Additions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
nZVI Slurry/Water Volume [gal/event] (Note 5)	740	423	0	0	423	423	423	423	423	423	423	423
Injection Events Per Year (Note 6)	4	2	0	0	1	2	2	2	2	2	2	2
Total nZVI Injection Per Year (kg) (Note 7)	280	80	0	0	40	80	80	80	80	80	80	80
Total nZVI Injection Slurry per Year (gallons) (Note 8)	2960	845	0	0	423	845	845	845	845	845	845	845
Maximum nZVI Injection Per Year [kg] (Note 9)	336	96	0	0	48	96	96	96	96	96	96	96
Maximum nZVI Slurry Per Year [gallons] (Note 9)	3552	1014	0	0	507	1014	1014	1014	1014	1014	1014	1014

Notes :

1. Concentration Ranges Per Table 3 of the Permit Application:
   - Concentrations for wells with high contamination are: in excess of 10,000 ug/L, typically 100,000 ug/L
   - Concentrations for wells with medium contamination are: total VOC in the order of 1,000 ug/L and less than 10,000 ug/L
   - Concentrations for wells with low contamination are: total VOC less than 1,000 ug/L
2. Injection Rate - based on solute tranport model results as described in Section 3 and Table 4 of the Permit Application.
3. Injection Pressure - The nZVI slurry injection pressures are based on pilot test results and correlation of fracture jacking/re-opening pressure and lithostaticpressure per Table 3 of the Permit Application.
4. nZVI per Injection - mass of nZVI required to achieve a slurry concentration of 25 g/L as described in Table 4 of the Permit Application.
5. nZVI Slurry/Water Volume - volume of nZVI slurry per Table 4 of the Permit Application.
6. Injections per Year - number of injections per year required to meet the contaminant reduciton goals within the area of nZVI influence per Table 4 of the Permit Application.
7. Total nZVI Injection per Year - mass of nZVI injected on an annual basis per Table 4 of the Permit Application.
8. Total nZVI Injection Slurry per Year - Estimated volume of nZVI slurry injected into the aquifer through a specific injection well per Table 4 of the Permit Application.
9. Maximum nZVI values include a 20% increase per Table 6 of the Permit Application.

Revised Table S-1
Summary of Groundwater Injection Wells
GlaxoSmithKline Permit Application No.WQ0034465

Site Area	SWMU 15 and SWMU 16							AOC Area Along Stike of AOC GW-6 and AOC GW-6							AOC W-1
Injection Well	**IW-22**	**IW-23**	**IW-26**	**IW-28**	**IW-25**	**IW-27**	**IW-29**	**IW-30**	**IW-31**	**IW-32**	**IW-35**	**GW-32S**	**IW-33**	**IW-34**	**IW-36**
Characteristics	Class 5L	Class 5L	Class 5L	Class 5L	Class 5L	Class 5L	Class 5L	Class 5I	Class 5I	Class 5I	Class 5I	Class 5I	Class 5I	Class 5I	Class 5I
Groundwater VOC Concentration Range (Note 1)	Low	Low	Low	Low	Medium	Medium	Medium	Low	Low	Low	Low	Low	Medium	Medium	Medium
Injection Rate [gpm] (Note 2)	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20
Injection Pressure [PSI] (Note 3)	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150
nZVI Per Injection [kg/event] (Note 4)	20	20	20	20	40	40	40	20	20	20	20	20	40	40	40
Water Source	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water
Soy Additions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
nZVI Slurry/Water Volume [gal/event] (Note 5)	211	211	211	211	423	423	423	106	106	211	211	211	423	423	423
Injection Events Per Year (Note 6)	2	2	2	2	4	4	4	1	1	1	1	1	2	2	2
Total nZVI Injection Per Year (kg) (Note 7)	40	40	40	40	160	160	160	20	20	20	20	20	80	80	80
Total nZVI Injection Slurry per Year (gallons) (Note 8)	423	423	423	423	1691	1691	1691	106	106	211	211	211	845	845	845
Maximum nZVI Injection Per Year [kg] (Note 9)	48	48	48	48	192	192	192	24	24	24	24	24	96	96	96
Maximum nZVI Slurry Per Year [gallons] (Note 9)	507	507	507	507	2029	2029	2029	127	127	254	254	254	1014	1014	1014

Notes :

1. Concentration Ranges Per Table 3 of the Permit Application:
   - •Concentrations for wells with high contamination are: in excess of 10,000 ug/L, typically 100,000 ug/L
   - •Concentrations for wells with medium contamination are: total VOC in the order of 1,000 ug/L and less than 10,000 ug/L
   - •Concentrations for wells with low contamination are: total VOC less than 1,000 ug/L
2. Injection Rate - based on solute tranport model results as described in Section 3 and Table 4 of the Permit Application.
3. Injection Pressure - The nZVI slurry injection pressures are based on pilot test results and correlation of fracture jacking/re-opening pressure and lithostaticpressure per Table 3 of the Permit Application.
4. nZVI per Injection - mass of nZVI required to achieve a slurry concentration of 25 g/L as described in Table 4 of the Permit Application.
5. nZVI Slurry/Water Volume - volume of nZVI slurry per Table 4 of the Permit Application.
6. Injections per Year - number of injections per year required to meet the contaminant reduciton goals within the area of nZVI influence per Table 4 of the Permit Application.
7. Total nZVI Injection per Year - mass of nZVI injected on an annual basis per Table 4 of the Permit Application.
8. Total nZVI Injection Slurry per Year - Estimated volume of nZVI slurry injected into the aquifer through a specific injection well per Table 4 of the Permit Application.
9. Maximum nZVI values include a 20% increase per Table 6 of the Permit Application.

PURASAL® S

Description

PURASAL S is the sodium salt of natural L-Lactic acid, produced by fermentation of sugar. It has a mild saline taste, antimicrobial properties and is neutral by pH. PURASAL S is the ultra pure food grade L-sodium lactate.

Specification	Product	L-sodium lactate
Assay	Assay	58.8-61.2 % (w/w)
	Assay sodium	12.1-12.6 % (w/w)
	Stereochemical purity	min. 97 (% (S)-enantiomer)
Visual sensory characteristics	Clarity of solution	clear
	Color fresh	max. 25 Apha
	Form	syrupy liquid
Identification	Color reaction with catechol	passes test
	Density (20 °C)	1.32-1.34 g/ml
	Positive test for lactate	passes test
	Positive test for sodium	passes test
	Solubility	miscible with water
	Test after ignition	passes test
Purity	Acidity, as lactic acid	max. 0.3 % (w/w)
	Cyanide	max. 0.3 ppm
	Heavy metals total	max. 5 ppm
	Iron	max. 10 ppm
	Lead	max. 2 ppm
	Mercury	max. 1 ppm
	Citrate, oxalate, phosphate, tartrate	passes test
	Reducing substances	passes test
	Sugars	passes test
	Methanol / methylesters (as methanol)	max. 50 ppm
	Chlorides	max. 50 ppm
	Sulfates	max. 20 ppm
	Volatile fatty acids	passes test
	pH (direct)	7.8-8.3
	pH 1 + 5 (% v/v)	6.5-7.5
	pH 20% (v/v)	6.5-7.5
Physical-chemical-properties	Molecular formula	$CH_3CHOHCOONa$
	Molecular weight	112 (anhydrous)
	Chemical name	Sodium-L-2-hydroxypropanoate
Regulatory / Registration	CAS number	867-56-1 (general 72-17-3)
	EEC Additive number	E325 Sodium lactate
	INS	325 Sodium lactate
	GRAS status	21CFR184.1768
	Complies with	FCC, 231/2012/EC, JSFA, JECFA

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APPENDIX B-2

NOVEMBER 20, 2015 APPROVAL OF THE USE OF ABC LACTATE AND INOCULATION OF BACTERIA

From: Rogers, Michael
To: Eichlin, Brian
Cc: Watts, Debra; Bolich, Rick; Smith, Danny
Subject: RE: Groundwater Remediation Permit No. WQ0034465
Date: Friday, November 20, 2015 11:04:23 AM

Your request to inject the bacteria and lactate referenced below is reasonable and, therefore, is approved. This is conditional in that the injection occurs only in the previously permitted treatment area SWMU-13. Please provide an Injection Event Record (IER) when the injection is completed.

From: Eichlin, Brian [mailto:brian_eichlin@golder.com]
Sent: Thursday, November 19, 2015 12:55 PM
To: Rogers, Michael <michael.rogers@ncdenr.gov>
Subject: RE: Groundwater Remediation Permit No. WQ0034465

Hi Michael,

We recently completed our microcosm study for the Site. We identified an area of the Site (SWMU 13 shallow injection area) we would like to include an inoculation of bacteria during our next injection event. In addition to enhancing our ability to degrade TCE and vinyl chloride the bacteria should help degrade chloroform which we believe maybe inhibiting existing microorganisms. The bacteria is RTB-1 and is currently included in the approved list of injectant found on the NCDEQ website. As a source of lactate we will be using the ABC product distributed by Redox Tech which is also included in the approved list of injectant found on the NCDEQ website.

We are planning to complete this injection in the near future and will notify the Raleigh regional office as noted below. Please let me know if the injection of the bacteria is acceptable. Please let me know if you have any concerns or require additional information.

Thank you,

Brian Eichlin

From: Rogers, Michael [mailto:michael.rogers@ncdenr.gov]
Sent: Wednesday, July 22, 2015 1:21 PM
To: Eichlin, Brian
Subject: RE: Groundwater Remediation Permit No. WQ0034465

Thanks for the additional info. I'll add this to the file as supplemental work under the existing permit. Please provide GW1s/GW-30s for injection wells and Injection Event Records when and where applicable.

From: Eichlin, Brian [mailto:brian_eichlin@golder.com]
Sent: Wednesday, July 22, 2015 8:44 AM
To: Rogers, Michael
Cc: Lindsey Walata (lindsey.c.walata@gsk.com)
Subject: RE: Groundwater Remediation Permit No. WQ0034465

Hi Michael.

Hope you are doing well. I left you message this morning. If you have an opportunity I would like get an update on your review and try to answer any questions you may have. We are interested in moving forward with this work as soon as possible. Thank you

Brian Eichlin (336) 852-4903

From: Eichlin, Brian
Sent: Wednesday, July 01, 2015 4:17 PM
To: 'Rogers, Michael'
Cc: Lindsey Walata (lindsey.c.walata@gsk.com)
Subject: Groundwater Remediation Permit No. WQ0034465

Michael,

Please find attached the requested information. The text of this email is also provided as an attached PDF to facilitate your review. Please let me know if you have any questions.

Golder Associates, on behalf of GSK, submitted to the Waste Management and Water Resources Divisions of NCDENR the First Annual Assessment Report (Annual Report) (Golder Associates, May 2015) covering the December 2013 to March 2015 reporting period in accordance with the requirements of the Groundwater Remediation Permit #WQ0034465 (Permit) dated December 10, 2010. The Permit includes 41 injection wells for injection of zero valent iron (ZVI) and soy powder of which 35 wells have been constructed. As requested in your email, below is a brief discussion on the compliance monitoring trends, recommendations, and proposed changes to the injection program as detailed in the Annual Report.

The first year of the ZVI injection program has significantly reduced Site-wide concentrations of TCE including an order of magnitude reduction in portions of the SWMU 13 shallow zone. While concentration increases of breakdown compounds cis 1,2-DCE and VC have been observed in select wells, total c-VOCs on a carbon molar base are declining. The Annual Report recommended continued injections of ZVI with the following enhancements to the remedy to include:

- The moderate increases in ethene may indicate that an insufficient micro-organism colony exists or that carbon in the soy and propylene glycol previously injected is too complex for the existing micro-organisms to readily assimilate. The use of sodium lactate as an alternative carbon source is proposed. A microcosm study will be completed in the SWMU 15/16 (GW-16S), SWMU 13 shallow (GW-4) and SWMU 13 deep (GW-4I or P-6) treatment zone to evaluate if an inoculation of micro-bacteria is needed to enhance bioremediation of the c-VOCs;
- The installation of a new injection well (IW-02) is proposed to the east of IW-16 to improve the radius of influence within the SWMU 13 shallow injection network (shown on the attached revised Figure 6B from the Non-Discharge Permit Application (Permit Application) (Golder Associates, November 2010);
- Injections in GW-4 are recommended to enhance remediation in the SWMU 13 shallow zone down-gradient of the BNP-1/IW-17 area as well as down-gradient of GW-4; (shown on revised Figure 6B); and,
- The AOC GW-6 injection well network be expanded to include injection up-gradient of GW-6 at monitoring well GW-32S (shown on revised Figure 6B).

SWMU-13 and SWMU-15/16

Since extracted groundwater is used to mix the injectant slurry, as shown on the revised Figure 6B, the Permit established a Compliance and Review Boundary around the combined Area of Influence/Waste Boundary for the SWMU 13 and SWMU 15/16 target injection zones. As specified by Permit Condition VIII (3), the Compliance Boundary applies only to the constituents of the injectant slurry (i.e. extracted groundwater and ZVI) and does not apply to existing groundwater impacts. The Permit identified eight (8) monitoring wells (GW-1A, GW-1A-D, GW-18S, MW-10, MW-12, GW-30S, GW-30I and MW-13) to be monitored to assess the potential migration of injectants and spread of the existing contamination as a result of injection activities.

As presented on Figure 4A and Figure 4B of the Annual Report, the trends for reported concentrations for TCE in the SWMU 13 and SWMU 15/16 compliance monitoring demonstrate that the injections of a slurry of treated groundwater is not causing an exceedance of an NC2L standard for VOCs at the Compliance Boundary and is not causing the migration of existing contamination into undesired areas. As presented on Figure 8 of the Annual Report, the reported concentrations for total iron in the SWMU 13 and SWMU 15/16 compliance monitoring wells fluctuated during the reporting period but were reported to be less than the baseline monitoring event and/or the historical Site-wide arithmetic mean with the exception of GW-1A and GW-1AS which are proposed for additional purging/well redevelopment.

GSK proposes to construct the permitted but unconstructed SWMU 13 contingent injection well IW-02 at the location shown on revised Figure 6B. The constructed IW-02 will be a Class 5L well for injection of injectants mixed with extracted and partially treated groundwater as defined in the Permit. The permitted maximum ZVI slurry volume for IW-02, as shown on Table S-1 of the Permit Application, is 1,014 gallons per year. It is requested that the maximum ZVI slurry volume for IW-02 be increased to the same permit limit as IW-16 of 3,550 gallons per year. This increase will not impact the overall permitted volume of injection slurry since SWMU 13 contingent injections wells IW-07, IW-09, IW-13 and IW-15 have not been constructed. A revised Table S-1 showing this change is attached and in Appendix I of the Annual Report.

GSK proposes the designation of existing monitoring well GW-4 as a Class 5L injection well for injection of injectants mixed with extracted and partially treated groundwater. GW-4 will replace unconstructed SWMU 13 contingent injection well IW-04 as shown on the revised Figure 6B. The maximum permitted ZVI slurry volume for IW-04 as shown on Table S-1 of the Permit Application is 1,014 gallons per year. The boring log for GW-4 from the RFI is attached.

As shown on the revised Figure 6B, the proposed new location of IW-02 and existing monitoring GW-4 (proposed IW-04) are located with the Permit defined Zone of Influence/Waste Boundary. As described above the Compliance Boundary monitoring results for the reporting period do not indicate a migration of injectants or the spread of the existing contamination as a result of injection activities at SMWU 13. Rather, the monitoring results for GW-22S (down-gradient from GW-4) and GW-20S (down-gradient from proposed new location of IW-02) show declining trends of total c-VOCs. The existing compliance monitoring well network should be sufficient to monitor for impacts associated with these injections. In addition, as presented on Figure 2 of the Annual Report, down-gradient monitoring wells GW-22S and GW-20S will continue to be monitored quarterly for VOCs and for the next year will be monitored quarterly for methane/ethane/ethene gases, TOC and total iron.

AOC GW-6 and AOC GW-6 Strike

Since potable water is used to mix the injectant slurry, AOC GW-6 and AOC GW-6 Strike do not have a Compliance or Review Boundary. The Permit identified three monitoring wells (GW-7, GW-8 and MW-11) to assess the potential migration of injectants and spread of the existing contamination as a result of injection activities.

GSK is requesting that GW-32S be designated as a Class 5I injection well for potable water injections at AOC GW-6. As presented on revised Figure 6B, monitoring well GW-32S is located within the permitted Target ZVI Injection Area for the AOC GW-6 and AOC GW-6 Strike treatment zones. The boring log for GW-32S is attached.

As presented on Table S-1 of the Permit Application, the maximum permitted yearly volume of ZVI slurry for AOC GW-6 and AOC GW-6 Strike is 4,058 gallons. As presented in the revised Table S-1, a decrease in the maximum permitted yearly volume of ZVI slurry for injection wells IW-30 and IW-31 is proposed to offset the addition of GW-32S as a Class 5I injection well. Reduced injection quantities at IW-30 and IW-31 should be acceptable since the baseline concentrations for TCE were reported to be below the NC2L standards for IW-30 and IW-31.

As described in Section 5 of the Annual Report, the compliance well monitoring results at AOC GW-6 and AOC GW-6 Strike for the reporting period do not indicate migration of injectants or the spread of the existing contamination as a result of injection activities. Rather, monitoring results at GW-6 show a declining trend of total c-VOCs. The existing compliance monitoring well network should be sufficient to monitor for impacts associated with injections at GW-32S since it is located up-gradient of the existing AOC GW-6 injection wells. In addition, as presented on Figure 2 of the Annual Report, GW-6 will continue to be monitored quarterly for VOCs, and for the next year GW-6 will be monitored quarterly for methane/ethane/ethene gases, TOC, and total iron.

Injection of Alternative Carbon Sources and Micro-Bacteria

GSK is requesting the ability, as needed based on a review of analytical data and the planned microcosm study, to inject sodium lactate as a substitute for soy powder during future injections and add microorganisms listed on NCDENR's approved injectant list. Sodium lactate will be added to increase available TOC concentrations in the treatment zones by 20 mg/l. Repeat injections will be required to replace available TOC that is consumed by micro-organisms. It is expected that up to 1,200 lbs of sodium lactate will be required for the initial injection and up to 600 lbs for follow-up injections that will be completed at frequency no greater than quarterly. The estimated yearly injections of sodium lactate will be less than the Permit yearly estimated value of 3,200 lbs of soy. Sodium lactate will be mixed in injection water at up to 20% by volume of injection water. Future injection events may periodically include the injection of potable water (AOC GW-6 Strike, AOC GW-6 and AOC W-1) or extracted treated groundwater (SWMU 13 shallow, SWMU 13 deep and SWMU 15/16) mixed with sodium lactate or soy powder only (i.e. without the addition of ZVI materials) at Permit injection volumes presented on revised Table S-1 as attached and in the Annual Report. A Safety Data Sheet for the sodium lactate is attached.

Summary

With your approval, we would like to move forward with the injection of sodium lactate during the next quarterly event scheduled for August 2015, including injection at GW-32S and IW-04 (GW-4), and would like to initiate construction of injection well IW-02. The construction of injection well IW-02 will follow construction details as described in Section 3.1 and as shown on Figure 9 of the Permit Application. The construction will be conducted in accordance with the Permit requirements including:

Item 7: Pursuant to rule 15A NCAC 2C .0211(h), following completion of construction of IW-02, GSK will submit a notice of completion of construction to the Raleigh Regional Office prior to injection. Injection will not commence until the regional office staff has inspected or otherwise reviewed the injection well and finds it in compliance with the permit. If GSK has not received notice from the Raleigh Regional Office of the intent to inspect or otherwise review the injection well within 10 days after the regional office has received the notice, GSK may commence operation of the injection well. Additionally, in accordance with 15A NCAC 2C .0114(b)(2), GSK will submit a GW-1 Well Construction Record to the Raleigh Regional Office within 30 days after completion.

Item 9: GSK will notify the Raleigh Regional Office at least 48 hours prior to the construction of injection well IW-02 so that an inspection can be made of the well location. Notification will be made during normal office hours from 8 am to 5 pm, Monday through Friday.

Item 10: Within 60 days of completion of injection well IW-02, GSK will submit two (2) original copies of a scaled site map to include this well and include the information described in Item 10 (a) through (f).

Should you have any questions or comments regarding this request or require additional information please do not hesitate to contact Lindsey Walata of GSK at (919) 483-4640 or me at (336) 852-4903.

Thank you.

Brian

From: Rogers, Michael [mailto:michael.rogers@ncdenr.gov]
Sent: Tuesday, June 23, 2015 2:18 PM
To: Eichlin, Brian
Cc: Lindsey Walata (lindsey.c.walata@gsk.com)
Subject: RE: Groundwater Remediation Permit No. WQ0034465

Brian-

I discussed this with Thomas as he was handling this issue before he transferred to DWM. A permit mod is not necessary along as the compliance boundary will not be affected by this revised injection plan. If the boundary will not be affected, just indicate in reply to this email the following:

1. The proposed revision in wells you are going to be using for injection (attach GW-1s if available).
2. Injectant (attach MSDS sheets).
3. Brief explanation/assurance on how the CB will not be affected.

Thanks

From: Eichlin, Brian [mailto:brian_eichlin@golder.com]
Sent: Monday, June 22, 2015 3:25 PM
To: Rogers, Michael
Cc: Lindsey Walata (lindsey.c.walata@gsk.com)
Subject: Groundwater Remediation Permit No. WQ0034465

Michael

Thank you for taking the time to discuss the GlaxoSmithKline South Campus, North Complex Site in Research Triangle Park (Permit No. WQ0034465). On-behalf of GSK, Golder submitted the First Annual Assessment Report to NCDENR on May 15, 2015. The Report included a request to modify the injection program to include new injection locations and supplement the injections with sodium lactate as an alternative carbon source to the permitted soy powder. The proposed modifications to the injection program will not increase the annual volume of injection slurry or total number of permitted injection wells. The additional injection locations would replace unconstructed contingent injection wells that are included in the permit. We would like NCDENR's approval to move forward with the recommendations outlined in the report. If it would be helpful for your review, we will come to your office to discuss the project.

Please let me know if you have any questions.

Thank you

Brian Eichlin, P.E. | Principal | **Golder Associates NC, Inc.**
5B Oak Branch Drive, Greensboro, North Carolina, USA 27407
T: +1 (336) 852-4903 | **D:** (336) 398-2809 | **F:** +1 (336) 852-4904 | **C:** (336) 402-9964 | **E:** brian_eichlin@golder.com | **www.golder.com**

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APPENDIX B-3

DECEMBER 2015 INJECTION EVENT RECORD

0739-6115
F/N 175.6
"December 2016 Injection Form"

INJECTION EVENT RECORD

North Carolina Department of Environment and Natural Resources – Division of Water Resources
Permit Number WQ0034465

1. **Permit Information**

GlaxoSmithKline
Permittee

South Campus, North Complex
Facility Name

3029 E. Cornwallis Rd, Durham, NC
Facility Address

2. **Injection Contractor Information**

Redox Tech, LLC
Injection Contractor / Company Name

Street Address 200 Quade Drive

Cary	NC	27513
City	State	Zip Code

(919) 678 - 0140
Area code – Phone number

3. **Well Information**

Number of wells used for injection 10

Well names IW-02, IW-08, IW-12, IW-14, IW-16, IW-17, IW-18, BR-1, BR-3, GW-4

Were any new wells installed during this injection event?
☐ Yes ☒ No

If yes, please provide the following information:

Number of Monitoring Wells N/A

Number of Injection Wells N/A

Type of Well Installed (Check applicable type):
☐ Bored ☐ Drilled ☐ Direct-Push
☐ Hand-Augured ☐ Other (specify) _____

Please include a copy of the GW-1 form for each well installed.

Were any wells abandoned during this injection event?
☐ Yes ☒ No

If yes, please provide the following information:

Number of Monitoring Wells N/A

Number of Injection Wells N/A

Please include a copy of the GW-30 for each well abandoned.

4. **Injectant Information**

RTB-1 (TCA-20) microbial consortium
Injectant Type

Concentration 1.1 %

If the injectant is diluted please indicate the source dilution fluid. Groundwater

Total Volume Injected 19 L

Volume Injected per well 1.9 L

5. **Injection History**

Injection date(s) 12/15-19/2015

Injection number (e.g. 3 of 5) 1 of 1

Is this the last injection at this site?
☐ Yes ☒ No

I DO HEREBY CERTIFY THAT ALL THE INFORMATION ON THIS FORM IS CORRECT TO THE BEST OF MY KNOWLEDGE AND THAT THE INJECTION WAS PERFORMED WITHIN THE STANDARDS LAID OUT IN THE PERMIT.

Gary Meyers 2-9-16
SIGNATURE OF INJECTION CONTRACTOR DATE

GARY MEYERS
PRINT NAME OF PERSON PERFORMING THE INJECTION

Submit the original of this form to the Division of Water Resources within 30 days of injection.
Attn: UIC Program, 1636 Mail Service Center, Raleigh, NC 27699-1636, Phone No. 919-807-6464

Form UIC-IER
Rev. 8/5/2013

Golder Associates
5B Oak Branch Drive
Greensboro, NC 27407-2157

UNITED STATES POSTAGE
PITNEY BOWES
02 1P $000.48[5]
0003257537 FEB 10 2016
MAILED FROM ZIP CODE 27407

Division of Water Resources
Attn: UIC Program
1636 Mail Service Center
Raleigh, NC 27699-1636

FILE COPY

Eichlin, Brian

From: John Haselow <jhaselow@redox-tech.com>
Sent: Wednesday, February 10, 2016 9:03 AM
To: Childress, Daniel
Cc: Eichlin, Brian
Subject: Re: Injection Event Record - December 2015 - GSK

Hi Daniel -- I think for the bacteria, I would put RTB-1 and then put TCA-20 in parantheses next to it. The state has RTB-1 on their approved list.

Thanks -- I think it will avoid some unnecessary questions.

John

John Haselow, PhD, PE
President
Redox Tech, LLC
200 Quade Drive
Cary, NC 27513
P. 919.678.0140
F. 919.678.0150
C. 919.906.4999

------ Original Message ------
From: "Childress, Daniel" <Daniel_Childress@golder.com>
To: "John Haselow (jhaselow@redox-tech.com)" <jhaselow@redox-tech.com>
Cc: "Eichlin, Brian" <brian_eichlin@golder.com>
Sent: 2/9/2016 5:39:21 PM
Subject: Injection Event Record - December 2015 - GSK

Hi John,

Please see the attached Injection Event Record [NCDEQ Form UIC-IER] for the December 2015 injection event at GSK. We are submitting this form for the amendment of TCA-20 as an additional injectant. Please review the form and return signed if no changes are needed.

Thanks,
Dan

Daniel Childress, CEP-IT | Staff Environmental Scientist | **Golder Associates NC, Inc.**
C: +1 (919) 410-4739 | **E:** Daniel_Childress@golder.com | **www.golder.com**

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APPENDIX B-4

IW-02 CONSTRUCTION DOCUMENTATION AND SCALED MAP

From:	Eichlin, Brian
To:	Eric.Rice@ncdenr.gov; "Rogers, Michael"
Cc:	Lindsey Walata (lindsey.c.walata@gsk.com); Childress, Daniel
Subject:	Record of Injection Well Construction - Groundwater Remediation Permit No. WQ0034465
Date:	Tuesday, January 26, 2016 12:40:00 PM
Attachments:	IW-2 Construction Record SAEDACCO.pdf

Eric and Michael,

Please find attached a Form GW-1 for the recently construction injection well IW-2 for the GlaxoSmithKline, South Campus, North Complex, RTP, NC remediation system (Groundwater Remediation Permit No. WQ0034465). The well was constructed by SAEDACCO. I am sending this to you for informational purposes as your departments should have received a copy of the form directly from SAEDACCO.

Should you have any questions, please do not hesitate to contact me.

Thank you

Brian Eichlin, P.E. | Principal | **Golder Associates NC, Inc.**
5B Oak Branch Drive, Greensboro, North Carolina, USA 27407
T: +1 (336) 852-4903 | **D:** +1 (336) 398-2809 Ext. 42509 | **F:** +1 (336) 852-4904 | **C:** 336 402-9964 | **E:** brian_eichlin@golder.com | **www.golder.com**

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10782

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

For Internal Use ONLY:

1. Well Contractor Information:

Will Keyes
Well Contractor Name

4220A
NC Well Contractor Certification Number

SAEDACCO Inc
Company Name

2. Well Construction Permit #: _____
List all applicable well permits (i.e. County, State, Variance, Injection, etc.)

3. Well Use (check well use):

Water Supply Well:
- ☐ Agricultural
- ☐ Municipal/Public
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Residential Water Supply (single)
- ☐ Industrial/Commercial
- ☐ Residential Water Supply (shared)
- ☐ Irrigation

Non-Water Supply Well:
- ☐ Monitoring
- ☐ Recovery

Injection Well:
- ☐ Aquifer Recharge
- ☒ Groundwater Remediation
- ☐ Aquifer Storage and Recovery
- ☐ Salinity Barrier
- ☐ Aquifer Test
- ☐ Stormwater Drainage
- ☐ Experimental Technology
- ☐ Subsidence Control
- ☐ Geothermal (Closed Loop)
- ☐ Tracer
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Other (explain under #21 Remarks)

4. Date Well(s) Completed: 10-21-15 **Well ID#** IW-2

5a. Well Location:

GSK
Facility/Owner Name

Facility ID# (if applicable)

3029 E Cornwallis Rd, Durham, NC, 27703
Physical Address, City, and Zip

USA
County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35.917984 N -78.866075 W

6. Is (are) the well(s): ☒ **Permanent** or ☐ **Temporary**

7. Is this a repair to an existing well: ☐ **Yes** or ☒ **No**
If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1
For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 40 (ft.)
For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 26 (ft.)
If water level is above casing, use "+"

11. Borehole diameter: 4 1/2" (in.)

12. Well construction method: sonic
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	30 ft.	6" in.	schd 40	PVC

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
ft.	ft.		
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	12 ft.	brown silt
12 ft.	17 ft.	brown PWR
17 ft.	40 ft.	mudstone/sandstone
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor — Date: 10/23/2015

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. **For All Wells:** Submit this form within 30 days of completion of well construction to the following:

Division of Water Resources, Information Processing Unit.
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. **For Injection Wells ONLY:** In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. **For Water Supply & Injection Wells:**
Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

December 8, 2015

Project No.: 0739-6115

NCDEQ
Division of Water Resources
Groundwater Protection Unit
1636 Mail Service Center
Raleigh, NC 27699-1636

Attn: Michael Rogers

NCDEQ
Division of Water Resources
Aquifer Protection Section
3800 Barrett Drive
Raleigh, NC 27609

Attn: Eric Rice

RE: **Submission of Scaled Site Map**
Groundwater Remediation Permit No. WQ0034465
GlaxoSmithKline, South Campus, North Complex, RTP, NC
RCRA Permit #NCD052547635

Golder Associates NC, Inc. (Golder), on behalf of GlaxoSmithKline (GSK), is submitting to North Carolina Department of Environmental Quality (NCDEQ) two copies of revised scaled site maps as required by Permit Condition III.10. The maps were revised from those previously submitted on May 25, 2012 to include the recently completed installation of contingent well IW-2 and conversion of GW-4 and GW-32S to injection wells. These additional injection points were recommended in the First Annual Assessment Report: December 2013 - March 2015 Reporting Period (Golder Associates, May 15, 2015) and approved for installation by NCDEQ in an email dated July 22, 2015.

Should you have any questions or comments regarding the Permit Application or require additional information, please do not hesitate to contact Lindsey Walata of GSK at (919) 483-4640 or Brian Eichlin at (336) 852-4903.

Sincerely,

GOLDER ASSOCIATES NC, INC.

Brian J. Eichlin, P.E.
Principal

Attachments:

1) Figure 1 – Site Map Groundwater Remediation System As-built Permit No. WQ0034465, Golder Associates Inc., Revised December 3, 2015

cc: Lindsey Walata, GlaxoSmithKline (Electronic Only)
Robert McDaniel, NCDEQ DWM, Hazardous Waste Section – with attachment

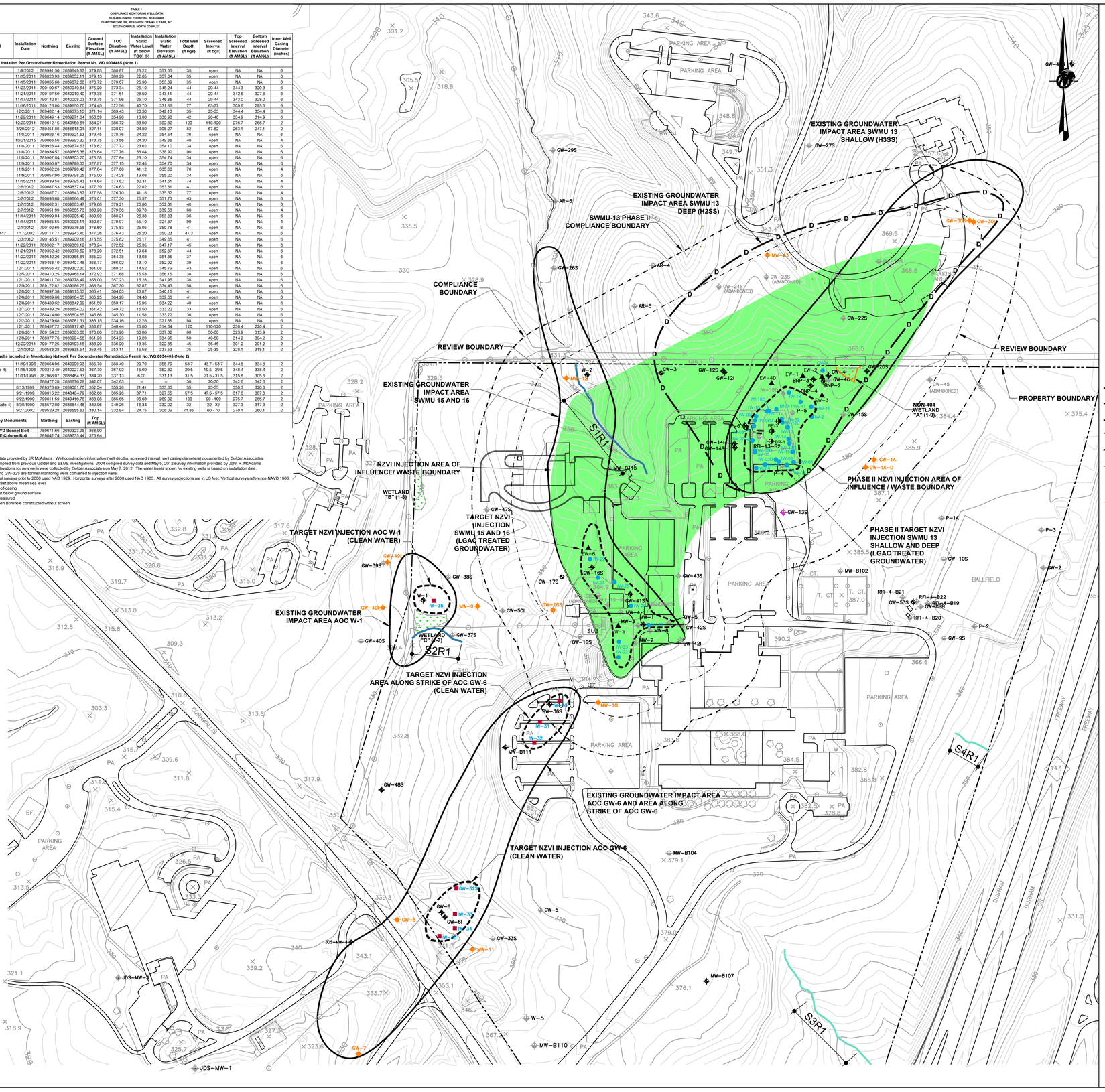
G:\Projects\GSK RTP Operations\Regulatory\Record of IW-2 Injection Wells\Final Cover Letter 12-08-15 .docx

TABLE 1
COMPLIANCE MONITORING WELL DATA
NON-DISCHARGE PERMIT No. WQ0034465
GLAXOSMITHKLINE, RESEARCH TRIANGLE PARK, NC
SOUTH CAMPUS, NORTH COMPLEX

Well	Installation Date	Northing	Easting	Ground Surface Elevation (ft AMSL)	TOC Elevation (ft AMSL)	Installation Static Water Level (ft below TOC) (3)	Installation Static Water Elevation (ft AMSL)	Total Well Depth (ft bgs)	Screened Interval (ft bgs)	Top Screened Interval Elevation (ft AMSL)	Bottom Screened Interval Elevation (ft AMSL)	Inner Well Casing Diameter (inches)
New Wells Installed Per Groundwater Remediation Permit No. WQ 0034465 (Note 1)												
BR-1	1/9/2012	789661.58	2038648.87	379.85	380.87	23.22	357.65	35	open	NA	NA	6
BR-2	11/15/2011	790023.93	2039852.11	379.13	380.29	22.65	357.64	35	open	NA	NA	6
BR-3	11/15/2011	790055.68	2039872.68	378.72	379.87	25.98	353.89	35	open	NA	NA	6
EW-1	11/23/2011	790199.67	2039949.64	375.20	373.34	25.10	348.24	44	29-44	344.3	329.3	6
EW-2	11/21/2011	790197.59	2040010.40	373.38	371.61	28.50	343.11	44	29-44	342.6	327.6	6
EW-3	11/17/2011	790142.81	2040008.03	373.75	371.96	25.10	346.86	44	29-44	343.0	328.0	6
EW-4D	11/16/2011	790176.00	2039850.70	374.45	372.56	40.70	331.86	77	63-77	309.6	295.6	6
EW-5	12/2/2011	789402.14	2039373.15	371.14	369.43	20.30	349.13	35	25-35	344.4	334.4	6
EW-6	11/29/2011	789649.14	2039271.84	356.59	354.90	18.00	336.90	42	20-40	334.9	314.9	6
GW-1A-D	12/20/2011	789612.15	2040150.61	384.21	386.72	83.90	302.82	120	110-120	276.7	266.7	2
GW-48I	3/29/2012	789451.86	2038618.01	327.11	330.07	24.80	305.27	82	67-82	263.1	247.1	2
IW-01	11/8/2011	789626.16	2039921.53	379.45	378.76	24.22	354.54	36	open	NA	NA	6
IW-02	10/21/2015	790066.56	2039993.32	373.75	373.56	24.20	349.36	40	open	NA	NA	4
IW-03	11/8/2011	789228.44	2039874.63	378.62	377.72	23.62	354.10	34	open	NA	NA	6
IW-03D	11/8/2011	789934.57	2039865.38	378.64	377.76	38.84	338.92	90	open	NA	NA	6
IW-05	11/8/2011	789607.04	2039803.20	378.58	377.84	23.10	354.74	34	open	NA	NA	6
IW-06	11/9/2011	789697.67	2039798.33	377.87	377.15	22.45	354.70	34	open	NA	NA	6
IW-06D	11/9/2011	789662.28	2039798.42	377.84	377.00	41.12	335.88	76	open	NA	NA	4
IW-08	11/9/2011	790057.90	2039798.25	375.00	374.28	19.08	355.20	34	open	NA	NA	6
IW-08D	11/15/2011	790039.58	2039795.43	374.64	373.82	32.31	341.51	74	open	NA	NA	4
IW-10	2/8/2012	790087.53	2039837.14	377.39	376.63	22.82	353.81	41	open	NA	NA	6
IW-10D	2/8/2012	790087.71	2039843.87	377.58	376.70	41.18	335.52	77	open	NA	NA	4
IW-11	2/7/2012	790093.68	2039865.49	378.01	377.30	25.57	351.73	43	open	NA	NA	6
IW-12	2/7/2012	790062.31	2039883.47	379.88	379.21	26.60	352.61	40	open	NA	NA	6
IW-12D	2/7/2012	790051.99	2039885.73	380.20	379.36	39.78	339.58	88	open	NA	NA	4
IW-14	11/14/2011	789699.04	2039905.49	380.90	380.21	26.38	353.83	36	open	NA	NA	6
IW-14D	11/14/2011	789685.55	2039908.11	380.87	379.97	55.10	324.87	90	open	NA	NA	4
IW-16	2/1/2012	790102.66	2039976.58	376.60	375.83	25.05	350.78	41	open	NA	NA	6
BNP-1 / IW-17	7/17/2002	790117.77	2039943.40	377.26	376.43	26.20	350.23	41.3	open	NA	NA	6
IW-18	2/3/2012	790145.51	2039909.18	378.55	375.82	26.17	349.65	41	open	NA	NA	6
IW-22	11/22/2011	789302.17	2039369.12	373.24	372.52	25.35	347.17	45	open	NA	NA	6
IW-23	11/21/2011	789352.42	2039370.62	373.20	372.51	19.64	352.87	44	open	NA	NA	6
IW-25	11/22/2011	789542.26	2039355.81	365.23	364.38	13.03	351.35	37	open	NA	NA	6
IW-26	11/22/2011	789468.10	2039407.46	366.77	366.02	13.10	352.92	39	open	NA	NA	6
IW-27	12/1/2011	789556.42	2039302.30	361.08	360.31	14.52	345.79	43	open	NA	NA	6
IW-28	12/5/2011	789410.25	2039469.14	372.92	371.68	15.53	356.15	38	open	NA	NA	6
IW-29	12/1/2011	789611.70	2039278.49	358.00	357.23	15.28	341.95	38	open	NA	NA	6
IW-30	12/6/2011	789172.82	2039189.25	368.54	367.30	32.87	334.43	50	open	NA	NA	6
IW-31	12/8/2011	789097.38	2039115.53	365.41	364.03	23.87	340.16	41	open	NA	NA	6
IW-32	12/8/2011	789039.66	2039104.65	365.25	364.28	24.40	339.88	41	open	NA	NA	6
IW-33	12/8/2011	788480.62	2038842.09	351.59	350.17	15.95	334.22	40	open	NA	NA	6
IW-34	12/7/2011	788439.29	2038854.02	351.42	349.72	16.50	333.22	33	open	NA	NA	6
IW-35	12/7/2011	788414.00	2038884.85	348.86	345.30	11.58	333.72	30	open	NA	NA	6
IW-36	12/2/2011	788479.68	2039781.31	333.15	334.16	12.28	321.88	66	open	NA	NA	6
IW-8	12/1/2011	789457.72	2039917.47	336.87	340.44	25.80	314.64	120	110-120	230.4	220.4	2
MW-10	12/8/2011	789154.22	2039033.68	370.80	373.90	36.88	337.02	60	50-60	323.9	313.9	2
MW-11	12/8/2011	788377.76	2038904.56	351.20	354.23	19.28	334.95	50	40-50	314.2	304.2	2
MW-12	12/22/2011	790177.25	2039193.15	333.20	336.20	13.35	322.85	45	35-45	301.2	291.2	2
MW-13	2/1/2012	790583.28	2039835.54	353.45	353.11	15.58	337.53	35	25-35	328.1	318.1	2
Existing Wells Included in Monitoring Network Per Groundwater Remediation Permit No. WQ 0034465 (Note 2)												
GW-1A	11/19/1996	789854.96	2040099.93	385.70	388.49	29.70	358.79	53.7	43.7 - 53.7	344.8	334.8	2
GW-4 (Note 4)	11/15/1996	790212.49	2040027.53	387.70	387.92	15.60	352.32	29.5	19.5 - 29.5	348.4	338.4	2
GW-7	11/11/1996	787968.07	2038464.33	334.20	337.13	6.00	331.13	31.5	21.5 - 31.5	315.6	305.6	2
GW-8		788477.28	2038676.28	342.07	342.63	--	--	30	20-30	342.6	342.6	2
GW-18S	8/13/1999	789378.69	2039081.70	352.54	355.26	21.41	333.85	35	25-35	330.3	320.3	2
GW-30S	9/21/1999	790615.22	2040404.79	362.66	365.26	37.71	327.55	57.5	47.5 - 57.5	317.8	307.8	2
GW-36I	8/20/1999	790611.59	2040418.78	363.08	365.65	96.63	269.02	100	90-100	273.7	263.7	2
GW-32S (Note 4)	8/30/1999	788572.80	2038844.48	349.96	349.26	16.34	332.92	32	22 - 32	327.3	317.3	2
GW-49I	9/27/2002	789629.28	2038555.63	330.14	332.84	24.75	308.09	71.85	60 - 70	270.1	260.1	2

Site Survey Monuments	Northing	Easting	Top (ft AMSL)
#1 FHYD Bonnet Bolt	789671.66	2039323.95	368.90
# 2 SE Column Bolt	789642.74	2039739.44	378.64

Notes:
1) Survey data provided by JR McAdams. Well construction information (well depths, screened interval, well casing diameters) documented by Golder Associates.
2) Data compiled from previous Golder and S&ME investigations, 2004 compiled survey data and May 5, 2012 survey information provided by John R. McAdams
3) Water Elevations for new wells were collected by Golder Associates on May 7, 2012. The water levels shown for existing wells is based on installation date.
4) GW-4 and GW-32S are former monitoring wells converted to injection wells
5) Horizontal surveys prior to 2008 used NAD 1929. Horizontal surveys after 2008 used NAD 1983. All survey projections are in US feet. Vertical surveys reference NAVD 1988.
ft AMSL = feet above mean sea level
TOC = top-of-casing
ft bgs = feet below ground surface
NM = not measured
Open = Open Borehole constructed without screen



LEGEND

GW–30I	GROUNDWATER MONITORING WELL
GW–10S	MONITORING WELL NOT SAMPLED
IW-03	PHASE II NZVI INJECTION WELL – CLASS 5L
IW-31	NZVI INJECTION WELL – CLASS 5I
BR-3	FRACTURED BEDROCK SVE WELL ALSO USED AS NZVI INJECTION WELL
▲	EXTRACTION WELL
MW–9	EXISTING WELLS FOR COMPLIANCE MONITORING

FOR INJECTION WELLS "D" DENOTE DEEP WELLS OTHER INJECTION WELLS ARE IN THE SHALLOW ZONE; FOR MONITORING WELLS "S" DENOTE SHALLOW AND "I" INTERMEDIATE WELLS OTHER MONITORING WELLS ARE IN THE DEEP ZONE.

	NZVI INJECTION AREA OF INFLUENCE/WASTE BOUNDARY (NOTE 4)
	GPS–LOCATED WETLAND LIMITS
	GPS–LOCATED NON–404 WETLAND LIMITS
S4R1	NCDWQ STREAM DETERMINATION ASSESSMENT REACH LOCATION
	INTERMITTENT STREAM CHANNEL
	NON–404 EPHEMERAL STORMWATER CHANNEL
	TARGET NZVI INJECTION (AREA) (NOTE 2)
	EXISTING GROUNDWATER IMPACT AREA (NOTE 3)
D	EXISTING GROUNDWATER IMPACT AREA SMWU–13 DEEP (NOTE 3)
	PROPERTY BOUNDARY
	COMPLIANCE BOUNDARY (NOTE 5)
	REVIEW BOUNDARY (NOTE 6)
	2' CONTOUR INTERVAL
	10' CONTOUR INTERVAL

NOTES

1. TOPOGRAPHIC CONTOUR INTERVAL IS TWO FEET.
2. TARGET NZVI INJECTION AREA SHOWS THE LOCATION WHERE PHASE I AND PHASE II INJECTION WELLS HAVE BEEN INSTALLED AS PERMITTED BY NCDENR GROUNDWATER PERMIT NO. WQ0034465.
3. EXISTING GROUNDWATER IMPACT AREA SHOWS THE EXTENT, BASED ON HISTORICAL GROUNDWATER MONITORING DATA, THAT GROUNDWATER IMPACTS ASSOCIATED WITH HISTORICAL RELEASES EXCEED NC 2L STANDARDS AS PRESENTED IN THE NON–DISCHARGE PERMIT APPLICATION (GOLDER ASSOCIATES, NOVEMBER 2010). GROUNDWATER IMPACTS FOR SWMU–13 ARE SHOWN FOR THE DEEPER AND SHALLOWER GROUNDWATER.
4. THE NZVI AREA OF INFLUENCE IS THE DIRECTION AND DISTANCE AT WHICH THE NZVI IS EXPECTED TO TRAVEL FROM THE INJECTION WELLS WHILE PROVIDING SUBSURFACE TREATMENT OF THE EXISTING GROUNDWATER IMPACT AREA AS PRESENTED IN THE NON–DISCHARGE PERMIT APPLICATION (GOLDER ASSOCIATES, NOVEMBER 2010). FOR PERMITTING PURPOSES THE NZVI AREA OF INFLUENCE IS THE WASTE BOUNDARY AS DEFINED IN 15A NCAC 02L .0102.
5. THE COMPLIANCE BOUNDARY IS THE MAXIMUM DISTANCE FROM A WASTE BOUNDARY THAT THE NC 2L STANDARDS MUST BE MET. FOR THE REMEDIATION SYSTEM THE COMPLIANCE BOUNDARY APPLIES ONLY TO THE INJECTED WASTEWATER (I.E. THE EXTRACTED GROUNDWATER) AND INJECTANTS AS PERMITTED IN THE GROUNDWATER PERMIT NO. WQ0034465..
6. AS PRESENTED IN THE NON–DISCHARGE PERMIT APPLICATION (GOLDER ASSOCIATES, NOVEMBER 2010) A REVIEW BOUNDARY IS ESTABLISHED AROUND A DISPOSAL SYSTEM MIDWAY BETWEEN THE COMPLIANCE BOUNDARY AND THE WASTE BOUNDARY IN ACCORDANCE WITH 15A NCAC 02L .0108.

REFERENCES

1. GROUNDWATER MONITORING WELLS TAKEN FROM CADD FILE TITLED "554/00JAN–DG–FIG5–15", DATED 06/22/00.
2. PLANIMETRIC FEATURES TAKEN FROM CADD FILE TITLED "S&ME", DATED 11/10/99. ALL FEATURES WERE SHIFTED 208.71 FEET AND 223D35'39.423" TO ALIGN WITH GROUNDWATER MONITORING WELLS.
3. ALL BASE CADD FILES USED DURING DRAWING PROTOTYPE CONSTRUCTION WERE TAKEN FROM COMPACT DISK SUPPLIED BY GSK.
4. BNP–1 AND GW–8 WERE SURVEYED IN NOVEMBER 2008 BY STANTEC CONSULTING.
5. COORDINATE SYSTEM SHOWN IS NORTH CAROLINA STATE PLANE NAD27.
6. BNP–2, BNP–3, BNP–4, GW–47S, GW–48S, AND W–2 WERE SURVEYED ON 09/11/02 AND GW–49I AND GW–50I WERE SURVEYED ON 11/15/02 BY TAYLOR WISEMAN AND TAYLOR.
7. WETLAND FEATURES AS PRESENTED IN REVISED FIGURE 3 OF REQUEST FOR JURISDICTIONAL DETERMINATION DATED JUNE 8, 2009 (GOLDER ASSOCIATES). APPROVED BY USACE ON OCTOBER 17, 2009 AND NCDENR ON JULY 16, 2009.
8. MONITORING WELL LOCATIONS FROM JOHN R. McADAMS COMPANY, INC. MAY 2012 DATED MAY 2, 2012 (2012–05–02) ASB LOCATION.DWG)

150 0 150 300
SCALE FEET

GlaxoSmithKline

CONTRACTOR FIRM ID

Golder Associates
Golder Associates NC, Inc.
5B Oak Branch Drive
Greensboro, NC 27407
(336) 852–4903
Firm License No. c–2862

CONTRACTOR PROJ No: 073–96115

Designed By: JAD
Drawn By: LKB
Checked By: BJE
Project Manager: BRIAN EICHLIN, P.E.

GSK PROJECT INFORMATION

GSK PROJECT NO: RE10614
PROJECT NAME: RCRA CORRECTIVE MEASURES
GSK PROJECT MGR: TOM HILLIARD, P.E.
EHS CONTACT: LINDSEY WALATA, P.G.

GROUNDWATER REMEDIATION SYSTEM
PERMIT NO. WQ0034465

CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No	Revision	Date
1	Add IW–2; Correct GW–4, GW–32S	12/03/15

Bldg Operations/ Project Mgr:
CAD: LKB
Site: GSK S. CAMPUS, N. COMPLEX
Scale: 1" = 150'

Title:
SITE MAP GROUNDWATER REMEDIATION SYSTEM ASBUILT
PERMIT NO. WQ0034465

FIGURE 1

GSK Drawing Number: **RE10164-G-1 06**
Rev: 1

UNITED STATES POSTAGE
PITNEY BOWES
02 1F $001.64⁰
0003257537 DEC 08 2015
MAILED FROM ZIP CODE 27407

Golder Associates

5B Oak Branch Drive
Greensboro, NC USA 27407

NCDEQ
Division of Water Resources
Groundwater Protection Unit
1636 Mail service Center
Raleigh, NC 27699-1636
Attn: Michael Rogers

UNITED STATES POSTAGE
PITNEY BOWES
$001.64⁰
02 1P
0003257537 DEC 08 2015
MAILED FROM ZIP CODE 27407

Golder Associates

5B Oak Branch Drive
Greensboro, NC USA 27407

NCDEQ
Division of Water Resources
Aquifer Protection Section
3800 Barrett Drive
Raleigh, NC 27609
Attn: Eric Rice

UNITED STATES POSTAGE
PITNEY BOWES
02 1P $000.92[5]
0003257537 DEC 08 2015
MAILED FROM ZIP CODE 27407

Golder Associates
5B Oak Branch Drive
Greensboro, NC USA 27407

NCDEQ
Division of Waste Management
Hazardous Waste Section
1646 Mail Service Center
Raleigh, NC 27699
Attn: Robert McDaniel

APPENDIX B-5

WELL ABANDONMENT RECORDS, CORRESPONDENCE REGARDING MISSING WELLS AND WELL INSPECTION FORMS

DATE: 01/29/16

0739611502

GROUNDWATER MONITORING WELL INSPECTION LOG
GlaxoSmithKline -- RTP, NC
South Campus, North Complex

	Well ID	Outer Protective Casing	Well Casing	Label	Lock	Concrete Pad	Notes
1	MW-B-102	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
2	MW-B-104	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	WATER IN VAULT, TIGHTENED BOLTS
3	MW-B-107	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
4	MW-B-110	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
5	MW-B-111	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☑ Cracked / damaged / undercut ☐ Missing / buried / unknown	TAG MISSING DRILLER NAME/# + DATE
6	MW-B-115	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	WATER IN VAULT
	BNP-2	☐ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	NEEDS WEEP HOLE IN OUTER CASING — PONDING WATER, ADD SAND
	BNP-3	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓ ~~NEEDS WEEP HOLE, SAND~~
	BNP-4	☐ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	NEEDS WEEP HOLE, SAND
	BR-1	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing N/A	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	BR-2	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing N/A	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	BR-3	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing N/A	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	EW-1	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	EW-2	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	EW-3	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	EW-4D	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing N/A	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	EW-5	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	EW-6	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓

☐ *Shaded boxes indicate priority maintenance items.*

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DATE: 01/29/16

0739611502

GROUNDWATER MONITORING WELL INSPECTION LOG
GlaxoSmithKline -- RTP, NC
South Campus, North Complex

Well ID	Outer Protective Casing	Well Casing	Label	Lock	Concrete Pad	Notes
GW-1A	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-1A-D	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-2	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-3	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-4	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	INSTALL EXTERIOR NAME PLATE [SIMILAR TO IW VAULTS]
GW-4I	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-4D	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	PROTECTIVE CASING LOOSE
GW-5	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-6	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
7 GW-6I	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	FLUSH MOUNT W/ NO LOCK ON PRESSURE CAP
GW-8SB	☐ Good condition, secure ☐ Needs minor repair(s) ☒ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	CAN'T CLOSE FLUSH MOUNT LID
8 GW-9S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	WATER IN VAULT
9 GW-10S	☐ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	VAULT FULL OF WATER/MUD. WELL SUBMERGED BY 3-4" WATER [IN DITCH]
GW-12S	☐ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☒ ~~Missing / buried / unknown~~	OUTER CASING NEEDS WEEP HOLE, RUSTING.
GW-12I	☐ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☒ ~~Missing / buried / unknown~~	WEEP HOLE / RUST
10 GW-14S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	THREADED CAP
GW-14I	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	THREADED CAP
GW-15S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	LABELED AS GW-13S

☐ *Shaded boxes indicate priority maintenance items.*

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2/7

DATE: 01/29/16

0739611502

GROUNDWATER MONITORING WELL INSPECTION LOG
GlaxoSmithKline -- RTP, NC
South Campus, North Complex

Well ID	Outer Protective Casing	Well Casing	Label	Lock	Concrete Pad	Notes
GW-16S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	✓ DIG OUT PAD
GW-17S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-18S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	LABEL PAINTED OVER, PAD CRACKED
11 GW-19S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	NO LOCK ON PRESSURE CAP
GW-20S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-32S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	WATER IN VAULT. INSTALL WELL ID TAG + NAMEPLATE.
GW-33S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
12 GW-36S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	WATER IN VAULT, ADD RUBBER GASKETS
GW-37S	☑ ~~Good condition, secure~~ ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	LID HINGE BROKEN, NOT CONNECTED TO PROTECTIVE CASING. EROSION UNDER PAD
GW-38S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-41SR	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-42I	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-47S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓ LOCK
GW-48S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-50I	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓ LOCK
GW-53S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	REMOVE VEGETATION / SOIL FROM PAD.
IW-01	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing N/A	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-02	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	INSTALL WELL TAG + NAME PLATE

☐ *Shaded boxes indicate priority maintenance items.*

#9

3/7

DATE: 01/29/16

0739611502

GROUNDWATER MONITORING WELL INSPECTION LOG
GlaxoSmithKline -- RTP, NC
South Campus, North Complex

Well ID	Outer Protective Casing	Well Casing	Label	Lock	Concrete Pad	Notes
IW-03	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing N/A	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-03D	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing N/A	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-05	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-06	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing N/A	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-06D	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced N/A ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-08	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced N/A ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-08D	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced N/A ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-10	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced N/A ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-10D	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced N/A ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-11	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced N/A ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-12	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced N/A ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-12D	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced N/A ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-14	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced N/A ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-14D	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced N/A ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-16	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-17	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-18	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-22	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓

☐ *Shaded boxes indicate priority maintenance items.*

~~6~~

DATE: 01/29/16

0739611502

GROUNDWATER MONITORING WELL INSPECTION LOG
GlaxoSmithKline -- RTP, NC
South Campus, North Complex

Well ID	Outer Protective Casing	Well Casing	Label	Lock	Concrete Pad	Notes
IW-23	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-25	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-26	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-27	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-28	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-29	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-30	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-31	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-32	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-33	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-34	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-35	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-36	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓ NEED TO UPDATE ~~TAG~~ WELL TAG FOR NEW DTB.
MW-1	☐ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☒ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	ADD RUBBER GASKETS
13 MW-2	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	~~[illegible]~~ THREADED CAP, NO LOCK
14 MW-3	☐ Good condition, secure ☐ Needs minor repair(s) ☒ Damaged, to be replaced	☑ ~~Good condition~~ ☒ Cracked / damaged BURIED	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	THREADED CAP, NO LOCK PROTECTIVE CASING FULL OF SILT/SAND, DUG OUT TO FIND WELL CASING. NO BOLTS
MW-9	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
MW-10	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓

☐ *Shaded boxes indicate priority maintenance items.*

DATE: 01/29/16

0739611502

GROUNDWATER MONITORING WELL INSPECTION LOG
GlaxoSmithKline -- RTP, NC
South Campus, North Complex

	Well ID	Outer Protective Casing	Well Casing	Label	Lock	Concrete Pad	Notes
	MW-11	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	MW-12	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓ DEPTH?
15	P-1-A	☐ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	REPLACE RUBBER GASKET @ COVER, NEW BOLTS (x2) FOR FLUSH-MOUNT COVE
16	P-2	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
17	P-3	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓ PAD
	P-4	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	✓ PAD
	P-5	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	✓
	P-6	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	RFI-13-B2	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
18	RFI-4-B18	☐ Good condition, secure ☐ Needs minor repair(s) ☒ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	OUTER CASING BOLT SETTINGS BROKEN OFF, CAN NOT BE CLOSED
19	RFI-4-B19	☐ Good condition, secure ☒ ~~Needs minor repair(s)~~ ☒ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	VAULT FULL OF WATER. REPLACE PROTECTIVE CASING (SEE ABOVE)
20	RFI-4-B20	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☐ Good condition ☒ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	PONDING WATER @ PAD, ~~OUTER~~ VAULT FULL OF WATER. LOCK RUSTED.
21	RFI-16-B13	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
22	RFI-16-B14	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	W-1	☐ Good condition, secure ☐ Needs minor repair(s) ☒ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	NO TAG, CAP BROKEN
	W-2	☐ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☒ Cracked / damaged CAP	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	REPLACE LID, WELL CASING CAP.
	W-3	☐ Good condition, secure ☒ Needs minor repair(s) CAP ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	CAP BROKEN, CAN'T LOCK OUTER CASING.
	W-4	☐ Good condition, secure ☒ Needs minor repair(s) CAP ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☐ Good condition ☒ To be replaced ☐ Missing NO KEY	☐ Good condition ☐ Cracked / ~~damaged / undercut~~ ☒ Missing / buried / unknown	CAP BROKEN, NO TAG. NO KEY FOR LOCK. PAD BURIED?

☐ *Shaded boxes indicate priority maintenance items.*

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DATE: 01/29/16

0739611502

GROUNDWATER MONITORING WELL INSPECTION LOG
GlaxoSmithKline -- RTP, NC
South Campus, North Complex

Well ID	Outer Protective Casing	Well Casing	Label	Lock	Concrete Pad	Notes
W-5	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	NEEDS WEEP HOLE/SAND AROUND CASING
UST-MW-1	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
GW-7	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	NO WELL TAG
GW-40I	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	WASHED OUT UNDER PAD.
GW-49I	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-30S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-30I	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-27S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-28S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-22S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-44S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
MW-13	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-39S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-40S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	✓ PAD
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	

122 WELLS

☐ *Shaded boxes indicate priority maintenance items.*

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RECORDED IN PLAT BOOK _____ PAGE _____

MONUMENTS SET			
MONUMENT ID	NORTHING	EASTING	ELEVATION
SWMU-12A	789448.87	2040432.24	368.54
SWMU-12B	789568.18	2040400.95	369.70
SWMU-12C	789598.64	2040521.55	367.54
SWMU-12D	789721.08	2040612.10	366.74
SWMU-12E	789721.09	2040642.16	366.53
SWMU-12F	789539.10	2040552.54	366.35
SWMU-12G	789448.85	2040522.24	366.67
SWMU-13A	789915.16	2039797.71	377.87
SWMU-13B	790190.94	2039797.27	369.91
SWMU-13C	790190.93	2039877.35	373.31
SWMU-13D	790089.92	2039900.62	376.53
SWMU-13E	789915.16	2039844.87	378.25

PRELIMINARY PLAT
NOT FOR RECORDATION, CONVEYANCES OR SALES; PLAT SUBMITTED FOR REVIEW PURPOSES ONLY

NORTH CAROLINA PROFESSIONAL SEAL L-4646 LAND SURVEYOR RICHARD T. WISEMAN

NC DENR CERTIFICATE
APPROVED FOR THE PURPOSES OF N.C.G.S. 143B-279.10

_____
DEXTER MATTHEWS, DIRECTOR
DIVISION OF WASTE MANAGEMENT

NOTARY CERTIFICATE
STATE OF NORTH CAROLINA
WAKE COUNTY

I, _____, A NOTARY PUBLIC OF SAID COUNTY AND STATE, DO HEREBY CERTIFY THAT _____ DID PERSONALLY APPEAR AND SIGN BEFORE ME THIS THE _____ DAY OF _____, 2014.

_____
NOTARY PUBLIC (SIGNATURE)

MY COMMISSION EXPIRES _____

OWNERS CERTIFICATE
I ACKNOWLEDGE THAT I HAVE FULL AUTHORITY TO LEGALLY EXECUTE A DEED FOR THIS PROPERTY.

_____ _____
SIGNATURE (S) OF PROPERTY OWNER (S) DATE

NOTARY CERTIFICATE

STATE OF _____ COUNTY OF _____

I, _____, A NOTARY PUBLIC OF SAID COUNTY AND STATE, DO HEREBY CERTIFY THAT _____ DID PERSONALLY APPEAR AND SIGN BEFORE ME THIS THE _____ DAY OF _____, 2014.

_____
NOTARY PUBLIC (SIGNATURE)

MY COMMISSION EXPIRES _____

A DECLARATION OF PERPETUAL LAND USE RESTRICTIONS, LIMITING THE USES OF THIS PROPERTY, IS RECORDED AT BOOK_____ PAGE_____.

WHEN THIS PROPERTY OR ANY PART OF IT IS SOLD, LEASED, CONVEYED OR TRANSFERRED, N.C.G.S. 143B-279.10(E) REQUIRES THAT THE FOLLOWING LANGUAGE BE PLACED IN THE DESCRIPTION SECTION OF THE DEED OR OTHER INSTRUMENT OF TRANSFER IN NO SMALLER TYPE THAN THAT USED IN THE BODY OF THE DEED:

"THIS PROPERTY IS A CONTAMINATED SITE. A NOTICE OF CONTAMINATED SITE IS RECORDED IN THE DURHAM COUNTY REGISTER OF DEED'S OFFICE AT BOOK_____, PAGE_____. QUESTIONS CONCERNING THIS MATTER MAY BE DIRECTED TO THE NORTH CAROLINA DIVISION OF WASTE MANAGEMENT, HAZARDOUS WASTE SECTION, 1646 MAIL SERVICE CENTER, RALEIGH, NC 27699-1646"

THE AREAS AND TYPE OF CONTAMINATION DEPICTED UPON THE MAP ARE APPROXIMATIONS DERIVED FROM THE BEST AVAILABLE INFORMATION AT THE TIME OF FILING.

THE QUANTITY AND TYPES OF WASTES DISPOSED OF ON THE PROPERTY ARE NOT KNOWN. GLAXOSMITHKLINE (GSK) REMEDIATED SOILS AT IDENTIFIED SOLID WASTE MANAGEMENT UNITS AND AREA OF CONCERN UNDER THE OVERSIGHT OF THE HAZARDOUS WASTE SECTION, DIVISION OF WASTE MANAGEMENT OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL RESOURCES. THE FOLLOWING TYPES OF CONTAMINATION ARE KNOWN TO REMAIN AT THE SITE IN CONCENTRATIONS ABOVE THE REMEDIAL GOALS:

1. *VOLATILE ORGANIC COMPOUNDS (VOCS) IN SOILS AT THE BEDROCK INTERFACE AT THE SWMU 13 FORMER DISPOSAL AREAS AND GROUNDWATER.*
2. *VOCS IN SITE WIDE GROUNDWATER MONITORING, INJECTION AND EXTRACTION WELLS AT CONCENTRATIONS ABOVE THE 15A NCAC SUBCHAPTER 2L GROUNDWATER STANDARD.*
3. *SEMI-VOCS IN SOILS AT THE BEDROCK INTERFACE AT THE SWMU 13 FORMER DISPOSAL AREAS AND SWMU 13 GROUNDWATER AT CONCENTRATIONS ABOVE THE 15A NCAC SUBCHAPTER 2L GROUNDWATER STANDARD.*
4. *PERPETUAL LAND USE RESTRICTIONS ARE IN PLACE PURSUANT TO TSCA PCB REGULATION 40 CFR 761.61 (A)(8) FOR POLYCHLORINATED BIPHENYLS (PCBS) IN SOILS AT THE SWMU 12 AND SWMU 13 RESTRICTED USE AREAS*

PICTURES

Well ID	Northing	Easting	Ground Surface Elevation (ft AMSL)	TOC Elevation (ft AMSL)
~~B-102~~	789577.0890'	2040074.4840'	385.86	385.66
~~B-104~~	788681.2030'	2039531.2390'	377.76	377.47
~~B-107~~	788273.7310'	2039649.8260'	373.50	373.31
~~B-110~~	788069.2480'	2039102.6990'	366.82	366.48
~~B-111~~	789017.5540'	2039010.8390'	362.74	362.49
~~B-115~~	789909.3640'	2039370.1320'	360.12	360.00
~~BNP-2~~	790180.5560'	2040019.5990'	371.36	373.99
~~BNP-3~~	790185.1470'	2039988.7830'	374.20	376.99
~~BNP-4~~	790165.2490'	2039980.6420'	374.93	377.77
~~BR-1~~	789991.7890'	2039850.1070'	381.14	380.07
~~BR-2~~	790024.1590'	2039852.4220'	380.54	379.35
~~BR-3~~	790055.8890'	2039873.0030'	380.18	378.99
~~EW-1~~	790200.2950'	2039948.8650'	375.14	373.48
~~EW-2~~	790196.6620'	2040009.7760'	373.19	371.68
~~EW-3~~	790141.7560'	2040007.3050'	373.42	372.09
~~EW-4D~~	790177.2630'	2039851.6120'	374.47	372.68
~~EW-5~~	789403.1740'	2039374.1100'	371.27	369.59
~~EW-6~~	789648.1210'	2039271.4440'	356.60	355.01
~~EW-6A~~	789918.5130'	2040179.2300'	384.66	387.69
~~EW-6A-D~~	789911.7990'	2040150.7070'	383.86	386.81
~~EW-8~~	789582.4110'	2040725.7890'	361.26	363.99
~~GW-3~~	790205.4990'	2039514.2490'	361.42	364.49
~~GW-4~~	790212.4930'	2040027.5250'	367.70	367.92
~~GW-4I~~	790184.1430'	2040035.7890'	368.89	371.54
~~GW-4D~~	790197.3430'	2040037.3910'	368.96	371.16
~~GW-5~~	788499.4800'	2039122.0790'	369.12	372.30
~~GW-6~~	788491.7630'	2038807.7800'	350.35	353.54
~~GW-6I~~	788478.2700'	2038817.0040'	350.50	350.30
~~GW-33~~	789363.9760'	2040403.4310'	367.58	366.92
~~GW-103~~	789615.0340'	2040403.0290'	369.09	368.95
~~GW-123~~	790212.1830'	2039712.1230'	366.12	368.46
~~GW-127~~	790207.5060'	2039716.4070'	366.45	369.06
~~GW-127-2~~	790076.5680'	2040082.7800'	370.98	374.33
~~GW-145~~	789971.2170'	2039739.0710'	373.33	373.15
~~GW-14I~~	789981.0940'	2039737.7040'	373.06	372.84
~~GW-145~~	789587.5300'	2039284.9740'	358.57	361.21
~~GW-245~~	789558.5240'	2039190.3900'	352.36	354.63
~~GW-285~~	789453.3080'	2039161.9180'	351.69	354.32
~~GW-295~~	789369.5340'	2039247.6190'	359.64	359.78
~~GW-305~~	790211.5300'	2040159.4080'	367.77	370.18
~~GW-325~~	788572.8030'	2038844.4780'	349.96	349.26
~~GW-335~~	788410.8310'	2038969.9810'	354.67	357.52
~~GW-365~~	789148.1400'	2039140.1580'	365.14	364.90
~~GW-375~~	789368.1220'	2038840.6100'	332.36	334.80
~~GW-385~~	789557.6820'	2038829.8000'	337.14	339.64
~~GW-419R~~	789504.9330'	2039407.0870'	366.27	365.96
~~GW-421~~	789359.9100'	2039564.5050'	378.88	378.62
~~GW-425~~	789772.1410'	2038951.9970'	343.34	345.76
~~GW-485~~	788881.8990'	2038617.5430'	332.76	336.58
~~GW-501~~	789451.6910'	2039001.5320'	340.33	343.98
~~GW-505~~	789482.8420'	2040304.7320'	371.90	375.48
IW-01	789926.4750'	2039921.6590'	379.56	379.06
IW-02	790066.5570'	2039993.3200'	373.75	373.56
IW-03	789934.1510'	2039865.5130'	378.74	378.05
IW-04	789928.4410'	2039874.3420'	378.73	378.02

Well ID	Northing	Easting	Ground Surface Elevation (ft AMSL)	TOC Elevation (ft AMSL)
IW-05	789956.5180'	2039798.3820'	377.96	377.42
IW-06D	789962.6150'	2039798.6190'	377.95	377.26
IW-08	790057.5720'	2039798.4850'	374.94	374.69
IW-08D	790039.7710'	2039795.5090'	374.63	374.20
IW-10	790087.5220'	2039837.6870'	377.56	376.99
IW-10D	790087.6760'	2039844.5150'	377.75	377.08
IW-11	790094.0180'	2039866.6520'	378.20	377.63
IW-12	790062.4280'	2039884.2000'	380.06	379.55
IW-12D	790052.1400'	2039886.4430'	380.37	379.70
IW-14	789999.3450'	2039905.5260'	381.05	380.53
IW-14D	789985.1310'	2039908.3210'	381.02	380.30
IW-16	790102.8230'	2039976.7450'	376.58	376.22
BNP-1 / IW-17	790118.2280'	2039943.1760'	376.94	376.86
IW-18	790145.2800'	2039908.8670'	376.28	376.20
IW-22	789302.6050'	2039369.3260'	373.40	372.88
IW-23	789352.5820'	2039370.2480'	373.36	372.86
IW-25	789541.9890'	2039355.8450'	365.34	364.75
IW-26	789467.6280'	2039407.4670'	366.89	366.34
IW-27	789557.0320'	2039302.5310'	361.20	360.74
IW-28	789410.2060'	2039468.1920'	373.06	372.02
IW-29	789611.5240'	2039278.5280'	357.82	357.61
IW-30	789172.9780'	2039186.4270'	368.44	367.65
IW-31	789097.4610'	2039115.6550'	365.04	364.37
IW-32	789039.6980'	2039104.8250'	365.08	364.64
IW-33	788480.6780'	2038842.5040'	351.35	350.52
IW-34	788439.3690'	2038854.3740'	351.06	350.10
IW-35	788413.8030'	2038805.4370'	346.69	345.66
IW-36	789479.1630'	2038781.5140'	333.38	332.65
MW-1	789405.2590'	2039449.6270'	371.56	371.15
MW-2	789347.0310'	2039425.1810'	374.31	374.12
MW-3	789403.1750'	2039435.7800'	370.69	370.39
GW-8SR	789464.8380'	2040330.4880'	371.30	371.31
MW-9	789457.4350'	2038917.9060'	336.68	340.52
MW-10	789153.9840'	2039304.0750'	370.78	374.03
MW-11	788377.5690'	2038904.7330'	351.03	354.36
MW-12	790176.8220'	2039193.4920'	334.03	336.38
P-1-A	789741.3610'	2040403.4330'	373.62	373.90
P-2	789397.3480'	2040508.2220'	366.08	366.26
P-3	789702.4830'	2040719.8690'	365.53	365.47
P-4	789909.8920'	2039899.6130'	379.50	381.96
P-5	790082.8940'	2039915.3200'	377.15	379.34
P-6	790038.6950'	2039780.4000'	372.97	375.49
RPI-13-02	790003.2960'	2039816.9750'	376.14	377.92
RPI-1-010	789430.5070'	2040363.8740'	371.93	371.39
RPI-1-019	789473.8330'	2040352.4070'	370.42	370.07
RPI-1-020	789428.6680'	2040295.5060'	372.03	371.83
RPI-13-043	789498.9030'	2039210.5320'	356.87	356.53
RPI-16-047	789542.7820'	2039208.8070'	353.08	352.76
SW-1	789434.8970'	2038774.2770'	330.30	331.43
TC-MW-2	790201.8110'	2039270.4150'	329.84	332.25
MW-3	789247.9920'	2040436.1410'	362.16	364.71
MW-4	788405.8930'	2039825.3220'	360.32	362.78
MW-5	788157.0480'	2039076.4700'	363.67	366.01
USGS MW-1	789370.5350'	2039456.8700'	373.41	376.01

~~GW-155~~

~~GW-8~~
~~GW-3~~
~~GW-22S~~
~~GW-30I~~
~~GW-30S~~
~~GW-14S~~
~~GW-27S~~
~~GW-28S~~
~~MW-13~~

~~GW-40I~~
~~GW-49I~~
~~GW-39S~~
~~GW-40S~~

PREPARED FOR:
GLAXOSMITHKLINE
3029 EAST CORNWALLIS ROAD
DURHAM COUNTY
RESEARCH TRIANGLE PARK, NC 27709
PIN: 0738-02-98-4931

PREPARED BY
TAYLOR WISEMAN & TAYLOR
ENGINEERS ▮ SURVEYORS ▮ SCIENTISTS
SUBSURFACE UTILITY ENGINEERS
3500 REGENCY PARKWAY, SUITE 260, CARY, NC 27518
PHONE (919) 297-0085 FAX (919) 297-0090
NORTH CAROLINA LICENSE NUMBER: F-0362

NOTICE OF HAZARDOUS WASTE DISPOSAL SITE
SOUTH CAMPUS, NORTH COMPLEX SITE
PERMIT NO. NCD052547635
GLAXOSMITHKLINE
DURHAM, DURHAM COUNTY, NORTH CAROLINA

REVISIONS:
11/25/15 - ADDED IW-02, REVISED ELEVATIONS FOR GW-4, GW-33S

DATE OF SURVEY:	4/27/15
SCALE:	1" = 200'
DRAWN BY:	SWH
CHECKED BY:	RTW
PROJECT:	05427.1000.03
SHEET:	2 / 2

DATE: 01/26/16

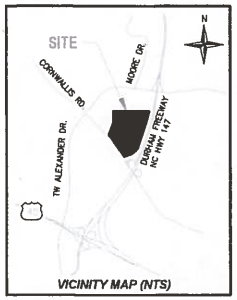
0739611502

GROUNDWATER MONITORING WELL INSPECTION LOG
GlaxoSmithKline -- RTP, NC
South Campus, North Complex

Well ID	Outer Protective Casing	Well Casing	Label	Lock	Concrete Pad	Notes
BNP-4	☑ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	NEEDS WEEP HOLE / SAND
IW-16	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-17	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
01/27 GW-44S	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-18	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-02	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☑ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	INSTALL WELL ID TAG + NAME PLATE
IW-01	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-03	☑ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☑ Good condition ☐ Cracked / damaged	☑ Present, complete ☐ Incomplete / not secured ☐ Missing	☑ Good condition ☐ To be replaced ☐ Missing	☑ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	

☐ *Shaded boxes indicate priority maintenance items.*

RECORDED IN PLAT BOOK _____ PAGE _____



VICINITY MAP (NTS)

ABBREVIATIONS

BM	BOOK OF MAPS
CH	CHORD BEARING
CMF	CONCRETE MONUMENT FOUND
DB	DEED BOOK
IPF	IRON PIPE FOUND
IRF	IRON ROD FOUND
L	ARC LENGTH
N/F	NOW OR FORMERLY
PB	PLAT BOOK
PG	PAGE
PIN	PARCEL IDENTIFICATION NUMBER
R/W	RIGHT-OF-WAY

SYMBOL LEGEND

- PROPERTY CORNER FOUND
- CONC MONUMENT FOUND
- CONC MONUMENT SET
- DATUM CONTROL POINT
- MONITORING WELL

HATCH LEGEND

- DISPOSAL AREA
- RESTRICTED USE AREA

LINE LEGEND

- PROPERTY LINE (PL)
- PL NOT SURVEYED
- RIGHT-OF-WAY LINE

SURVEY CONTROL / GRID TIE NOTES

DATUM DESCRIPTION:
NC STATE PLANE COORDINATE SYSTEM
NAD83 (2011) [EPOCH: 2010.00]
NAVD88 (GEOID 2012A)
UNIT OF MEASUREMENT: U.S. SURVEY FOOT
GPS FIELD PROCEDURE: REAL TIME NETWORK (VRS)
DATE OF GPS SURVEY: 4/7/2015
GPS ANTENNA: TRIMBLE R6-3 (SN: 5006414918)
PUBLISHED / FIXED CONTROL USED:
STATION NAME: DURH
PID: DG8328
LATITUDE: 35°59'46.12942"N
LONGITUDE: 78°53'58.03641"W
ELLIPSOID HEIGHT: 385.39
GEOID HEIGHT: -102.79 FT
ADJUSTMENT: SURVEY DATA WAS POST PROCESSED WITH TRIMBLE BUSINESS CENTER (TBC) USING A NETWORK LEAST SQUARES ADJUSTMENT AT THE 95% CONFIDENCE LEVEL.
CLASS OF SURVEY: CLASS A (URBAN)
POSITIONAL ACCURACY: 0.05
POINT OF LOCALIZATION: TWT# 1003
COMBINED FACTOR: 0.99993643

SURVEY NOTES

1. THE PURPOSE OF THIS PLAT IS TO DISPLAY THE LOCATIONS AND ELEVATIONS OF MONITORING WELLS INSTALLED ON THE SITE IN COMPLIANCE WITH THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (NCDENR) HAZARDOUS WASTE SECTION (HWS) PROGRAM.
2. THIS IS A "CLASS A" SURVEY WITH A POSITIONAL ACCURACY OF 0.04'. ALL MEASUREMENTS SHOWN HEREON ARE REPORTED IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
3. BOUNDARY LINES REPRESENTED BY SOLID LINES WERE SURVEYED IN ACCORDANCE WITH G.S. 47-30 REQUIREMENTS. ALL PROPERTY LINES SHOWN WITH DASHED LINES WERE SCALED FROM DURHAM COUNTY GIS IMAGERY AND ARE SHOWN FOR REFERENCE PURPOSES ONLY.
4. PROPERTY OWNER INFORMATION WAS OBTAINED FROM DURHAM COUNTY ONLINE GIS.
5. PROPERTIES SHOWN HEREON ARE SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD THAT WOULD BE REVEALED BY A THOROUGH TITLE SEARCH. THIS PLAT SHOULD NOT BE RELIED UPON AS A COMPLETE RECORD OF ALL EASEMENTS THAT MAY EFFECT THESE PROPERTIES.
6. BACKGROUND INFORMATION WAS OBTAINED FROM A PLAT TITLED "WELL AS-BUILT SURVEY" BY THE JOHN R. MCADAMS COMPANY, INC. DATED 05/19/12.
7. ALL DISTANCES AND COORDINATES SHOWN HEREON ARE LOCALIZED, GROUND INFORMATION, UNLESS OTHERWISE.
8. UNIT OF MEASUREMENT IS U.S. SURVEY FEET, UNLESS SPECIFICALLY NOTED OTHERWISE.

FLOOD NOTE: THIS PROPERTY IS PARTIALLY LOCATED IN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE "A" AS DEFINED BY F.E.M.A F.I.R.M COMMUNITY PANEL #3720073800 J DATED MAY 2, 2006.

SURVEYORS CERTIFICATE [G.S. 47-30]

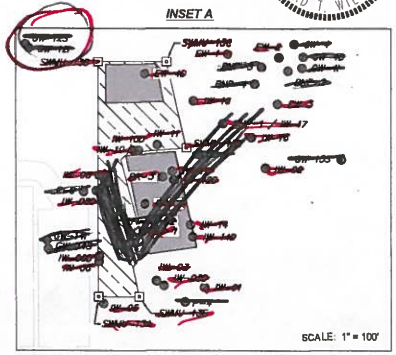
I, RICHARD T. WIECZOREK, HEREBY CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DASHED LINES; DRAWN FROM INFORMATION REFERENCED ON THE FACE OF THIS PLAT; THAT THE RATIO OF PRECISION AS CALCULATED EXCEEDS 1:10,000; THAT THIS SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET; THAT THIS SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE REGISTRATION NUMBER AND SEAL THIS 19th DAY OF MAY, IN THE YEAR 2015.

PRELIMINARY PLAT
NOT FOR RECORDATION, CONVEYANCES OR SALES; PLAT SUBMITTED FOR REVIEW PURPOSES ONLY

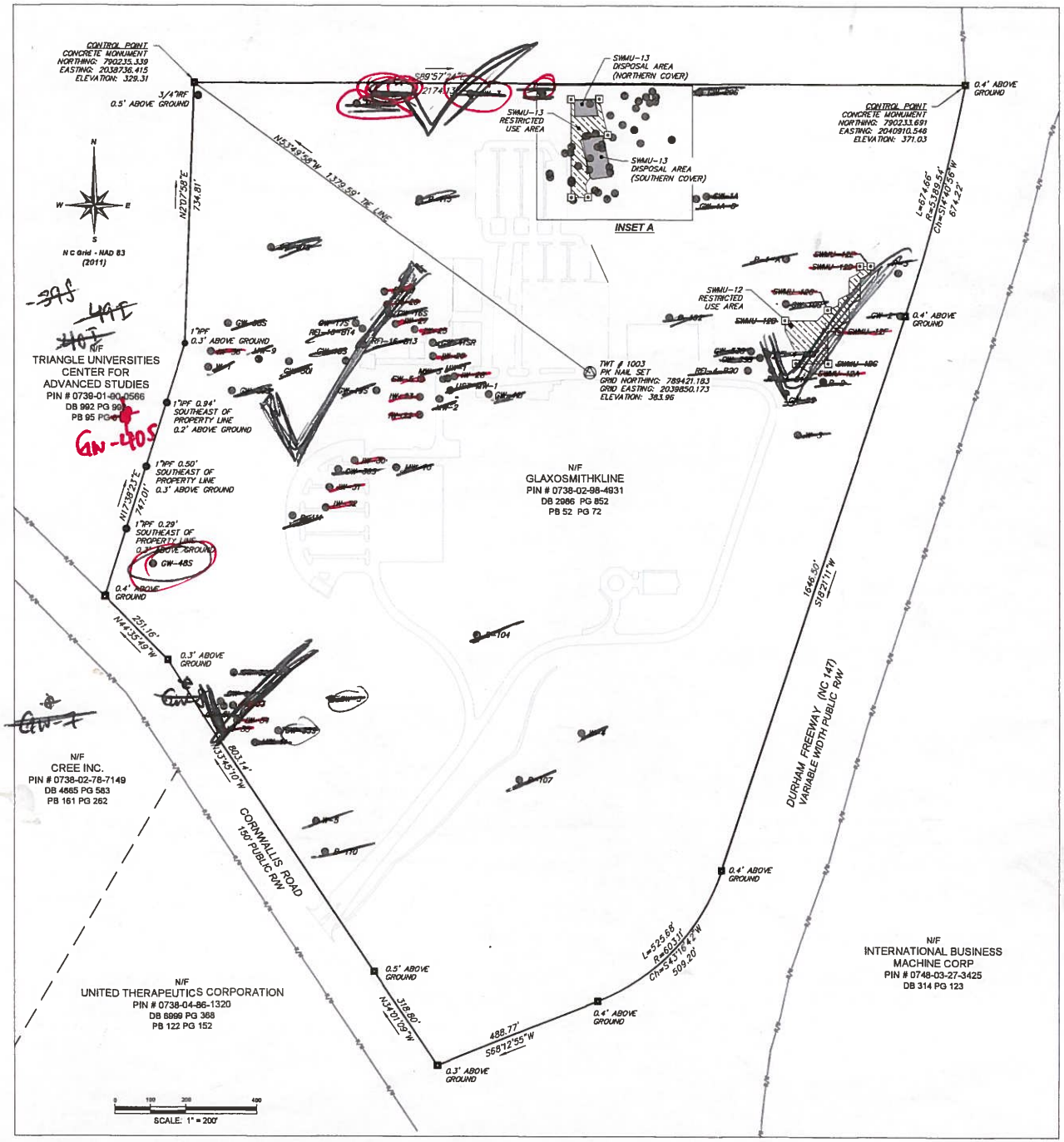
NORTH CAROLINA PROFESSIONAL SEAL L-4846 LAND SURVEYOR RICHARD T. WIECZOREK

RICHARD T. WIECZOREK, PLS (L-4846)

INSET A



SCALE: 1" = 100'



PREPARED FOR:
GLAXOSMITHKLINE
3029 EAST CORNWALLIS ROAD
DURHAM COUNTY
RESEARCH TRIANGLE PARK, NC 27709
PIN: 0738-02-98-4931

PREPARED BY:
TAYLOR WISEMAN & TAYLOR
ENGINEERS ▮ SURVEYORS ▮ SCIENTISTS
SUBSURFACE UTILITY ENGINEERS
3500 REGENCY PARKWAY, SUITE 260, CARY, NC 27518
PHONE (919) 297-0085 FAX (919) 297-0090
NORTH CAROLINA LICENSE NUMBER: F-0362

NOTICE OF HAZARDOUS WASTE DISPOSAL SITE
SOUTH CAMPUS, NORTH COMPLEX SITE
PERMIT NO. NCD052547635
GLAXOSMITHKLINE
DURHAM, DURHAM COUNTY, NORTH CAROLINA

REVISIONS:
11/25/15 - ADDED IM-02, REVISED ELEVATIONS FOR GW-4, OW-32B

DATE OF SURVEY:	4/27/15
SCALE:	1" = 200'
DRAWN BY:	DWH
CHECKED BY:	RTW
PROJECT:	05427.1000.03
SHEET:	1 / 2

01/19/16

DATE: 1-20-16 ~~[illegible]~~
1-21-16

0739611502

GROUNDWATER MONITORING WELL INSPECTION LOG
GlaxoSmithKline -- RTP, NC
South Campus, North Complex

Well ID	Outer Protective Casing	Well Casing	Label	Lock	Concrete Pad	Notes
MW-11	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
IW-35	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
GW-8	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	LABEL
MW-10	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
MW-B107	☐ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☒ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	- H_2O in area around PVC - lock doesn't open
GW-16S	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☒ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	DTB is incorrect Labeled as 74, actual 37
IW-36	☐ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☒ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	Lock does not fit into slot, pieces missing/broken
IW-1	☒ Good condition, secure ☐ Needs minor repair(s) ☒ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	
GW-8S	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	- Label painted over
MW-9	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
P-6	☐ Good condition, secure ☐ Needs minor repair(s) ☒ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☒ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	LOCK & outer casing rusted (casing does not close all the way
GW-48S	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing → 48' (no S)	☒ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown - under Ice	
1/26 GW-12I	☐ Good condition, secure ☒ Needs minor repair(s) rust ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	
GW-12S	☐ Good condition, secure ☒ Needs minor repair(s) rust ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☒ Missing / buried / unknown	X under snow - outer casing needs weep hole, filled w/ H_2
MW-12	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	Depth mislabeled
GW-3	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
1/27 GW-40I	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☒ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ ~~Good condition~~ ☒ Cracked / damaged / undercut ☐ ~~Missing / buried / unknown~~	- labeled as MW-40I
GW-49I	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
IW-12D	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	

☐ *Shaded boxes indicate priority maintenance items.*

DATE: 01/19/16

0739611502

GROUNDWATER MONITORING WELL INSPECTION LOG
GlaxoSmithKline -- RTP, NC
South Campus, North Complex

Well ID	Outer Protective Casing	Well Casing	Label	Lock	Concrete Pad	Notes
GW-6	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-6I	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	SCREW CAP / ~~[illegible]~~ LOOS WELL TAG
IW-35	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	WATER IN VAULT
GW-32S	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	WATER IN VAULT
GW-14S	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	SCREW CAP, LOOSE WELL TAG
GW-14I	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
GW-36S	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	RUBBER GASKETS, WATER IN VAULT
MW-BIM	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☒ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☒ Cracked / damaged / undercut ☐ Missing / buried / unknown	RUBBER GASKETS TAG MISSING DRILLER/DATE
~~MW-TO~~	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
~~MW-BIOI~~	☐ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☐ Missing	☐ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
MW-1	☐ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☐ Good condition ☒ Cracked / damaged DOZER	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☐ Good condition ☐ To be replaced ☒ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	RUBBER GASKETS
GW-41SR	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-7	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☐ Present, complete ☐ Incomplete / not secured ☒ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
MW-13	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-22S	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-30I	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-30S	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
1/25 GW-1A	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
GW-1A-D	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-23	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
P-5	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	PAD ?
IW-14	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
IW-12	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	BROKE NAMEPLATE WHILE REMOVING SNOW/ICE
1/26 GW-20S	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	✓
MGW-4M	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	~~[illegible] ID TAG~~ NAMEPLATE
GW-4I	☒ Good condition, secure ☐ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☐ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	
BNP-2	☒ Good condition, secure ☒ Needs minor repair(s) ☐ Damaged, to be replaced	☒ Good condition ☐ Cracked / damaged	☒ Present, complete ☐ Incomplete / not secured ☐ Missing	☒ Good condition ☐ To be replaced ☐ Missing	☒ Good condition ☐ Cracked / damaged / undercut ☐ Missing / buried / unknown	INSTALLED THREADED CAP - MISSING NEEDS WEEP HOLE + SAND

☐ *Shaded boxes indicate priority maintenance items.*

From: Eichlin, Brian
To: "Rice, Eric"
Cc: Lindsey Walata (lindsey.c.walata@gsk.com); Childress, Daniel
Subject: RE1: GlaxoSmithKline South Campus, North Complex - Groundwater Monitoring Wells
Date: Tuesday, December 15, 2015 12:21:00 PM
Attachments: image001.png

Hi Eric,

The listed wells (MW-4, RFI 4 B-21, RFI 4 B-22, RFI 16 B-11) are not in the WQ0034465 permit or required to be sampled under any permit. The wells were installed in the 1990's timeframe for RCRA Corrective Action investigations under the oversight of the Hazardous Waste Section. In addition to the monitoring wells sampled as part of the WQ0034465 permit, we have a list of wells that are sampled under GSK's RCRA Corrective Action Permit. The listed wells are not sampled under the RCRA Corrective Action permit.

There are a number of wells maintained at the Site that are not part of a monitoring program. In December of 2013 the Hazardous Waste Section asked us for a list of Site wells to include in their database. In discussion with the Hazardous Waste Section they instructed us to include only those wells covered under the WQ0034465 permit or the RCRA permit. As a result the listed wells (MW-4, RFI 4 B-21, RFI 4 B-22, RFI 16 B-11) were not included in the database.

Please let me know if you have any additional questions.

Thanks for your assistance,

Brian

From: Rice, Eric [mailto:eric.rice@ncdenr.gov]
Sent: Tuesday, December 15, 2015 11:20 AM
To: Eichlin, Brian
Cc: Lindsey Walata (lindsey.c.walata@gsk.com); Childress, Daniel
Subject: RE: GlaxoSmithKline South Campus, North Complex - Groundwater Monitoring Wells

Hi Brian:

A couple follow up questions- It does not appear that any of the listed wells (MW-4, RFI 4 B-21, RFI 4 B-22, RFI 16 B-11) are included in the WQ0034465 permit. Is that correct? Also, are the wells in question included in any DWR permits active or otherwise such as WI injection permits? Included meaning listed in a permit for actions such as monitoring or injection, etc.

Thanks.

Eric Rice
Hydrogeologist
Water Quality Regional Operations

Department of Environmental Quality

919 791 4242 office
eric.rice@ncdenr.gov

3800 Barrett Drive
1628 Mail Service Center
Raleigh, NC 27699

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Eichlin, Brian [mailto:brian_eichlin@golder.com]
Sent: Tuesday, December 08, 2015 1:26 PM
To: Rice, Eric <eric.rice@ncdenr.gov>
Cc: Lindsey Walata (lindsey.c.walata@gsk.com) <lindsey.c.walata@gsk.com>; Childress, Daniel <Daniel_Childress@golder.com>
Subject: GlaxoSmithKline South Campus, North Complex - Groundwater Monitoring Wells

Hi Eric,

To follow-up to our conversation a few weeks back. GlaxoSmithKline (GSK) contracted with a North Carolina licensed land surveyor to locate wells at the South Campus, North Complex facility in Durham, NC. The surveyor successfully located 109 wells on the property. Four wells (MW-4, RFI 4 B-21, RFI 4 B-22, RFI 16 B-11 – see attached well records) installed for previous investigations could not be located. As described in the attached letter, efforts to locate these four wells included surveying their location using historical survey data and search of the surveyed area using ground penetrating radar.

Based on our previous conversation, since these wells cannot be located using appropriate means and a well abandonment form cannot be completed, this email will serve as documentation that the wells are no longer in service.

Please contact me if you have any questions.

Thanks

Brian Eichlin

Brian Eichlin, P.E. | Principal | **Golder Associates NC, Inc.**
5B Oak Branch Drive, Greensboro, North Carolina, USA 27407
T: +1 (336) 852-4903 | **D:** (336) 398-2809 | **F:** +1 (336) 852-4904 | **C:** (336) 402-9964 | **E:** brian_eichlin@golder.com | **www.golder.com**

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Please consider the environment before printing this email.

From:	Rice, Eric
To:	Eichlin, Brian
Cc:	lindsey.c.walata@gsk.com; Childress, Daniel
Subject:	RE: GlaxoSmithKline South Campus, North Complex - Groundwater Monitoring Wells
Date:	Friday, December 11, 2015 5:25:15 PM
Attachments:	image001.png

Thank you for this submittal Brian. The Division will contact you (GlaxoSmithKline) if any additional actions are necessary.

Eric Rice
Hydrogeologist
Water Quality Regional Operations
Department of Environmental Quality

919 791 4242 office
eric.rice@ncdenr.gov

3800 Barrett Drive
1628 Mail Service Center
Raleigh, NC 27699

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From: Eichlin, Brian [mailto:brian_eichlin@golder.com]
Sent: Tuesday, December 08, 2015 1:26 PM
To: Rice, Eric <eric.rice@ncdenr.gov>
Cc: Lindsey Walata (lindsey.c.walata@gsk.com) <lindsey.c.walata@gsk.com>; Childress, Daniel <Daniel_Childress@golder.com>
Subject: GlaxoSmithKline South Campus, North Complex - Groundwater Monitoring Wells

Hi Eric,

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Please consider the environment before printing this email.

From:	Eichlin, Brian
To:	Eric.Rice@ncdenr.gov
Cc:	Lindsey Walata (lindsey.c.walata@gsk.com); Childress, Daniel
Subject:	GlaxoSmithKline South Campus, North Complex - Groundwater Monitoring Wells
Date:	Tuesday, December 08, 2015 1:25:00 PM
Attachments:	05427.1000.03 Surveyor Letter 150724.pdf Missing Well Records 12-08-2015.pdf

---

Hi Eric,

To follow-up to our conversation a few weeks back. GlaxoSmithKline (GSK) contracted with a North Carolina licensed land surveyor to locate wells at the South Campus, North Complex facility in Durham, NC. The surveyor successfully located 109 wells on the property. Four wells (MW-4, RFI 4 B-21, RFI 4 B-22, RFI 16 B-11 – see attached well records) installed for previous investigations could not be located. As described in the attached letter, efforts to locate these four wells included surveying their location using historical survey data and search of the surveyed area using ground penetrating radar.

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Please contact me if you have any questions.

Thanks

Brian Eichlin

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Please consider the environment before printing this email.

Taylor Wiseman & Taylor

ENGINEERS | SURVEYORS | SCIENTISTS

Date: July 24, 2015

Re: Monitoring Well Location
GlaxoSmithKline
North Cornwallis Campus

To: Attention Brian Eichlin
Golder Associates NC, Inc.

From: Richard T. Wieczorek, PLS
Taylor Wiseman & Taylor

Mr. Eichlin,

The intent of this letter is to describe the methods used to locate the monitoring wells associated with Permit Number NCD052547635. Installation coordinates for each well were provided by Golder Associates. TWT used GPS survey to locate the installation coordinates and then did a physical search in the area of each well. In the areas where wells were not found with a visual inspection, ground penetrating radar (GPR) was used in an attempt to locate the wells. A Golder representative also accompanied TWT in the use of GPR to ensure that we were searching in the correct areas. Despite these efforts, wells MW-4, RFI-16-B11, RFI-4-B21 and RFI-4-B22 were unable to be located.

Respectfully,

Richard T. Wieczorek, NC PLS #4846

North Carolina - Department of Environmental, Health and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO.____ SERIAL NO.____
Lat.____ Long.____ RO____
Minor Basin____
Basin Code____
Header Ent.____ GW-1 Ent.

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: Law Engineering **STATE WELL CONSTRUCTION**
DRILLER REGISTRATION NUMBER: 332 **PERMIT NUMBER:**____

1. WELL LOCATION: (Show sketch of the location below) MW-4
Nearest Town: Research Triangle Park County: Durham
(Road, Community, or Subdivision and Lot No.)

2. OWNER Burroughs Wellcome - North Center
ADDRESS 3030 Cornwallis Road
(Street or Route No.)
Research Triangle Park, North Carolina 27709
City or Town State Zip Code

3. DATE DRILLED 7/18/95 USE OF WELL Monitoring
4. TOTAL DEPTH 20.5'
5. CUTTINGS COLLECTED YES ☑ NO ☐
6. DOES WELL REPLACE EXISTING WELL ? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing: 13.15 FT.
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 0 FT. Above Land Surface*
***Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118**
9. YIELD (gpm): NA METHOD OF TEST NA
10. WATER ZONES (depth): Surficial Aquifer
11. CHLORINATION: Type NA Amount NA
12. CASING:

	Depth From	Depth To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
	0	10.5		2"	SCH 40	PVC

13. GROUT:

	Depth From	Depth To	Ft.	Material	Method
	6.5	8.5		Bentonite	Pour

14. SCREEN

	Depth From	Depth To	Ft.	Diameter	Slot Size	Material
	10.5	20.5		2"	0.010	PVC

15. SAND/GRAVEL PACK:

	Depth From	Depth To	Ft.	Size	Material
	8.5	21		Torpedo	Sand

16. REMARKS:

DEPTH From	DEPTH To	DRILLING LOG Formation Description
See attached Boring log.		

If additional space is needed use back of form

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)

See attached map.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

[signature] 8/30/95
SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit original to Division of Environmental Management and copy to well owner.

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	● PENETRATION - BLOWS/FOOT 0 10 20 30 40 60 80 100
0.0			
0.2	Grass and TOPSOIL		
	Maroon to dark red clayey SILT (ML), little sand.		
	Hand auger refusal at 8 feet bls.		50/5"
			46
20.0	Auger refusal at 20 feet bls.		
	Boring terminated at 20 feet bls. The boring was initially advanced on July 10, 1995, with a hand auger to a depth of 8 feet bls to presecreen subsurface soils for evidence of contamination. The remainder of the boring was advanced on July 19, 1995 using hollow stem augers.		

REMARKS:

Boring terminated at 20 feet bls. Type II mointoring well was installed upon completion. See Monitoring Well Construction Sheet for details.

SEE KEY SHEET FOR EXPLANATION OF SYMBOLS AND ABBREVIATIONS USED ABOVE

TEST BORING RECORD

BORING NUMBER	MW-4
DATE DRILLED	July 10, 1995
PROJECT NUMBER	30742-5-0109
PROJECT	Burroughs Wellcome
PAGE 1 OF 1	

LAW ENGINEERING

North Carolina – Department of Environment and Natural Resources – Division of Water Quality – Groundwater Section
P.O. Box 29578 – Raleigh, N.C. 27626-0578-Phone (919) 733-3221

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: Graham and Currie
DRILLER REGISTRATION #: 537
WELL NUMBER: RFI 4 B-21
STATE WELL CONSTRUCTION PERMIT #:

1. WELL USE (Check Applicable Box): Residential ☐ Municipal ☐ Industrial ☐ Agricultural ☐ Monitoring ☒
Recovery ☐ Heat-Pump Water Injection ☐ Other ☐ If Other, List Use:

2. WELL LOCATION: (Show Sketch of the location below)
Nearest Town: Durham County: Durham
N.C. 147 and Cornwallis Road
(Road, Community, or Subdivision and Lot No.)

3. OWNER Glaxo Wellcome
ADDRESS 5 Moore Drive
(Street or Route No.)
Research Triangle Park NC 27709
City or Town State Zip Code

4. DATE DRILLED 5/24/1999
5. TOTAL DEPTH 12.5
6. CUTTINGS COLLECTED YES ☒ NO ☐
7. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
8. STATIC WATER LEVEL Below Top of Casing: 0.95 FT.
(Use "+" if Above Top of Casing)
9. TOP OF CASING IS 0.60 FT Below Land Surface *
* Casing Terminated at/or below land surface is illegal unless a variance is issued
10. YIELD (gpm): NA METHOD OF TEST
11. WATER ZONES (depth): NA

CHLORINATION: Type NA Amount

DEPTH (FT.) From	To	DRILLING LOG Formation Description
(See attached boring log)		
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If additional space is needed use back of form

13. CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From 0.60	To 5.0	Ft.	2.0 in.	Sch 40.	PVC
From	To	Ft.	in.		
From	To	Ft.	in.		

14. GROUT:

	Depth		Material	Method
From 0.0	To 4.0	Ft.	Cement	Grout
From 4.0	To 5.0	Ft.	Bentonite	Chips

15. SCREEN:

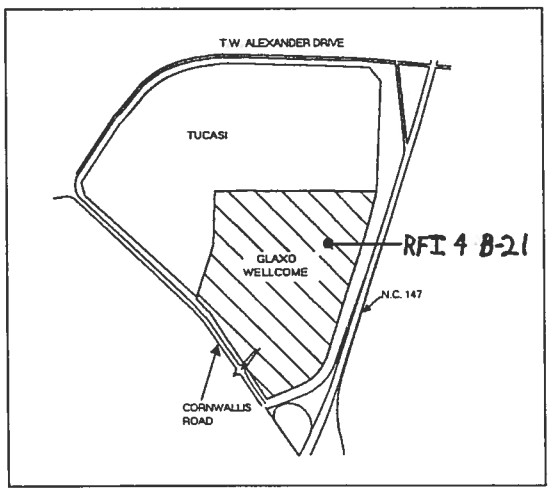
	Depth		Diameter	Slot Size	Material
From 5.5	To 12.5	Ft.	2.0 in.	0.010 in.	PVC
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	

16. SAND/GRAVEL PACK:

	Depth		Size	Material
From 5.0	To 12.5	Ft.	#2	Sand
From	To	Ft.		

17. REMARKS:

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

FOR OFFICE USE ONLY
Quad No:
Serial No:

SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit Original to Division of Water Quality and copy to well owner.
S&ME PROJECT NUMBER: 1054-96-554 GW-1 REV. 1/98

S&ME
ENGINEERING · TESTING
ENVIRONMENTAL SERVICES

Boring Log

RFI 4 **B-21**

PROJECT NO. 1054-96-554	SITE Glaxo Wellcome South Campus, North Complex	COUNTY Durham
BORING LOCATION SWMU 4		GEOLOGIST Samuel Watts
DATE STARTED 5/24/99	COMPLETED 5/24/99	DRILL METHOD Hollow Stem Auger
TOTAL DEPTH -12.5 FT. bgs	GROUND ELEV. 373.3 FT.	RIG CME 55 HAMMER TYPE 140 lbs
SURFACE WATER DEPTH 0.95 FT. BTOC	NORTHING 789418.49	EASTING 2040192.98
SURFACE CASING " ID. FROM FT. TO FT.	CASING TYPE	
WELL RISER 2 " ID FROM -0.60 FT. TO -5.5 FT.	CASING TYPE Schedule 40 PVC	
WELL SCREEN 2 " ID FROM -5.5 FT. TO -12.5 FT.	SCREEN TYPE 20 Slot Schedule 40 PVC	

NOTE: ASTERISKED SAMPLE WAS SENT TO LAB

Depth (Feet)	Blow Count 6 in.	6 in.	6 in.	6 in.	Pen	PID	FID	Samp. No.	LOG	ELEV.	Soil And Rock Description	Well Dwg.
0	7	10	12	11						373	0.0' - Medium brown sandy SILT (ML) with roots and angular gravel. Stiff and dry.	
-1						0.30	6.27	SS-1		372		
-2	6	9	7	7						371		
-3						-0.91	4.62	SS-2		370		
-4	3	4	4	5						369	3.5' - Medium brown sandy SILT (ML) with angular gravel. Stiff and slightly moist.	
-5						-1.50	0.54	SS-3		368	4.0' - Medium dark brown sandy SILT (ML) with organic matter and fill material (moist with angular gravel and concrete fragments). Slight odor at 6.0'.	
-6	4	41	7	4						367		
-7						-1.64	0.53	SS-4		366	6.0' - Medium brown sandy SILT (ML). Medium stiff and dry. (At 7.5' - same, with weathered rock and piece of metal.)	
-8	50	33	13	6						365		
-9						-1.30	1600	SS-5*		364	9.0' - Medium brown sandy SILT (ML), micaceous and moist. (At 10.5' - same, very moist.)	
-10	4	7	29	50						363		
-11						-0.94	500	SS-6		362	11.0' - Reddish brown sandy SILT (ML), moist. (Apparent fill)	
-12	50				50/3	-0.93	400	SS-7		361	11.5' - Yellowish brown sandy SILT (ML) with weathered rock. Very stiff and dry with slight sewage odor.	
-13										360	12.5' - Boring terminated.	

North Carolina – Department of Environment and Natural Resources – Division of Water Quality – Groundwater Section
P.O. Box 29578 – Raleigh, N.C. 27626-0578-Phone (919) 733-3221

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: Graham and Currie
DRILLER REGISTRATION #: 537
STATE WELL CONSTRUCTION PERMIT #:

WELL NUMBER: RFI 4 B-22

1. WELL USE (Check Applicable Box): Residential ☐ Municipal ☐ Industrial ☐ Agricultural ☐ Monitoring ☒
Recovery ☐ Heat-Pump Water Injection ☐ Other ☐ If Other, List Use:

2. WELL LOCATION: (Show Sketch of the location below)
Nearest Town: Durham County: Durham
N.C. 147 and Cornwallis Road
(Road, Community, or Subdivision and Lot No.)

3. OWNER Glaxo Wellcome
ADDRESS 5 Moore Drive
(Street or Route No.)
Research Triangle Park NC 27709
City or Town State Zip Code

4. DATE DRILLED 5/24/1999
5. TOTAL DEPTH 15.0
6. CUTTINGS COLLECTED YES ☒ NO ☐
7. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
8. STATIC WATER LEVEL Below Top of Casing: 4.85 FT.
(Use "+" if Above Top of Casing)
9. TOP OF CASING IS 0.34 FT Below Land Surface *
* Casing Terminated at/or below land surface is illegal unless a variance is issued
10. YIELD (gpm): NA METHOD OF TEST
11. WATER ZONES (depth): NA

CHLORINATION: Type NA Amount

DEPTH (FT.) From	To	DRILLING LOG Formation Description
(See attached boring log)		
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If additional space is needed use back of form

13. CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From 0.34	To 5.0	Ft.	2.0 in.	Sch 40	PVC
From	To	Ft.	in.		
From	To	Ft.	in.		

14. GROUT:

	Depth		Material	Method
From 0.0	To 3.0	Ft.	Cement	Grout
From 3.0	To 4.0	Ft.	Bentonite	Chips

15. SCREEN:

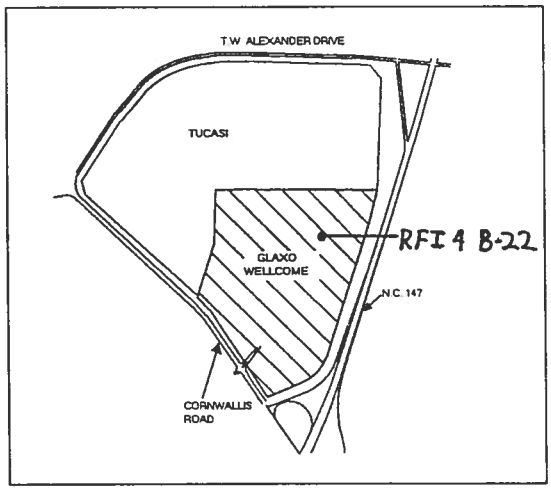
	Depth		Diameter	Slot Size	Material
From 5.0	To 15.0	Ft.	2.0 in.	0.010 in.	PVC
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	

16. SAND/GRAVEL PACK:

	Depth		Size	Material
From 4.0	To 15.0	Ft.	#2	Sand
From	To	Ft.		

17. REMARKS:

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



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SIGNATURE OF CONTRACTOR OR AGENT DATE

FOR OFFICE USE ONLY
Quad No:
Serial No:

Submit Original to Division of Water Quality and copy to well owner.
S&ME PROJECT NUMBER: 1054-96-554 GW-1 REV. 1/98

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Boring Log

RFI 4 **B-22**

PROJECT NO. 1054-96-554	SITE Glaxo Wellcome South Campus, North Complex	COUNTY Durham
BORING LOCATION SWMU 4		GEOLOGIST Samuel Watts
DATE STARTED 5/24/99	COMPLETED 5/24/99	DRILL METHOD Hollow Stem Auger
TOTAL DEPTH -15 FT. bgs	GROUND ELEV. 372.4 FT.	RIG CME 55 HAMMER TYPE 140 lbs
SURFACE WATER DEPTH 4.85 FT. BTOC	NORTHING 789406.46	EASTING 2040237.60
SURFACE CASING " ID. FROM FT. TO FT.	CASING TYPE	
WELL RISER 2 " ID FROM -0.34 FT. TO -5.0 FT.	CASING TYPE Schedule 40 PVC	
WELL SCREEN 2 " ID FROM -5.0 FT. TO -15.0 FT.	SCREEN TYPE 20 Slot Schedule 40 PVC	

NOTE: ASTERISKED SAMPLE WAS SENT TO LAB

Depth (Feet)	Blow Count 6 in.	6 in.	6 in.	6 in.	Pen	PID	FID	Samp. No.	LOG	ELEV.	Soil And Rock Description	Well Dwg.
0	7	8	5	4						372	0.0' - Medium brown, sandy SILT (ML) with organic material and angular gravel throughout. Very stiff and dry.	
-1						-1.30	2.40	SS-1		371		
-2	3	4	6	7						370	2.0' - Medium brown sandy SILT (ML) with yellow and gray mottling and organic material. Slightly moist and soft.	
-3						-0.92	77.00	SS-2		369		
-4	3	3	7	3						368	4.0' - Medium to dark brown sandy SILT (ML) with angular graval. Slightly moist and soft.	
-5						-0.80	400	SS-3		367		
-6	2	4	4	6						366	6.0' - Medium brown sandy SILT (ML) with gray mottling. Slightly moist and soft.	
-7						-1.09	1950	SS-4		365	7.0' - Dark brown sandy SILT (ML) with gray mottling and black decaying organic matter. Moist and soft.	
-8	3	4	4	5						364		
-9						1.03	950	SS-5		363	9.0' - Medium to yellow brown sandy SILT (ML) with dark brown decaying matter and angular gravel. Moist with strong rotten odor.	
-10	30	50			50/.5					362		
-11						1.59	300	SS-6		361	10.0' - Medium brown sandy SILT (ML) with angular gravel, wood and organic matter. Soft and moist with strong odor.	
-12	3	5	14	18						360	12.0' - Piece of concrete. Medium brown sandy SILT (ML) with angular gravel, organic material and metal wire. Moist and soft with strong rotten odor.	
-13						4.30	490	SS-7		359		

S&ME
ENGINEERING · TESTING
ENVIRONMENTAL SERVICES

Boring Log

RFI 4 **B-22**

PROJECT NO. 1054-96-554	SITE Glaxo Wellcome South Campus, North Complex	COUNTY Durham
BORING LOCATION SWMU 4		GEOLOGIST Samuel Watts
DATE STARTED 5/24/99	COMPLETED 5/24/99	DRILL METHOD Hollow Stem Auger
TOTAL DEPTH -15 FT. bgs	GROUND ELEV. 372.4 FT.	RIG CME 55 HAMMER TYPE 140 lbs
SURFACE WATER DEPTH 4.85 FT. BTOC	NORTHING 789406.46	EASTING 2040237.60
SURFACE CASING " ID. FROM FT. TO FT.	CASING TYPE	
WELL RISER 2 " ID FROM -0.34 FT. TO -5.0 FT.	CASING TYPE Schedule 40 PVC	
WELL SCREEN 2 " ID FROM -5.0 FT. TO -15.0 FT.	SCREEN TYPE 20 Slot Schedule 40 PVC	

NOTE: ASTERISKED SAMPLE WAS SENT TO LAB

Depth (Feet)	Blow Count 6 in.	6 in.	6 in.	6 in.	Pen	PID	FID	Samp. No.	LOG	ELEV.	Soil And Rock Description	Well Dwg.
-14	50				50/5	8.30	2200	SS-8*		358	14.0' - Medium brown sandy SILT (ML) with angular gravel, organic material, concrete pieces and a piece of wood at 15'. (Apparent fill)	
-15										357	15.0' - Boring terminated - refusal. Auger bit coated with white dust. Refusal may be on concrete, not rock.	
-16												

North Carolina – Department of Environment and Natural Resources – Division of Water Quality – Groundwater Section
P.O. Box 29578 – Raleigh, N.C. 27626-0578-Phone (919) 733-3221

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: Graham and Currie
DRILLER REGISTRATION #: 537
WELL NUMBER: RFI 16 B-11
STATE WELL CONSTRUCTION PERMIT #:

1. WELL USE (Check Applicable Box): Residential ☐ Municipal ☐ Industrial ☐ Agricultural ☐ Monitoring ☒
Recovery ☐ Heat-Pump Water Injection ☐ Other ☐ If Other, List Use:

2. WELL LOCATION: (Show Sketch of the location below)
Nearest Town: Durham County: Durham
N.C. 147 and Cornwallis Road
(Road, Community, or Subdivision and Lot No.)

3. OWNER Glaxo Wellcome
ADDRESS 5 Moore Drive
(Street or Route No.)
Research Triangle Park NC 27709
City or Town State Zip Code

4. DATE DRILLED 6/1/1999
5. TOTAL DEPTH 9.0
6. CUTTINGS COLLECTED YES ☒ NO ☐
7. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
8. STATIC WATER LEVEL Below Top of Casing: "DRY" FT.
(Use "+" if Above Top of Casing)
9. TOP OF CASING IS 0.3 FT Below Land Surface *
* Casing Terminated at/or below land surface is illegal unless a variance is issued
10. YIELD (gpm): NA METHOD OF TEST
11. WATER ZONES (depth): NA

CHLORINATION: Type NA Amount

DEPTH (FT.) From	To	DRILLING LOG Formation Description
(See attached boring log)		
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If additional space is needed use back of form

13. CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From 0.30	To 3.3	Ft.	2.0 in.	Sch 40 .	PVC
From	To	Ft.	in.		
From	To	Ft.	in.		

14. GROUT:

	Depth		Material	Method
From 0.0	To 2.0	Ft.	Cement	Grout
From 2.0	To 3.0	Ft.	Bentonite	Chips

15. SCREEN:

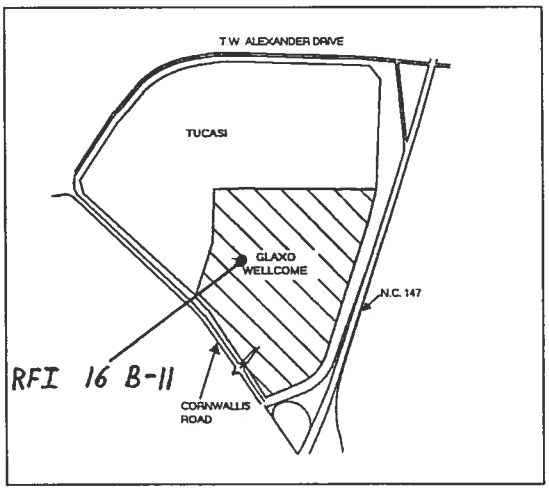
	Depth		Diameter	Slot Size	Material
From 3.5	To 7.4	Ft.	2.0 in.	0.010 in.	PVC
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	

16. SAND/GRAVEL PACK:

	Depth		Size	Material
From 3.0	To 7.4	Ft.	#2	Sand
From	To	Ft.		

17. REMARKS:

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CONTRACTOR OR AGENT DATE

FOR OFFICE USE ONLY
Quad No:
Serial No:

Submit Original to Division of Water Quality and copy to well owner.
S&ME PROJECT NUMBER: 1054-96-554 GW-1 REV. 1/98

S&ME
ENGINEERING · TESTING
ENVIRONMENTAL SERVICES

Boring Log

RFI 16 **B-11**

PROJECT NO. 1054-96-554	SITE Glaxo Wellcome South Campus, North Complex	COUNTY Durham
BORING LOCATION SWMU 16		GEOLOGIST Samuel Watts
DATE STARTED 6/1/99	COMPLETED 6/4/99	DRILL METHOD Hollow Stem Auger
TOTAL DEPTH -9 FT. bgs	GROUND ELEV. 361.9 FT.	RIG CME 55 HAMMER TYPE 140 lbs
SURFACE WATER DEPTH Dry	NORTHING 789394.65	EASTING 2039184.80
SURFACE CASING " ID. FROM FT. TO FT.	CASING TYPE	
WELL RISER 2 " ID FROM -0.30 FT. TO -3.5 FT.	CASING TYPE Schedule 40 PVC	
WELL SCREEN 2 " ID FROM -3.5 FT. TO -7.4 FT.	SCREEN TYPE Slot 20 Schedule 40 PVC	

NOTE: ASTERISKED SAMPLE WAS SENT TO LAB

Depth (Feet)	Blow Count 6 in.	6 in.	6 in.	6 in.	Pen	PID	FID	Samp. No.	LOG	ELEV.	Soil And Rock Description	Well Dwg.
0	20	30	30	36							0.0' - Light medium brown sandy SILT (ML). Very stiff, dry. Some roots and gravel. (Apparent fill)	
-1						0.65	4.85	SS-1*		361		
-2	13	11	10	9						360		
-3						0.81	5.00	SS-2		359		
-4	5	4	4	4						358		
-5						1.10	4.37	SS-3		357		
-6	3	9	50		50/4					356		
-7						1.26	5.56	SS-4		355		
-8	50				50/4					354	8.0' - Reddish brown sandy SILT (ML), stiff, moist.	
-9						1.90	5.70	SS-5*		353	8.5' - Reddish brown weathered SILTSTONE.	
-10										352	9.0' - Boring terminated - auger refusal.	

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Stefan Smith
Well Contractor Name (or well owner personally abandoning well on his/her property)

3576A
NC Well Contractor Certification Number

SAEDACCO Inc
Company Name

2. Well Construction Permit #: , ,
List all applicable well permits (i.e. County, State, Variance, Injection, etc.) if known

3. Well use (check well use):

Water Supply Well:
- ☐ Agricultural
- ☐ Municipal/Public
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Residential Water Supply (single)
- ☐ Industrial/Commercial
- ☐ Residential Water Supply (shared)
- ☐ Irrigation

Non-Water Supply Well:
- ☒ Monitoring
- ☐ Recovery

Injection Well:
- ☐ Aquifer Recharge
- ☐ Groundwater Remediation
- ☐ Aquifer Storage and Recovery
- ☐ Salinity Barrier
- ☐ Aquifer Test
- ☐ Stormwater Drainage
- ☐ Experimental Technology
- ☐ Subsidence Control
- ☐ Geothermal (Closed Loop)
- ☐ Tracer
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Other (explain under 7g)

4. Date well(s) abandoned: 3-9-2016

5a. Well location:

Glaxo South campus
Facility/Owner Name

Facility ID# (if applicable)

3029 E Cornwallis Rd Durham, NC 27703 Orange Count
Physical Address, City, and Zip

Durham
County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

789390.24N N 2040250.53E W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: GW-8SB

6b. Total well depth: 36 (ft.)

6c. Borehole diameter: 2 (in.)

6d. Water level below ground surface: 24~ (ft.)

6e. Outer casing length (if known): 6"-9 feet, 4"-18 feet (ft.)

6f. Inner casing/tubing length (if known): _____ (ft.)

6g. Screen length (if known): 2" X 10' (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1
For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): 2 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):
- ☒ Neat Cement Grout
- ☐ Bentonite Chips or Pellets
- ☐ Sand Cement Grout
- ☐ Dry Clay
- ☐ Concrete Grout
- ☐ Drill Cuttings
- ☐ Specialty Grout
- ☐ Gravel
- ☐ Bentonite Slurry
- ☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

Neat Cem.:47lb ,Wtr:6gal.
Sand Cem.:lb ,Wtr:gal.
Bentonite.:>.5lb ,Wtr:gal.

7g. Provide a brief description of the abandonment procedure:

Tremie grouted from bottom up.

8. Certification:

Stefan J Smith
Signature of Certified Well Contractor or Well Owner

3/20/2016
Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Stefan Smith
Well Contractor Name (or well owner personally abandoning well on his/her property)

3576A
NC Well Contractor Certification Number

SAEDACCO Inc
Company Name

2. Well Construction Permit #: , ,
List all applicable well permits (i.e. County, State, Variance, Injection, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☒Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 3-9-2016

5a. Well location:

Glaxo South campus
Facility/Owner Name

Facility ID# (if applicable)

3029 E Cornwallis Rd Durham, NC 27703 Orange Count
Physical Address, City, and Zip

Durham
County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

789540.34N N 2040322.99E W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: GW-10S

6b. Total well depth: 36 (ft.)

6c. Borehole diameter: 2 (in.)

6d. Water level below ground surface: 23~ (ft.)

6e. Outer casing length (if known): 5.5 feet (ft.)

6f. Inner casing/tubing length (if known): 26 (ft.)

6g. Screen length (if known): 2" X 10' (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1
For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): >2 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☒ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

Neat Cem.:47lb ,Wtr:6gal. Sand Cem.:lb ,Wtr:gal.

Bentonite.:>.5lb ,Wtr:gal.

7g. Provide a brief description of the abandonment procedure:

Tremie grouted from bottom up.

8. Certification:

Stefan J Smith
Signature of Certified Well Contractor or Well Owner

3/20/2016
Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Stefan Smith
Well Contractor Name (or well owner personally abandoning well on his/her property)

3576A
NC Well Contractor Certification Number

SAEDACCO Inc
Company Name

2. Well Construction Permit #: , ,
List all applicable well permits (i.e. County, State, Variance, Injection, etc.) if known

3. Well use (check well use):

Water Supply Well:
- ☐ Agricultural
- ☐ Municipal/Public
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Residential Water Supply (single)
- ☐ Industrial/Commercial
- ☐ Residential Water Supply (shared)
- ☐ Irrigation

Non-Water Supply Well:
- ☒ Monitoring
- ☐ Recovery

Injection Well:
- ☐ Aquifer Recharge
- ☐ Groundwater Remediation
- ☐ Aquifer Storage and Recovery
- ☐ Salinity Barrier
- ☐ Aquifer Test
- ☐ Stormwater Drainage
- ☐ Experimental Technology
- ☐ Subsidence Control
- ☐ Geothermal (Closed Loop)
- ☐ Tracer
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Other (explain under 7g)

4. Date well(s) abandoned: 3-9-2016

5a. Well location:

Glaxo South campus
Facility/Owner Name

Facility ID# (if applicable)

3029 E Cornwallis Rd Durham, NC 27703 Orange Count
Physical Address, City, and Zip

Durham
County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

789298.92N N 2039072.09E W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: GW-37S

6b. Total well depth: 37.5 (ft.)

6c. Borehole diameter: 2 (in.)

6d. Water level below ground surface: 13- (ft.)

6e. Outer casing length (if known): 10 (ft.)

6f. Inner casing/tubing length (if known): 27.5 (ft.)

6g. Screen length (if known): 2" X 10' (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1
For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): 2 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):
- ☒ Neat Cement Grout
- ☐ Bentonite Chips or Pellets
- ☐ Sand Cement Grout
- ☐ Dry Clay
- ☐ Concrete Grout
- ☐ Drill Cuttings
- ☐ Specialty Grout
- ☐ Gravel
- ☐ Bentonite Slurry
- ☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

Neat Cem.:47lb ,Wtr:6gal. Sand Cem.:lb ,Wtr:gal.

Bentonite.:>.5lb ,Wtr:gal.

7g. Provide a brief description of the abandonment procedure:

Tremie grouted from bottom up.

8. Certification:

Stefan J. Smith
Signature – Certified Well Contractor or Well Owner

3/20/2016
Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Stefan Smith
Well Contractor Name (or well owner personally abandoning well on his/her property)

3576A
NC Well Contractor Certification Number

SAEDACCO Inc
Company Name

2. Well Construction Permit #: , ,
List all applicable well permits (i.e. County, State, Variance, Injection, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☒Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 3-9-2016

5a. Well location:

Glaxo South campus
Facility/Owner Name

Facility ID# (if applicable)

3029 E Cornwallis Rd Durham, NC 27703 Orange Count
Physical Address, City, and Zip

Durham
County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

789298.92N N 2039072.09E W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: MW-3

6b. Total well depth: 50 (ft.)

6c. Borehole diameter: 2 (in.)

6d. Water level below ground surface: 13~ (ft.)

6e. Outer casing length (if known): (ft.)

6f. Inner casing/tubing length (if known): 45 (ft.)

6g. Screen length (if known): 2" X 5' (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1
For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): >2 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used:

7d. Amount of disinfectant used:

7e. Sealing materials used (check all that apply):

☒ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

Neat Cem.:47lb ,Wtr:6gal. Sand Cem.:lb ,Wtr:gal.

Bentonite.:>.5lb ,Wtr:gal.

7g. Provide a brief description of the abandonment procedure:

Tremie grouted from bottom up.

8. Certification:

Stefan J Smith
Signature of Certified Well Contractor or Well Owner

3/20/2016
Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Stefan Smith
Well Contractor Name (or well owner personally abandoning well on his/her property)

3576A
NC Well Contractor Certification Number

SAEDACCO Inc
Company Name

2. Well Construction Permit #: , ,
List all applicable well permits (i.e. County, State, Variance, Injection, etc.) if known

3. Well use (check well use):

Water Supply Well:
- ☐ Agricultural
- ☐ Municipal/Public
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Residential Water Supply (single)
- ☐ Industrial/Commercial
- ☐ Residential Water Supply (shared)
- ☐ Irrigation

Non-Water Supply Well:
- ☒ Monitoring
- ☐ Recovery

Injection Well:
- ☐ Aquifer Recharge
- ☐ Groundwater Remediation
- ☐ Aquifer Storage and Recovery
- ☐ Salinity Barrier
- ☐ Aquifer Test
- ☐ Stormwater Drainage
- ☐ Experimental Technology
- ☐ Subsidence Control
- ☐ Geothermal (Closed Loop)
- ☐ Tracer
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Other (explain under 7g)

4. Date well(s) abandoned: 3-9-2016

5a. Well location:

Glaxo South campus
Facility/Owner Name

Facility ID# (if applicable)

3029 E Cornwallis Rd Durham, NC 27703 Orange Count
Physical Address, City, and Zip

Durham
County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

789355.36N N 2040283.61E W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: RFI4-B18

6b. Total well depth: 13 (ft.)

6c. Borehole diameter: 2 (in.)

6d. Water level below ground surface: 0 (ft.)

6e. Outer casing length (if known): (ft.)

6f. Inner casing/tubing length (if known): 45 (ft.)

6g. Screen length (if known): 2" X 5' (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1
For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): >2 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used:

7d. Amount of disinfectant used:

7e. Sealing materials used (check all that apply):
- ☒ Neat Cement Grout
- ☐ Bentonite Chips or Pellets
- ☐ Sand Cement Grout
- ☐ Dry Clay
- ☐ Concrete Grout
- ☐ Drill Cuttings
- ☐ Specialty Grout
- ☐ Gravel
- ☐ Bentonite Slurry
- ☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

Neat Cem.:47lb ,Wtr:6gal.
Sand Cem.:lb ,Wtr:gal.
Bentonite.:>.5lb ,Wtr:gal.

7g. Provide a brief description of the abandonment procedure:

Tremie grouted from bottom up.

8. Certification:

Stefan J. Smith
Signature of Certified Well Contractor or Well Owner

3/20/2016
Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Stefan Smith
Well Contractor Name (or well owner personally abandoning well on his/her property)

3576A
NC Well Contractor Certification Number

SAEDACCO Inc
Company Name

2. Well Construction Permit #: , ,
List all applicable well permits (i.e. County, State, Variance, Injection, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐ Agricultural	☐ Municipal/Public
☐ Geothermal (Heating/Cooling Supply)	☐ Residential Water Supply (single)
☐ Industrial/Commercial	☐ Residential Water Supply (shared)
☐ Irrigation	
Non-Water Supply Well:	
☒ Monitoring	☐ Recovery
Injection Well:	
☐ Aquifer Recharge	☐ Groundwater Remediation
☐ Aquifer Storage and Recovery	☐ Salinity Barrier
☐ Aquifer Test	☐ Stormwater Drainage
☐ Experimental Technology	☐ Subsidence Control
☐ Geothermal (Closed Loop)	☐ Tracer
☐ Geothermal (Heating/Cooling Return)	☐ Other (explain under 7g)

4. Date well(s) abandoned: 3-9-2016

5a. Well location:

Glaxo South campus
Facility/Owner Name — Facility ID# (if applicable)

3029 E Cornwallis Rd Durham, NC 27703 Orange Count
Physical Address, City, and Zip

Durham
County — Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

789399.08N N 2040272.43E W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: RFI4-B19

6b. Total well depth: 8 (ft.)

6c. Borehole diameter: 2 (in.)

6d. Water level below ground surface: 0 (ft.)

6e. Outer casing length (if known): _____ (ft.)

6f. Inner casing/tubing length (if known): 3 (ft.)

6g. Screen length (if known): 2" X 5' (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1
For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): 2 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☒ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

Neat Cem.:47lb ,Wtr:6gal. Sand Cem.:lb ,Wtr:gal.

Bentonite.:>.5lb ,Wtr:gal.

7g. Provide a brief description of the abandonment procedure:

Tremie grouted from bottom up.

8. Certification:

Stefan J. Smith — 3/20/2016
Signature of Certified Well Contractor or Well Owner — Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
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1636 Mail Service Center, Raleigh, NC 27699-1636

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WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Stefan Smith
Well Contractor Name (or well owner personally abandoning well on his/her property)

3576A
NC Well Contractor Certification Number

SAEDACCO Inc
Company Name

2. Well Construction Permit #: , ,
List all applicable well permits (i.e. County, State, Variance, Injection, etc.) if known

3. Well use (check well use):

Water Supply Well:
- ☐ Agricultural
- ☐ Municipal/Public
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Residential Water Supply (single)
- ☐ Industrial/Commercial
- ☐ Residential Water Supply (shared)
- ☐ Irrigation

Non-Water Supply Well:
- ☒ Monitoring
- ☐ Recovery

Injection Well:
- ☐ Aquifer Recharge
- ☐ Groundwater Remediation
- ☐ Aquifer Storage and Recovery
- ☐ Salinity Barrier
- ☐ Aquifer Test
- ☐ Stormwater Drainage
- ☐ Experimental Technology
- ☐ Subsidence Control
- ☐ Geothermal (Closed Loop)
- ☐ Tracer
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Other (explain under 7g)

4. Date well(s) abandoned: 3-9-2016

5a. Well location:

Glaxo South campus
Facility/Owner Name

Facility ID# (if applicable)

3029 E Cornwallis Rd Durham, NC 27703 Orange Count
Physical Address, City, and Zip

Durham
County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

789399.08N N 2040272.43E W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: W-3

6b. Total well depth: 53 (ft.)

6c. Borehole diameter: 2 (in.)

6d. Water level below ground surface: 33~ (ft.)

6e. Outer casing length (if known): _____ (ft.)

6f. Inner casing/tubing length (if known): 43 (ft.)

6g. Screen length (if known): 2"X10' (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1
For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): >2 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):
- ☒ Neat Cement Grout
- ☐ Bentonite Chips or Pellets
- ☐ Sand Cement Grout
- ☐ Dry Clay
- ☐ Concrete Grout
- ☐ Drill Cuttings
- ☐ Specialty Grout
- ☐ Gravel
- ☐ Bentonite Slurry
- ☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

Neat Cem.:471b ,Wtr:6gal.
Sand Cem.:1b ,Wtr:gal.
Bentonite.:>.51b ,Wtr:gal.

7g. Provide a brief description of the abandonment procedure:

Tremie grouted from bottom up.

8. Certification:

Stefan J Smith
Signature of Certified Well Contractor or Well Owner

3/20/2016
Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
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Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

APPENDIX C

WASTE DISPOSAL DOCUMENTATION

NON-HAZARDOUS MANIFEST [25796]

SVE SOILS [20150309], SVE CONDENSATE [20150310], GENERAL TRASH [20150311]

APRIL 9, 2015

A&D Environmental Services — Bill of Lading / Material Manifest

A&D Job No:	Generator ID Number	Page 1 of	Emergency Response Phone	Tracking Number
74391	NCD052547635	1	800-255-3924-MIS0007951	25796

Generator's Name and Mailing Address
GlaxoSmithKline
5 Moore Drive/PO Box 13398
Durham, NC 27709-3398 USA
919-483-4640

Generator's site address (if different from mailing address)
3025 East Cornwallis Road
Durham, NC 27709

Transporter 1 ☐ 2 ☐ Company Name **A&D Environmental Services, Inc.** US EPA ID No: NCD986232221

Transporter 1 ☒ 2 ☐ Company Name **A&D Environmental Services (SC), LLC** US EPA ID No: SCD987598331

☒ Designated Facility	☐ Designated Facility	☐ Designated Facility	☐ Designated Facility
A&D Environmental Services, Inc. 2718 Uwharrie Road Archdale, NC 27263 336-434-7750 NCD986232221	A&D Environmental Services, Inc. 3149 Lear Drive Burlington, NC 27215 336-229-0058 NCR000138628	A&D Environmental Services (SC), LLC 1741 Calks Ferry Road Lexington, SC 29073 803-957-9175 SCD987598331	A&D Environmental Services (SC), LLC 1321 White Horse Road, Suite C Greenville, SC 29605 864-234-6055

HM	Hazardous Materials Shipping Name and Description (if applicable)	No.	Type	QTY	Wt/Vol	Profile Number
	Non-Regulated Material (IDW-Liquids)	003	DM	1200	P	20150310
	Non-Regulated Material (IDW-Solids)	002	DM	50	P	20150309
	Non-Regulated Material (IDW-PVC)	002	BA	40	P	20150311
	Petroleum Products for Recycle	No.	Type	QTY	Wt/Vol	Profile Number
X	NA1993, Diesel fuel, 3, III ERG# 128					
X	NA1993, Fuel oil (No.1,2,4,5 or 6), 3, III ERG# 128					
X	UN1203, Gasoline, 3, II ERG# 128					
	USED OIL (Not a USDOT Hazardous Material)					
	Petroleum Contact Water (Not a USDOT Hazardous Material)					

Universal Waste Lamps, Batteries, Ballasts, and Electronics for Recycle

HM	No.	Type	Est. Wt.	Count	Shipping Name and Description (if applicable)	Common Name	Discrepancy
X					RQ, UN2809, Mercury contained in manufactured articles, 8, III ERG# 172	Mercury Containing Articles	
X					RQ, UN3432, Polychlorinated biphenyls, solid, 9, II ERG# 171	TSCA Exempt PCB Lamp Ballasts	
X					UN2800, Batteries, wet, nonspillable, 8, III ERG# 154	Sealed Lead Acid Batteries	
X					UN2794, Batteries, wet, filled with acid, 8, III ERG# 154	Lead Acid Batteries	
X					UN2795, Batteries, wet, filled with alkali, 8, III ERG# 154	Wet NiCad Batteries	
X					UN3090, Lithium batteries, 9, II ERG# 138	Lithium Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III ERG# 154	Alkaline Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III ERG# 154	NiCad Batteries	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Fluorescent lamps 4' or <	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Fluorescent lamps 4'	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Circular/U-tube lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Compact Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Shattershield	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	HID/MV/UV Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Incandescent Lamps	
					Non-PCB Light Ballasts for Recycle (Not DOT-Regulated)	Non-PCB Light Ballasts	
					Electronic Equipment for Recycle (Not DOT-Regulated)	Electronics	

Generator's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are a hazardous waste as defined by EPA 40CFR Part 261 or any applicable state law, and unless specifically identified above the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2ppm) of PCBs as defined by EPA 40 CFR Parts 279 and 761.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
DANIEL CHILDRESS "ON BEHALF OF GSK"	Daniel Childress	04	09	15

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Matt Wang	Matt Wang	04	09	15

Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

Discrepancy Indication / Additional Information:

Designated Facility Certification: I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy indicated above.

Printed/Typed Name	Signature	Month	Day	Year
TRAVIS Clapp	Clapp	04	28	15

DESIGNATED FACILITY TO GENERATOR

A&D Environmental Services, Inc.
2718 Uwharrie Rd., Archdale, NC 27263
336-434-7750 FAX: 336-434-7752

Reserved for Facility Use | Approval Date: 4-8-15 By: Steve Seeemann Expiration Date: 1 yr from Approval Date

☐ Solidification ☐ Recovery **Profile Number:** 20150309

A. Billing Information

Company: **Golder Associates** Account #:
Address: **5B Oak Branch Drive**
City/State: **Greensboro, NC** Zip: **27407** Contact: **Brian Eichlin**
Phone: **336-852-4903** Fax: **336-852-4904**

B. Generator Information/Location of Waste

Generator Name: GlaxoSmithKline Site Contact: Lindsey Walata
Address: 3029 E. Cornwallis Road
City/State: Durham, NC Zip: 27703
Contact Phone: 919-483-4640 EPD ID: NCD052547635
Type of Business: Closed Site SIC Code:

C. Waste Description

Common Name of Waste: Solid Waste - Soils
Process Generating Waste: Operations and Maintenance of Remediation System

D. Physical Properties

Physical State	Odor	Color	Viscosity	Specific Gravity
☑ 100% Solid	☑ None	Describe: Tan, Brown	☐ Low	____ lb/gallon
☐ 100% Liquid	☐ Mild		☐ Medium	
☐ Sludge	☐ Strong		☑ High	
____ % Free Liquid	Describe:			

Flash Point		pH		Water	
☐ <73 F	☐ 140-199 F	☐ < 2	☐ 9.1 - 12.4	☐ < 5%	☐ 30-80%
☐ 73-99 F	☐ >199 F	☐ 2.1 - 4.9	☐ > 12.5	☐ 5-10%	☐ 80-100%
☐ 100-139 F	☑ N/A	☐ 5 - 9	☑ N/A	☐ 10-30%	☑ N/A

Is this waste incompatibile with other material? ☑ No ☐ Yes If Yes, explain:

E. Volume

Anticipated Volume: 1-5 ☐ Drums ☑ 5-Gallon ☐ 30-Gallon ☐ 55-Gallon ☐ Tote ☐ Bulk ☐ Tanker ☐ Pump Truck ☐ Other:

Estimated Frequency: ☐ Weekly ☐ Semimonthly ☐ Monthly ☐ Quarterly ☐ Other Year

F. Constituents

Total must be equal to 100%. All constituents, including debris must be identified.

Constituents	Actual %	Range
Solid Waste - Soils	100%	
	100%	

G. Other Hazards

☐ Radioactive
☐ Water Reactive
☐ Oxidizer
☐ OSHA
☐ Carcinogen
☐ Explosive
☐ Pesticide
☐ Polymerizable
☐ Organic Peroxide
☐ Infectious
☐ Pryophoric

H. Process Flow Chart

Using the space provided, draw a flow chart showing how waste is generated

I. Constituents

These values are based on ☐ Generator Knowledge ☑ Analytical Results ☐ MSDS

All analytical data provided relevant to this profile must be conducted by laboratories that have NELAP/NELAC accreditation.

Accreditation Number: E87047 Name: CompuChem

Address: 501 Madison Avenue, Cary, NC 27513 Phone: 919-379-4100

Inorganic

Metals		Level	(mg/l)
D004	Arsenic	5.0	n/a
D005	Barium	100.0	n/a
D006	Cadmium	1.0	n/a
D007	Chromium	5.0	n/a
D008	Lead	5.0	n/a
D009	Mercury	0.2	n/a
D010	Selenium	1.0	n/a
D011	Silver	5.0	n/a

Other	Conc.
Ammonia	n/a
Phosphorus	n/a
Formaldehyde	n/a
Total Solids	n/a
PCBs	n/a
Copper	n/a
Nickel	n/a
Zinc	n/a

Pesticides/Herbicides		Level	(mg/l)
D012	Endrin		n/a
D013	Lindane		n/a
D014	Methoxychlor		n/a
D015	Toxaphene		n/a
D016	2,4-D		n/a
D017	2,4,5-TP		n/a
D020	Chlordane		n/a
D031	Heptachlor		n/a

Organic

Volatile Compounds		Level	(mg/l)
D018	Benzene	0.5	ND
D019	Carbon Tetrachloride	0.5	ND
D021	Chlorobenzene	100.0	ND
D022	Chloroform	6.0	ND
D028	1,2-Dichloroethane	0.5	ND
D029	1,1-Dichloroethylene	0.7	ND
D035	Methyl Ethyl Ketone	200.0	ND
D039	Tetrachloroethylene	0.7	ND
D040	Trichloroethlene	0.5	ND
D043	Vinyl Chloride	0.2	ND

Semi-Volatile Compounds		Level	(mg/l)
D023	o-Cresol	200.0	n/a
D024	m-Cresol	200.0	n/a
D025	p-Cresol	200.0	n/a
D026	Cresol	200.0	n/a
D027	1,4-Dichlorobenzene	7.5	n/a
D030	2,4-Dinitrotoluene	0.13	n/a
D032	Hexchlorobenzene	0.13	n/a
D033	Hexachlorobutadiene	0.5	n/a
D034	Hexachloroethene	3.0	n/a
D036	Nitrobenzene	2.0	n/a
D037	Pentachlorophenol	100.0	n/a
D038	Pyridine	5.0	n/a
D041	2,4,5-Trichlorophenol	400.0	n/a
D042	2,4,6-Trichlorophenol	2.0	n/a

J. General Information

1 ☑ No ☐ Yes Is this waste a hazardous material as defined in 49 CFR Section 172.101?
If yes, include shipping name, placard hazard class and packaging group:

2 ☑ No ☐ Yes Is this waste regulated as a reportable quantity as defined in 49 CFR Section 172.101 Appendix A?

3 ☑ No ☐ Yes Is this waste a marine pollutant as defined in 49 CFR Section 172.101 Appendix B?

4 ☑ No ☐ Yes Is this hazardous waste, as determined by performing the Hazardos Waste Determination prescribed at CFR262.11? (Attach Documentation)

5 ☑ No ☐ Yes Does this waste contain any amount of Listed Hazardous Waste in 40 CFR 261.31, Hazardous Waste from Non-specific Sources; 261.32, Hazardous Waste from Specific Sources; and 261.33, Discarded Commercial Chemical Products, Off specification Species, Container Residues, and Spill Residues?

6 ☑ No ☐ Yes Does waste fall any of the four Hazardous Waste Characteristics of Ignitibility, corrosivity, reactivity, and toxicity, as defined in 40 CFR 261.21, 261.22, 261.23, 261.23, respectively?

7 ☑ No ☐ Yes Is this waste state regulated? If Yes, define:

8 ☑ No ☐ Yes Are Material Safety Data Sheets and/or all analytical data relevant to this profile data sheet attached?

9 ☑ No ☐ Yes Is this waste derived from an investigation of an Underground Storage Tank release (IDW)?

K. Sample

Has a sample been included? ☐ Yes ☑ No If yes, sampled by: _____ Date: _____

L. Generator's Certification

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If A&D Environmental Services discovers a descrepancy during the approval process, Generator grants A&D Environmental Services the authority to amend the profile, as A&D Environmental Services LLC deems necessary, to reflect the descrepancy.

Generator Signature	Print Name	Date
Daniel Childress	DANIEL CHILDRESS	04/00/2015

"CONSULTANT ON BEHALF OF GENERTOR"

ANALYSES DATA PACKAGE COVER PAGE

Client: GOLDER

Project: GSK GW-O&M ACTIVITIES MARCH 2015/073-9611502

Laboratory: COMPUCHEM

SDG: 1503040

Client Sample Id:	Analysis:	Lab Sample Id:
SS-1	SW 8260B	1503040-01
SS-2	SW 8260B	1503040-02
SS-3	SW 8260B	1503040-03
SS-4	SW 8260B	1503040-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions addressed in the narrative. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Quentisha Forrester

Name: Quentisha Forrester

Date: 03/19/2015

Title: Chemist III

CompuChem
A Division Of
Liberty Analytical Corp.

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1503040
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: **SS-1** **SS-2** **SS-3** **SS-4**

The 4 soil samples listed above were received intact, refrigerated at 0.2^{0}C with proper documentation, in sealed shipping containers, on March 12, 2015. The samples were scheduled for the requested analyses of the volatile fraction only. SW-846, 3rd Edition, Update 3, 5035A/8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices are included in the sample data sections.

VOLATILES

Analysis holding time requirements were met for all of the samples. Percent moisture values ranged from 13 to 19 percent.

No Volatile Project/Target Compound List (TCL) analytes were identified above the Contract Required Quantitation Limit (CRQL) in these samples.

Manual integrations were performed in this SDG, as indicated on the detailed Manual Integration Summary report that is located in section S. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All of the system monitoring compounds met recovery criteria in the analyses of the samples. All of the internal standards met response and retention time criteria in the analyses of the samples.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG.

All QC criteria were met for all initial calibration and continuing calibration verification standards associated to this SDG.

The associated method blank met all quality control criteria.

No duplicate matrix spikes were requested with this SDG. The associated Laboratory Control Samples (LCS/LCSD) met all quality control criteria.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Quentisha Forrester
Chemist III
March 19, 2015

ANALYSIS DATA SHEET

SW 8260B

SS-1

Client: GOLDER | SDG 1503040 | Project: GSK GW-O&M ACTIVITIES MARCH 2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1503040-0159.d | Sampled: 03/11/15 13:40

Initial/Final: 5g / 5mL | Lab ID: 1503040-01 | Received: 03/12/15 12:00

Dilution: 1 | pH: | Prepared: 03/16/15 18:49

% Moisture: 13 | Analyzed: 03/16/15 23:54

Batch: 5031603 | Sequence: 5C16008 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.50	5.7	U
74-87-3	Chloromethane		0.37	5.7	U
75-01-4	Vinyl chloride		0.48	5.7	U
74-83-9	Bromomethane		0.67	5.7	U
75-00-3	Chloroethane		0.81	5.7	U
75-69-4	Trichlorofluoromethane		0.34	5.7	U
107-02-8	Acrolein		6.5	57	U
75-35-4	1,1-Dichloroethene		1.3	5.7	U
67-64-1	Acetone		5.7	14	U
74-88-4	Iodomethane		0.37	5.7	U
75-15-0	Carbon disulfide		0.16	5.7	U
107-05-1	3-Chloropropene		1.3	5.7	U
75-05-8	Acetonitrile		1.1	5.7	U
75-09-2	Methylene chloride		0.56	5.7	U
107-13-1	Acrylonitrile		4.2	57	U
156-60-5	trans-1,2-Dichloroethene		1.1	5.7	U
75-34-3	1,1-Dichloroethane		0.54	5.7	U
108-05-4	Vinyl acetate		0.24	5.7	U
156-59-2	cis-1,2-Dichloroethene		0.48	5.7	U
107-12-0	Propionitrile		11	290	U
78-93-3	2-Butanone		1.5	14	U
126-98-7	Methacrylonitrile		2.5	57	U
67-66-3	Chloroform		0.36	5.7	U
71-55-6	1,1,1-Trichloroethane		0.57	5.7	U
56-23-5	Carbon tetrachloride		0.52	5.7	U
107-06-2	1,2-Dichloroethane		0.31	5.7	U
78-83-1	Isobutyl alcohol		18	290	U
71-43-2	Benzene		0.36	5.7	U
79-01-6	Trichloroethene		0.37	5.7	U
78-87-5	1,2-Dichloropropane		0.72	5.7	U
74-95-3	Dibromomethane		1.4	5.7	U
123-91-1	1,4-Dioxane		55	290	U
80-62-6	Methyl Methacrylate		3.7	57	U
75-27-4	Bromodichloromethane		0.44	5.7	U
10061-01-5	cis-1,3-Dichloropropene		0.45	5.7	U

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SW 8260B

SS-1

Client: GOLDER | SDG 1503040 | Project: GSK GW-O&M ACTIVITIES MARCH 2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1503040-0159.d | Sampled: 03/11/15 13:40

Initial/Final: 5g / 5mL | Lab ID: 1503040-01 | Received: 03/12/15 12:00

Dilution: 1 | pH: | Prepared: 03/16/15 18:49

% Moisture: 13 | Analyzed: 03/16/15 23:54

Batch: 5031603 | Sequence: 5C16008 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		1.5	14	U
108-88-3	Toluene		0.39	5.7	U
10061-02-6	trans-1,3-Dichloropropene		0.47	5.7	U
79-00-5	1,1,2-Trichloroethane		0.83	5.7	U
97-63-2	Ethyl Methacrylate		5.2	57	U
127-18-4	Tetrachloroethene		1.8	5.7	U
591-78-6	2-Hexanone		1.1	14	U
124-48-1	Dibromochloromethane		0.64	5.7	U
106-93-4	1,2-Dibromoethane		0.25	5.7	U
108-90-7	Chlorobenzene		0.29	5.7	U
630-20-6	1,1,1,2-Tetrachloroethane		0.37	5.7	U
100-41-4	Ethylbenzene		0.67	5.7	U
100-42-5	Styrene		0.092	5.7	U
75-25-2	Bromoform		1.3	5.7	U
79-34-5	1,1,2,2-Tetrachloroethane		0.42	5.7	U
96-18-4	1,2,3-Trichloropropane		1.0	5.7	U
110-57-6	trans-1,4-Dichloro-2-butene		2.1	23	U
76-01-7	Pentachloroethane		0.64	5.7	U
541-73-1	1,3-Dichlorobenzene		0.31	5.7	U
106-46-7	1,4-Dichlorobenzene		0.24	5.7	U
95-50-1	1,2-Dichlorobenzene		0.41	5.7	U
96-12-8	1,2-Dibromo-3-chloropropane		0.75	5.7	U
120-82-1	1,2,4-Trichlorobenzene		0.40	5.7	U
87-68-3	Hexachlorobutadiene		0.83	5.7	U
1330-20-7	Xylenes (total)		0.16	5.7	U

SURROGATE RECOVERY RESULTS	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	57.36	56.81	99	71 - 141	
1,2-Dichloroethane-d4	57.36	64.56	113	70 - 139	
Toluene-d8	57.36	54.49	95	72 - 123	
Bromofluorobenzene	57.36	56.19	98	65 - 131	

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SW 8260B

SS-2

Client: GOLDER | SDG 1503040 | Project: GSK GW-O&M ACTIVITIES MARCH 2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1503040-0259.d | Sampled: 03/11/15 13:45

Initial/Final: 5g / 5mL | Lab ID: 1503040-02 | Received: 03/12/15 12:00

Dilution: 1 | pH: | Prepared: 03/16/15 18:49

% Moisture: 18 | Analyzed: 03/17/15 00:26

Batch: 5031603 | Sequence: 5C16008 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.53	6.1	U
74-87-3	Chloromethane		0.39	6.1	U
75-01-4	Vinyl chloride		0.51	6.1	U
74-83-9	Bromomethane		0.70	6.1	U
75-00-3	Chloroethane		0.86	6.1	U
75-69-4	Trichlorofluoromethane		0.36	6.1	U
107-02-8	Acrolein		6.9	61	U
75-35-4	1,1-Dichloroethene		1.3	6.1	U
67-64-1	Acetone		6.1	15	U
74-88-4	Iodomethane		0.39	6.1	U
75-15-0	Carbon disulfide		0.17	6.1	U
107-05-1	3-Chloropropene		1.3	6.1	U
75-05-8	Acetonitrile		1.1	6.1	U
75-09-2	Methylene chloride		0.59	6.1	U
107-13-1	Acrylonitrile		4.5	61	U
156-60-5	trans-1,2-Dichloroethene		1.2	6.1	U
75-34-3	1,1-Dichloroethane		0.57	6.1	U
108-05-4	Vinyl acetate		0.25	6.1	U
156-59-2	cis-1,2-Dichloroethene		0.51	6.1	U
107-12-0	Propionitrile		12	300	U
78-93-3	2-Butanone		1.6	15	U
126-98-7	Methacrylonitrile		2.7	61	U
67-66-3	Chloroform		0.38	6.1	U
71-55-6	1,1,1-Trichloroethane		0.61	6.1	U
56-23-5	Carbon tetrachloride		0.55	6.1	U
107-06-2	1,2-Dichloroethane		0.33	6.1	U
78-83-1	Isobutyl alcohol		19	300	U
71-43-2	Benzene		0.38	6.1	U
79-01-6	Trichloroethene		0.39	6.1	U
78-87-5	1,2-Dichloropropane		0.76	6.1	U
74-95-3	Dibromomethane		1.5	6.1	U
123-91-1	1,4-Dioxane		58	300	U
80-62-6	Methyl Methacrylate		3.9	61	U
75-27-4	Bromodichloromethane		0.46	6.1	U
10061-01-5	cis-1,3-Dichloropropene		0.47	6.1	U

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SW 8260B

SS-2

Client: GOLDER | SDG 1503040 | Project: GSK GW-O&M ACTIVITIES MARCH 2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1503040-0259.d | Sampled: 03/11/15 13:45

Initial/Final: 5g / 5mL | Lab ID: 1503040-02 | Received: 03/12/15 12:00

Dilution: 1 | pH: | Prepared: 03/16/15 18:49

% Moisture: 18 | Analyzed: 03/17/15 00:26

Batch: 5031603 | Sequence: 5C16008 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		1.6	15	*U*
108-88-3	Toluene	0.42	0.41	6.1	*J*
10061-02-6	trans-1,3-Dichloropropene		0.50	6.1	*U*
79-00-5	1,1,2-Trichloroethane		0.87	6.1	*U*
97-63-2	Ethyl Methacrylate		5.5	61	*U*
127-18-4	Tetrachloroethene		1.9	6.1	*U*
591-78-6	2-Hexanone		1.2	15	*U*
124-48-1	Dibromochloromethane		0.68	6.1	*U*
106-93-4	1,2-Dibromoethane		0.27	6.1	*U*
108-90-7	Chlorobenzene		0.30	6.1	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.39	6.1	*U*
100-41-4	Ethylbenzene		0.70	6.1	*U*
100-42-5	Styrene		0.097	6.1	*U*
75-25-2	Bromoform		1.3	6.1	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.45	6.1	*U*
96-18-4	1,2,3-Trichloropropane		1.1	6.1	*U*
110-57-6	trans-1,4-Dichloro-2-butene		2.2	24	*U*
76-01-7	Pentachloroethane		0.68	6.1	*U*
541-73-1	1,3-Dichlorobenzene		0.33	6.1	*U*
106-46-7	1,4-Dichlorobenzene		0.25	6.1	*U*
95-50-1	1,2-Dichlorobenzene		0.44	6.1	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.79	6.1	*U*
120-82-1	1,2,4-Trichlorobenzene		0.42	6.1	*U*
87-68-3	Hexachlorobutadiene		0.87	6.1	*U*
1330-20-7	Xylenes (total)		0.17	6.1	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	60.68	59.96	99	71 - 141	
1,2-Dichloroethane-d4	60.68	63.87	105	70 - 139	
Toluene-d8	60.68	59.00	97	72 - 123	
Bromofluorobenzene	60.68	56.50	93	65 - 131	

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SW 8260B

SS-3

Client: GOLDER | SDG 1503040 | Project: GSK GW-O&M ACTIVITIES MARCH 2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1503040-0359.d | Sampled: 03/11/15 13:49

Initial/Final: 5g / 5mL | Lab ID: 1503040-03 | Received: 03/12/15 12:00

Dilution: 1 | pH: | Prepared: 03/16/15 18:49

% Moisture: 15 | Analyzed: 03/17/15 00:58

Batch: 5031603 | Sequence: 5C16008 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.52	5.9	U
74-87-3	Chloromethane		0.38	5.9	U
75-01-4	Vinyl chloride		0.50	5.9	U
74-83-9	Bromomethane		0.69	5.9	U
75-00-3	Chloroethane		0.84	5.9	U
75-69-4	Trichlorofluoromethane		0.35	5.9	U
107-02-8	Acrolein		6.7	59	U
75-35-4	1,1-Dichloroethene		1.3	5.9	U
67-64-1	Acetone		5.9	15	U
74-88-4	Iodomethane		0.38	5.9	U
75-15-0	Carbon disulfide		0.17	5.9	U
107-05-1	3-Chloropropene		1.3	5.9	U
75-05-8	Acetonitrile		1.1	5.9	U
75-09-2	Methylene chloride		0.58	5.9	U
107-13-1	Acrylonitrile		4.4	59	U
156-60-5	trans-1,2-Dichloroethene		1.2	5.9	U
75-34-3	1,1-Dichloroethane		0.56	5.9	U
108-05-4	Vinyl acetate		0.25	5.9	U
156-59-2	cis-1,2-Dichloroethene		0.50	5.9	U
107-12-0	Propionitrile		12	300	U
78-93-3	2-Butanone		1.5	15	U
126-98-7	Methacrylonitrile		2.6	59	U
67-66-3	Chloroform		0.37	5.9	U
71-55-6	1,1,1-Trichloroethane		0.59	5.9	U
56-23-5	Carbon tetrachloride		0.53	5.9	U
107-06-2	1,2-Dichloroethane		0.32	5.9	U
78-83-1	Isobutyl alcohol		19	300	U
71-43-2	Benzene		0.37	5.9	U
79-01-6	Trichloroethene		0.38	5.9	U
78-87-5	1,2-Dichloropropane		0.75	5.9	U
74-95-3	Dibromomethane		1.4	5.9	U
123-91-1	1,4-Dioxane		57	300	U
80-62-6	Methyl Methacrylate		3.8	59	U
75-27-4	Bromodichloromethane		0.45	5.9	U
10061-01-5	cis-1,3-Dichloropropene		0.46	5.9	U

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SW 8260B

SS-3

Client: GOLDER | SDG 1503040 | Project: GSK GW-O&M ACTIVITIES MARCH 2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1503040-0359.d | Sampled: 03/11/15 13:49

Initial/Final: 5g / 5mL | Lab ID: 1503040-03 | Received: 03/12/15 12:00

Dilution: 1 | pH: | Prepared: 03/16/15 18:49

% Moisture: 15 | Analyzed: 03/17/15 00:58

Batch: 5031603 | Sequence: 5C16008 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		1.5	15	*U*
108-88-3	Toluene	0.40	0.40	5.9	*J*
10061-02-6	trans-1,3-Dichloropropene		0.49	5.9	*U*
79-00-5	1,1,2-Trichloroethane		0.85	5.9	*U*
97-63-2	Ethyl Methacrylate		5.3	59	*U*
127-18-4	Tetrachloroethene		1.9	5.9	*U*
591-78-6	2-Hexanone		1.2	15	*U*
124-48-1	Dibromochloromethane		0.66	5.9	*U*
106-93-4	1,2-Dibromoethane		0.26	5.9	*U*
108-90-7	Chlorobenzene		0.30	5.9	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.38	5.9	*U*
100-41-4	Ethylbenzene		0.69	5.9	*U*
100-42-5	Styrene		0.095	5.9	*U*
75-25-2	Bromoform		1.3	5.9	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.44	5.9	*U*
96-18-4	1,2,3-Trichloropropane		1.1	5.9	*U*
110-57-6	trans-1,4-Dichloro-2-butene		2.1	24	*U*
76-01-7	Pentachloroethane		0.66	5.9	*U*
541-73-1	1,3-Dichlorobenzene		0.32	5.9	*U*
106-46-7	1,4-Dichlorobenzene		0.25	5.9	*U*
95-50-1	1,2-Dichlorobenzene		0.43	5.9	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.77	5.9	*U*
120-82-1	1,2,4-Trichlorobenzene		0.41	5.9	*U*
87-68-3	Hexachlorobutadiene		0.85	5.9	*U*
1330-20-7	Xylenes (total)		0.17	5.9	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	59.16	57.68	97	71 - 141	
1,2-Dichloroethane-d4	59.16	59.29	100	70 - 139	
Toluene-d8	59.16	54.95	93	72 - 123	
Bromofluorobenzene	59.16	55.52	94	65 - 131	

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SW 8260B

SS-4

Client: GOLDER | SDG 1503040 | Project: GSK GW-O&M ACTIVITIES MARCH 2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1503040-0459.d | Sampled: 03/11/15 13:54

Initial/Final: 5g / 5mL | Lab ID: 1503040-04 | Received: 03/12/15 12:00

Dilution: 1 | pH: | Prepared: 03/16/15 18:49

% Moisture: 19 | Analyzed: 03/16/15 23:23

Batch: 5031603 | Sequence: 5C16008 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.54	6.1	U
74-87-3	Chloromethane		0.39	6.1	U
75-01-4	Vinyl chloride		0.52	6.1	U
74-83-9	Bromomethane		0.71	6.1	U
75-00-3	Chloroethane		0.87	6.1	U
75-69-4	Trichlorofluoromethane		0.37	6.1	U
107-02-8	Acrolein		7.0	61	U
75-35-4	1,1-Dichloroethene		1.4	6.1	U
67-64-1	Acetone		6.1	15	U
74-88-4	Iodomethane		0.39	6.1	U
75-15-0	Carbon disulfide		0.17	6.1	U
107-05-1	3-Chloropropene		1.4	6.1	U
75-05-8	Acetonitrile		1.1	6.1	U
75-09-2	Methylene chloride		0.60	6.1	U
107-13-1	Acrylonitrile		4.5	61	U
156-60-5	trans-1,2-Dichloroethene		1.2	6.1	U
75-34-3	1,1-Dichloroethane		0.58	6.1	U
108-05-4	Vinyl acetate		0.26	6.1	U
156-59-2	cis-1,2-Dichloroethene		0.52	6.1	U
107-12-0	Propionitrile		12	310	U
78-93-3	2-Butanone		1.6	15	U
126-98-7	Methacrylonitrile		2.7	61	U
67-66-3	Chloroform		0.38	6.1	U
71-55-6	1,1,1-Trichloroethane		0.61	6.1	U
56-23-5	Carbon tetrachloride		0.55	6.1	U
107-06-2	1,2-Dichloroethane		0.33	6.1	U
78-83-1	Isobutyl alcohol		20	310	U
71-43-2	Benzene		0.38	6.1	U
79-01-6	Trichloroethene		0.39	6.1	U
78-87-5	1,2-Dichloropropane		0.77	6.1	U
74-95-3	Dibromomethane		1.5	6.1	U
123-91-1	1,4-Dioxane		59	310	U
80-62-6	Methyl Methacrylate		3.9	61	U
75-27-4	Bromodichloromethane		0.47	6.1	U
10061-01-5	cis-1,3-Dichloropropene		0.48	6.1	U

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SW 8260B

SS-4

Client: GOLDER | SDG 1503040 | Project: GSK GW-O&M ACTIVITIES MARCH 2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1503040-0459.d | Sampled: 03/11/15 13:54

Initial/Final: 5g / 5mL | Lab ID: 1503040-04 | Received: 03/12/15 12:00

Dilution: 1 | pH: | Prepared: 03/16/15 18:49

% Moisture: 19 | Analyzed: 03/16/15 23:23

Batch: 5031603 | Sequence: 5C16008 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		1.6	15	*U*
108-88-3	Toluene	0.43	0.42	6.1	*J*
10061-02-6	trans-1,3-Dichloropropene		0.50	6.1	*U*
79-00-5	1,1,2-Trichloroethane		0.89	6.1	*U*
97-63-2	Ethyl Methacrylate		5.5	61	*U*
127-18-4	Tetrachloroethene		2.0	6.1	*U*
591-78-6	2-Hexanone		1.2	15	*U*
124-48-1	Dibromochloromethane		0.69	6.1	*U*
106-93-4	1,2-Dibromoethane		0.27	6.1	*U*
108-90-7	Chlorobenzene		0.31	6.1	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.39	6.1	*U*
100-41-4	Ethylbenzene		0.71	6.1	*U*
100-42-5	Styrene		0.098	6.1	*U*
75-25-2	Bromoform		1.4	6.1	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.45	6.1	*U*
96-18-4	1,2,3-Trichloropropane		1.1	6.1	*U*
110-57-6	trans-1,4-Dichloro-2-butene		2.2	25	*U*
76-01-7	Pentachloroethane		0.69	6.1	*U*
541-73-1	1,3-Dichlorobenzene		0.33	6.1	*U*
106-46-7	1,4-Dichlorobenzene		0.26	6.1	*U*
95-50-1	1,2-Dichlorobenzene		0.44	6.1	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.80	6.1	*U*
120-82-1	1,2,4-Trichlorobenzene		0.43	6.1	*U*
87-68-3	Hexachlorobutadiene		0.89	6.1	*U*
1330-20-7	Xylenes (total)		0.17	6.1	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	61.46	60.98	99	71 - 141	
1,2-Dichloroethane-d4	61.46	60.48	98	70 - 139	
Toluene-d8	61.46	60.49	98	72 - 123	
Bromofluorobenzene	61.46	60.45	98	65 - 131	

Environmental Testing Laboratories CompuChem A Division Of Liberty Analytical Corp.

ACCREDITED IN ACCORDANCE WITH nelac

ANALYSIS DATA SHEET

SW 8260B

VBLKIQ

Client: GOLDER | SDG: 1503040 | Project: GSK GW-O&M ACTIVITIES MARCH 2015/073-9611502

Matrix: Soil | Extraction: EPA 5035A | File ID: 5031603-BLK1R59.d | QC Type: Blank

Initial/Final: 5g / 5mL | Lab ID: 5031603-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/16/15 18:49

% Moisture: NA | Analyzed: 03/16/15 18:49

Batch: 5031603 | Sequence: 5C16008 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/kg wet)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.44	5.0	U
74-87-3	Chloromethane		0.32	5.0	U
75-01-4	Vinyl chloride		0.42	5.0	U
74-83-9	Bromomethane		0.58	5.0	U
75-00-3	Chloroethane		0.71	5.0	U
75-69-4	Trichlorofluoromethane		0.30	5.0	U
107-02-8	Acrolein		5.7	50	U
75-35-4	1,1-Dichloroethene		1.1	5.0	U
67-64-1	Acetone		5.0	13	U
74-88-4	Iodomethane		0.32	5.0	U
75-15-0	Carbon disulfide		0.14	5.0	U
107-05-1	3-Chloropropene		1.1	5.0	U
75-05-8	Acetonitrile		0.92	5.0	U
75-09-2	Methylene chloride		0.49	5.0	U
107-13-1	Acrylonitrile		3.7	50	U
156-60-5	trans-1,2-Dichloroethene		1.0	5.0	U
75-34-3	1,1-Dichloroethane		0.47	5.0	U
108-05-4	Vinyl acetate		0.21	5.0	U
156-59-2	cis-1,2-Dichloroethene		0.42	5.0	U
107-12-0	Propionitrile		10	250	U
78-93-3	2-Butanone		1.3	13	U
126-98-7	Methacrylonitrile		2.2	50	U
67-66-3	Chloroform		0.31	5.0	U
71-55-6	1,1,1-Trichloroethane		0.50	5.0	U
56-23-5	Carbon tetrachloride		0.45	5.0	U
107-06-2	1,2-Dichloroethane		0.27	5.0	U
78-83-1	Isobutyl alcohol		16	250	U
71-43-2	Benzene		0.31	5.0	U
79-01-6	Trichloroethene		0.32	5.0	U
78-87-5	1,2-Dichloropropane		0.63	5.0	U
74-95-3	Dibromomethane		1.2	5.0	U
123-91-1	1,4-Dioxane		48	250	U
80-62-6	Methyl Methacrylate		3.2	50	U
75-27-4	Bromodichloromethane		0.38	5.0	U

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ANALYSIS DATA SHEET

SW 8260B

VBLKIQ

Client: GOLDER | SDG: 1503040 | Project: GSK GW-O&M ACTIVITIES MARCH 2015/073-9611502

Matrix: Soil | Extraction: EPA 5035A | File ID: 5031603-BLK1R59.d | QC Type: Blank

Initial/Final: 5g / 5mL | Lab ID: 5031603-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/16/15 18:49

% Moisture: NA | Analyzed: 03/16/15 18:49

Batch: 5031603 | Sequence: 5C16008 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/kg wet)	MDL	RL	Q
10061-01-5	cis-1,3-Dichloropropene		0.39	5.0	U
108-10-1	4-Methyl-2-pentanone		1.3	13	U
108-88-3	Toluene		0.34	5.0	U
10061-02-6	trans-1,3-Dichloropropene		0.41	5.0	U
79-00-5	1,1,2-Trichloroethane		0.72	5.0	U
97-63-2	Ethyl Methacrylate		4.5	50	U
127-18-4	Tetrachloroethene		1.6	5.0	U
591-78-6	2-Hexanone		1.0	13	U
124-48-1	Dibromochloromethane		0.56	5.0	U
106-93-4	1,2-Dibromoethane		0.22	5.0	U
108-90-7	Chlorobenzene		0.25	5.0	U
630-20-6	1,1,1,2-Tetrachloroethane		0.32	5.0	U
100-41-4	Ethylbenzene		0.58	5.0	U
100-42-5	Styrene		0.080	5.0	U
75-25-2	Bromoform		1.1	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane		0.37	5.0	U
96-18-4	1,2,3-Trichloropropane		0.91	5.0	U
110-57-6	trans-1,4-Dichloro-2-butene		1.8	20	U
76-01-7	Pentachloroethane		0.56	5.0	U
541-73-1	1,3-Dichlorobenzene		0.27	5.0	U
106-46-7	1,4-Dichlorobenzene		0.21	5.0	U
95-50-1	1,2-Dichlorobenzene		0.36	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane		0.65	5.0	U
120-82-1	1,2,4-Trichlorobenzene		0.35	5.0	U
87-68-3	Hexachlorobutadiene		0.72	5.0	U
1330-20-7	Xylenes (total)		0.14	5.0	U

SURROGATE RECOVERY RESULTS	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
Dibromofluoromethane	50.00	45.49	91	71 - 141	
1,2-Dichloroethane-d4	50.00	51.05	102	70 - 139	
Toluene-d8	50.00	47.29	95	72 - 123	
Bromofluorobenzene	50.00	42.59	85	65 - 131	

Environmental Testing Laboratories CompuChem A Division Of Liberty Analytical Corp.

ACCREDITED IN ACCORDANCE WITH nelac

A&D Environmental Services, Inc.
2718 Uwharrie Road, Archdale, NC 27263
336-434-7750 FAX: 336-434-7752

Reserved for Facility Use | Approval Date: 4-8-15 By: Steve see email Expiration Date: 4-8-16

☐ Solidification ☐ Recovery **Profile Number:** 20150310

A. Billing Information

Company: **Golder Associates** Account #:
Address: **5B Oak Branch Drive**
City/State: **Greensboro, NC** Zip: **27407** Contact: **Brian Eichlin**
Phone: **336-852-4903** Fax:

B. Generator Information/Location of Waste

Generator Name: GlaxoSmithKline Site Contact: Lindsey Walata
Address: 3029 E. Cornwallis Road
City/State: Durham, NC Zip: 27703
Contact Phone: 919-483-4640 EPD ID: NCD052547635
Type of Business: Closed Site SIC Code:

C. Waste Description

Common Name of Waste: VOC Impacted Stormwater/Groundwater
Process Generating Waste: Soil Vapor Extraction System

D. Physical Properties

Physical State	Odor	Color	Viscosity	Specific Gravity
☐ 100% Solid	☑ None	Describe: Dirty Water	☑ Low	8.35 lb/gallon
☑ 100% Liquid	☐ Mild		☐ Medium	
☐ Sludge	☐ Strong		☐ High	
>95 % Free Liquid	Describe:			

Flash Point		pH		Water	
☐ <73 F	☐ 140-199 F	☐ < 2	☐ 9.1 - 12.4	☐ < 5%	☐ 30-80%
☐ 73-99 F	☐ >199 F	☐ 2.1 - 4.9	☐ > 12.5	☐ 5-10%	☑ 80-100%
☐ 100-139 F	☑ N/A	☑ 5 - 9	☐ N/A	☐ 10-30%	☐ N/A

Is this waste incompatibile with other material? ☑ No ☐ Yes If Yes, explain:

E. Volume

Anticipated Volume: 1-20 ☑ Drums ☐ 5-Gallon ☐ 30-Gallon ☑ 55-Gallon ☐ Tote ☐ Bulk ☐ Tanker ☐ Pump Truck ☐ Other:

Estimated Frequency: ☐ Weekly ☐ Semimonthly ☐ Monthly ☐ Quarterly ☑ Other Year

F. Constituents

Total must be equal to 100%. All constituents, including debris must be identified.

Constituents	Actual %	Range
VOC Impacted Stormwater/Groundwater	100%	
	100%	

G. Other Hazards

☐ Radioactive
☐ Water Reactive
☐ Oxidizer
☐ OSHA
☐ Carcinogen
☐ Explosive
☐ Pesticide
☐ Polymerizable
☐ Organic Peroxide
☐ Infectious
☐ Pyrophoric

H. Process Flow Chart

Using the space provided, draw a flow chart showing how waste is generated

Liquids condense in bottom of knockout pot and piping for SVE system.

I. Constituents

These values are based on ☐ Generator Knowledge ☑ Analytical Results

All analytical data provided relevant to this profile must be conducted by laboratories that have NELPA/NELAC accreditation.

Accreditation Number: E87047 Name: Compuchem

Address: 501 Madison Avenue, Cary, NC 27513 Phone: (919) 379-4100

Inorganic

Metals		Level	(mg/l)
D004	Arsenic	5.0	
D005	Barium	100.0	
D006	Cadmium	1.0	
D007	Chromium	5.0	
D005	Lead	5.0	
D009	Mercury	0.2	
D010	Selenium	1.0	
D011	Silver	5.0	

Other	Conc.
Ammonia	
Phosphorus	
Formaldehyde	
Total Solids	
PCBs	ND
Copper	
Nickel	
Zinc	

Pesticides/Herbicides		Level	(mg/l)
D012	Endrin		
D013	Lindane		
D014	Methoxychlor		
D015	Toxaphene		
D016	2,4-D		
D017	2,4,5-TP		
D020	Chlordane		
D031	Heptachlor		

Organic

Volatile Compounds		Level	(mg/l)
D018	Benzene	0.5	0.0064
D019	Carbon Tetrachloride	0.5	ND
D021	Chlorobenzene	100.0	0.00075
D022	Chloroform	6.0	0.0470
D028	1,2-Dichloroethane	0.5	0.0790
D029	1,1-Dichloroethylene	0.7	0.0045
D035	Methyl Ethyl Ketone	200.0	ND
D039	Tetrachloroethylene	0.7	0.0014
D040	Trichloroethylene	0.5	0.1100
D043	Vinyl Chloride	0.2	0.0010

Semi-Volatile Compounds		Level	(mg/l)
D023	o-Cresol	200.0	
D024	m-Cresol	200.0	
D025	p-Cresol	200.0	
D026	Cresol	200.0	
D027	1,4-Dichlorobenzene	7.5	
D030	2,4-Dinitrotoluene	0.13	
D032	Hexachlorobenzene	0.13	
D033	Hexachlorobutadiene	0.5	
D034	Hexachloroethane	3.0	
D036	Nitrobenzene	2.0	
D037	Pentachlorophenol	100.0	
D038	Pyridine	5.0	
D041	2,4,5-Trichlorophenol	400.0	
D042	2,4,6-Trichlorophenol	2.0	

J. General Information

1 ☑ No ☐ Yes Is this waste a hazardous material as defined in 49 CFR Section 172.101?
If yes, include shipping name, placard hazard class and packaging group:

2 ☑ No ☐ Yes Is this waste regulated as a reportable quantity as defined in 49 CFR Section 172.101 Appendix A?

3 ☑ No ☐ Yes Is this waste a marine pollutant as defined in 49 CFR Section 172.101 Appendix B?

4 ☑ No ☐ Yes Is this hazardous waste, as determined by performing the Hazardous Waste Determination prescribed at 40CFR262.11? (Attach Documentation)

5 ☑ No ☐ Yes Does this waste contain any amount of Listed Hazardous Waste in 40 CFR 261.31, Hazardous Waste from Non-specific Sources; 261.32, Hazardous Waste from Specific Sources; and 261.33, Discarded Commercial Chemical Products, Off specification Species, Container Residues, and Spill Residues?

6 ☑ No ☐ Yes Does waste fail any of the four Hazardous Waste Characteristics of ignitibility, corrosivity, reactivity, and toxicity, as defined in 40 CFR 261.21, 261.22, 261.23, 261.23, respectively?

7 ☑ No ☐ Yes Is this waste state regulated? If Yes, define:

8 ☑ No ☐ Yes Are Material Safety Data Sheets and/or all analytical data relevant to this profile data sheet attached?

9 ☑ No ☐ Yes Is this waste derived from an Investigation of an Underground Storage Tank release (IDW)?

K. Sample

Has a sample been included? ☐ Yes ☑ No If yes, sampled by: _____ Date: _____

L. Generator's Certification

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If A&D Environmental Services, Inc. discovers a discrepancy during the approval process, Generator grants A&D Environmental Services Inc. the authority to amend the profile, as A&D Environmental Services, Inc. deems necessary, to reflect the discrepancy.

Generator Signature	Print Name	Date
Daniel Childress	DANIEL CHILDRESS	04/06/2015

"CONSULTANT ON BEHALF OF GENERATOR"

ANALYSES DATA PACKAGE COVER PAGE

Client: GOLDER

Project: GSK GW-O&M ACTIVITIES/073-96115.2

Laboratory: COMPUCHEM

SDG: 1401116

Client Sample Id:	Analysis:	Lab Sample Id:
SVE DRUM	8082A	1401116-01

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Patricia A Murphy

Name: Pat Murphy

Date: 01/27/2014

Title: Senior Chemist

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1401116
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: SVE DRUM

The water sample listed above was received intact at 0.1°C, with proper documentation, in sealed shipping containers, on January 20, 2014. The sample was scheduled for the requested analysis of the PCB fraction. The requested SW-846, 3rd Edition, Update 4, Method 8082A was used to prepare and analyze the sample, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices are included in the sample data sections.

PCBs

Extraction and analysis holding time requirements were met for the sample.

No Aroclors were confirmed above the reporting limits in the sample.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

The surrogates met method recovery criteria.

The method blank associated with the samples met all quality control criteria.

Per client's request, duplicate matrix spikes were not performed with this SDG.

The Laboratory Control Samples (LCS/LCSD) prepared and analyzed with the samples met all quality control criteria.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Patricia A Murphy

Patricia A. Murphy
Senior Scientist
January 27, 2014

ANALYSIS DATA SHEET

8082A

SVE DRUM

Client: GOLDER | SDG: 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Extraction: EPA 3510C_GC | File ID: 552k1401116-01.d | Sampled: 01/17/14 11:30

Initial/Final: 500mL / 2500uL | Sulfur Cleanup: N | Lab ID: 1401116-01 | Received: 01/20/14 09:00

Dilution: 1 | pH: | Florisil Cleanup: N | Prepared: 01/22/14 09:36

% Moisture: NA | GPC Cleanup: N | GPC Cleanup Factor: N | Analyzed: 01/22/14 18:14

Batch: 4012102 | Sequence: 4A21006 | Calibration: 3122702 | Instrument: tracegc86

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.0730	0.500	U
11104-28-2	Aroclor-1221		0.0640	0.500	U
11141-16-5	Aroclor-1232		0.0650	0.500	U
53469-21-9	Aroclor-1242		0.140	0.500	U
12672-29-6	Aroclor-1248		0.0440	0.500	U
11097-69-1	Aroclor-1254		0.0720	0.500	U
11096-82-5	Aroclor-1260		0.0500	0.500	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
DCB (A)	0.6000	0.4989	83	43 - 144	
DCB (A) [2C]	0.6000	0.4827	80	43 - 144	
TCX (A)	0.3000	0.1495	50	43 - 135	
TCX (A) [2C]	0.3000	0.2980	99	43 - 135	

* Values outside of QC limits

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

8082A

ABLKHJ

Client: GOLDER | SDG: 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Extraction: EPA 3510C_GC | File ID: 548k4012102-BLK1.d | QC Type: Blank

Initial/Final: 1000mL / 5000uL | Sulfur Cleanup: N | Lab ID: 4012102-BLK1 | Column ID: clpest

Dilution: 1 | pH: | Florisil Cleanup: N | Prepared: 01/22/14 09:36

% Moisture: NA | GPC Cleanup: N | GPC Cleanup Factor: N | Analyzed: 01/22/14 16:19

Batch: 4012102 | Sequence: 4A21006 | Calibration: 3122702 | Instrument: tracegc86

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.0730	0.500	U
11104-28-2	Aroclor-1221		0.0640	0.500	U
11141-16-5	Aroclor-1232		0.0650	0.500	U
53469-21-9	Aroclor-1242		0.140	0.500	U
12672-29-6	Aroclor-1248		0.0440	0.500	U
11097-69-1	Aroclor-1254		0.0720	0.500	U
11096-82-5	Aroclor-1260		0.0500	0.500	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
DCB (A)	0.6000	0.6754	113	43 - 144	
TCX (A)	0.3000	0.3071	102	43 - 135	

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

8082A

ABLKHJ

Client: GOLDER | SDG: 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Extraction: EPA 3510C_GC | File ID: 548k4012102-BLK1.d | QC Type: Blank

Initial/Final: 1000mL / 5000uL | Sulfur Cleanup: N | Lab ID: 4012102-BLK1 | Column ID: clpest2

Dilution: 1 | pH: | Florisil Cleanup: N | Prepared: 01/22/14 09:36

% Moisture: NA | GPC Cleanup: N | GPC Cleanup Factor: N | Analyzed: 01/22/14 16:19

Batch: 4012102 | Sequence: 4A21006 | Calibration: 3122702 | Instrument: tracegc86

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
12674-11-2	Aroclor-1016 [2C]		0.0730	0.500	U
11104-28-2	Aroclor-1221 [2C]		0.0640	0.500	U
11141-16-5	Aroclor-1232 [2C]		0.0650	0.500	U
53469-21-9	Aroclor-1242 [2C]		0.140	0.500	U
12672-29-6	Aroclor-1248 [2C]		0.0440	0.500	U
11097-69-1	Aroclor-1254 [2C]		0.0720	0.500	U
11096-82-5	Aroclor-1260 [2C]		0.0500	0.500	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
DCB (A) [2C]	0.6000	0.6259	104	43 - 144	
TCX (A) [2C]	0.3000	0.2890	96	43 - 135	

Environmental Testing Laboratories

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ANALYSES DATA PACKAGE COVER PAGE

Client: GOLDER

Project: GSK GW-O&M ACTIVITIES/073-96115.2

Laboratory: COMPUCHEM

SDG: 1401116

Client Sample Id:	Analysis:	Lab Sample Id:
SVE DRUM	SW 8260B	1401116-01
SVE DRUM	SW 8260B	1401116-01RE1
TRIP BLANK	SW 8260B	1401116-02

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Patricia A Murphy

Name: Pat Murphy

Date: 01/27/2014

Title: Senior Chemist

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

CompuChem
A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1401116
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: SVE DRUM TRIP BLANK

The 2 aqueous samples listed above were received intact, refrigerated at 0.1°C, with proper documentation, in sealed shipping containers, on January 20, 2014. All samples listed above were scheduled for the requested analyses of the volatile fraction. SW-846, 3rd Edition, Update 3, 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices are included in the sample data sections.

Analysis holding time requirements were met for the samples.
The pH values of the samples were 1.
There were volatile Project/Target Compound List (TCL) analytes, identified above the Contract Required Quantitation Limit (CRQL) in these samples.
Sample SVE DRUM required a dilution both analyses are reported.
All of the system monitoring compounds met recovery criteria in the analyses of the samples.
All of the internal standards met response and retention time criteria in the analyses of the samples.
All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG.
All QC criteria were met for all initial and continuing calibration standards associated to this SDG.
The associated method blanks met quality control criteria.
The associated Laboratory Control Samples (LCS/LCSD) met all quality control criteria with the following exception.
Acrolein was bias high in LCS_4012203-BS1.
No matrix spike/matrix spike duplicate (MS/MSD) samples were requested for this SDG.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Patricia A. Murphy
Patricia A. Murphy
Senior Scientist
January 27, 2014

ANALYSIS DATA SHEET

SW 8260B

SVE DRUM

Client: GOLDER SDG 1401116 Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water Preparation: EPA 5030B File ID: 1401116-0173.d Sampled: 01/17/14 11:30

Initial/Final: 25mL / 25mL Lab ID: 1401116-01 Received: 01/20/14 09:00

Dilution: 1 pH: 1 Prepared: 01/21/14 17:29

% Moisture: NA Analyzed: 01/21/14 21:29

Batch: 4012108 Sequence: 4A21008 Calibration: 4012201 Instrument: 5972hp73

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
74-87-3	Chloromethane		0.11	0.50	*U*
75-01-4	Vinyl chloride	0.80	0.070	0.50	
74-83-9	Bromomethane		0.11	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-69-4	Trichlorofluoromethane		0.060	0.50	*U*
107-02-8	Acrolein		1.0	5.0	*U*
75-35-4	1,1-Dichloroethene	4.1	0.040	0.50	
67-64-1	Acetone	2.5	0.44	2.5	
74-88-4	Iodomethane		0.030	0.50	*U*
75-15-0	Carbon disulfide		0.020	0.50	*U*
107-05-1	3-Chloropropene		0.050	0.50	*U*
75-05-8	Acetonitrile		0.030	0.50	*U*
75-09-2	Methylene chloride	2.0	0.020	0.50	*B*
107-13-1	Acrylonitrile		0.36	5.0	*U*
156-60-5	trans-1,2-Dichloroethene	5.2	0.050	0.50	
75-34-3	1,1-Dichloroethane	5.9	0.020	0.50	
108-05-4	Vinyl acetate		0.060	0.50	*U*
107-12-0	Propionitrile		1.4	25	*U*
78-93-3	2-Butanone		0.28	2.5	*U*
126-98-7	Methacrylonitrile		0.39	5.0	*U*
67-66-3	Chloroform	49	0.030	0.50	*E*
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
56-23-5	Carbon tetrachloride		0.030	0.50	*U*
107-06-2	1,2-Dichloroethane	85	0.030	0.50	*E*
78-83-1	Isobutyl alcohol		5.9	25	*U*
71-43-2	Benzene	6.4	0.030	0.50	
79-01-6	Trichloroethene	110	0.030	0.50	*E*
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
74-95-3	Dibromomethane		0.030	0.50	*U*
123-91-1	1,4-Dioxane	42	5.4	25	
80-62-6	Methyl Methacrylate		0.56	5.0	*U*

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SW 8260B

SVE DRUM

Client: GOLDER | SDG 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Preparation: EPA 5030B | File ID: 1401116-0173.d | Sampled: 01/17/14 11:30

Initial/Final: 25mL / 25mL | Lab ID: 1401116-01 | Received: 01/20/14 09:00

Dilution: 1 | pH: 1 | Prepared: 01/21/14 17:29

% Moisture: NA | Analyzed: 01/21/14 21:29

Batch: 4012108 | Sequence: 4A21008 | Calibration: 4012201 | Instrument: 5972hp73

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-27-4	Bromodichloromethane		0.030	0.50	*U*
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	*U*
108-10-1	4-Methyl-2-pentanone		0.42	2.5	*U*
108-88-3	Toluene	37	0.030	0.50	
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	*U*
79-00-5	1,1,2-Trichloroethane	0.62	0.040	0.50	
97-63-2	Ethyl Methacrylate		0.41	5.0	*U*
127-18-4	Tetrachloroethene	1.4	0.060	0.50	
591-78-6	2-Hexanone		0.51	2.5	*U*
124-48-1	Dibromochloromethane		0.040	0.50	*U*
106-93-4	1,2-Dibromoethane		0.040	0.50	*U*
108-90-7	Chlorobenzene	0.74	0.020	0.50	
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	*U*
100-41-4	Ethylbenzene	2.6	0.040	0.50	
100-42-5	Styrene		0.020	0.50	*U*
75-25-2	Bromoform		0.030	0.50	*U*
79-34-5	1,1,2,2-Tetrachloroethane	1.7	0.050	0.50	
96-18-4	1,2,3-Trichloropropane		0.090	0.50	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	*U*
76-01-7	Pentachloroethane		0.070	0.50	*U*
541-73-1	1,3-Dichlorobenzene		0.040	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*
95-50-1	1,2-Dichlorobenzene	0.093	0.030	0.50	*J*
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	*U*
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	*U*
87-68-3	Hexachlorobutadiene		0.030	0.50	*U*
1330-20-7	Xylenes (total)	22	0.030	0.50	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.640	113	65 - 150	
1,2-Dichloroethane-d4	5.000	5.800	116	59 - 150	
Toluene-d8	5.000	5.500	110	61 - 145	

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SW 8260B

SVE DRUM

Client: GOLDER SDG 1401116 Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water Preparation: EPA 5030B File ID: 1401116-0173.d Sampled: 01/17/14 11:30

Initial/Final: 25mL / 25mL Lab ID: 1401116-01 Received: 01/20/14 09:00

Dilution: 1 pH: 1 Prepared: 01/21/14 17:29

% Moisture: NA Analyzed: 01/21/14 21:29

Batch: 4012108 Sequence: 4A21008 Calibration: 4012201 Instrument: 5972hp73

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	5.000	5.276	106	63 - 143	

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SW 8260B

SVE DRUMDL

Client: GOLDER | SDG 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Preparation: EPA 5030B | File ID: 1401116-01D73.d | Sampled: 01/17/14 11:30

Initial/Final: 25mL / 25mL | Lab ID: 1401116-01RE1 | Received: 01/20/14 09:00

Dilution: 4.17 | pH: 1 | Prepared: 01/22/14 16:41

% Moisture: NA | Analyzed: 01/22/14 19:05

Batch: 4012203 | Sequence: 4A22005 | Calibration: 4012201 | Instrument: 5972hp73

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.13	2.1	*U*
74-87-3	Chloromethane		0.46	2.1	*U*
75-01-4	Vinyl chloride	1.0	0.29	2.1	*JD*
74-83-9	Bromomethane		0.46	2.1	*U*
75-00-3	Chloroethane		0.83	2.1	*U*
75-69-4	Trichlorofluoromethane		0.25	2.1	*U*
107-02-8	Acrolein		4.3	21	*U*
75-35-4	1,1-Dichloroethene	4.5	0.17	2.1	*D*
67-64-1	Acetone		1.8	10	*U*
74-88-4	Iodomethane		0.13	2.1	*U*
75-15-0	Carbon disulfide		0.083	2.1	*U*
107-05-1	3-Chloropropene		0.21	2.1	*U*
75-05-8	Acetonitrile		0.13	2.1	*U*
75-09-2	Methylene chloride	2.6	0.083	2.1	*BD*
107-13-1	Acrylonitrile		1.5	21	*U*
156-60-5	trans-1,2-Dichloroethene	5.2	0.21	2.1	*D*
75-34-3	1,1-Dichloroethane	5.0	0.083	2.1	*D*
108-05-4	Vinyl acetate		0.25	2.1	*U*
107-12-0	Propionitrile		5.8	100	*U*
78-93-3	2-Butanone		1.2	10	*U*
126-98-7	Methacrylonitrile		1.6	21	*U*
67-66-3	Chloroform	47	0.13	2.1	*D*
71-55-6	1,1,1-Trichloroethane		0.083	2.1	*U*
56-23-5	Carbon tetrachloride		0.13	2.1	*U*
107-06-2	1,2-Dichloroethane	79	0.13	2.1	*D*
78-83-1	Isobutyl alcohol		25	100	*U*
71-43-2	Benzene	6.4	0.13	2.1	*D*
79-01-6	Trichloroethene	110	0.13	2.1	*D*
78-87-5	1,2-Dichloropropane		0.50	2.1	*U*
74-95-3	Dibromomethane		0.13	2.1	*U*
123-91-1	1,4-Dioxane	47	23	100	*JD*
80-62-6	Methyl Methacrylate		2.3	21	*U*

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SW 8260B

SVE DRUMDL

Client: GOLDER SDG 1401116 Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water Preparation: EPA 5030B File ID: 1401116-01D73.d Sampled: 01/17/14 11:30

Initial/Final: 25mL / 25mL Lab ID: 1401116-01RE1 Received: 01/20/14 09:00

Dilution: 4.17 pH: 1 Prepared: 01/22/14 16:41

% Moisture: NA Analyzed: 01/22/14 19:05

Batch: 4012203 Sequence: 4A22005 Calibration: 4012201 Instrument: 5972hp73

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-27-4	Bromodichloromethane		0.13	2.1	*U*
10061-01-5	cis-1,3-Dichloropropene		0.17	2.1	*U*
108-10-1	4-Methyl-2-pentanone		1.8	10	*U*
108-88-3	Toluene	37	0.13	2.1	*D*
10061-02-6	trans-1,3-Dichloropropene		0.21	2.1	*U*
79-00-5	1,1,2-Trichloroethane	0.74	0.17	2.1	*JD*
97-63-2	Ethyl Methacrylate		1.7	21	*U*
127-18-4	Tetrachloroethene	1.4	0.25	2.1	*JD*
591-78-6	2-Hexanone		2.1	10	*U*
124-48-1	Dibromochloromethane		0.17	2.1	*U*
106-93-4	1,2-Dibromoethane		0.17	2.1	*U*
108-90-7	Chlorobenzene	0.75	0.083	2.1	*JD*
630-20-6	1,1,1,2-Tetrachloroethane		0.083	2.1	*U*
100-41-4	Ethylbenzene	2.6	0.17	2.1	*D*
100-42-5	Styrene		0.083	2.1	*U*
75-25-2	Bromoform		0.13	2.1	*U*
79-34-5	1,1,2,2-Tetrachloroethane	1.5	0.21	2.1	*JD*
96-18-4	1,2,3-Trichloropropane		0.38	2.1	*U*
110-57-6	trans-1,4-Dichloro-2-butene		1.4	8.3	*U*
76-01-7	Pentachloroethane		0.29	2.1	*U*
541-73-1	1,3-Dichlorobenzene		0.17	2.1	*U*
106-46-7	1,4-Dichlorobenzene		0.13	2.1	*U*
95-50-1	1,2-Dichlorobenzene		0.13	2.1	*U*
96-12-8	1,2-Dibromo-3-chloropropane		1.0	2.1	*U*
120-82-1	1,2,4-Trichlorobenzene		0.25	2.1	*U*
87-68-3	Hexachlorobutadiene		0.13	2.1	*U*
1330-20-7	Xylenes (total)	21	0.13	2.1	*D*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.408	108	65 - 150	
1,2-Dichloroethane-d4	5.000	5.392	108	59 - 150	
Toluene-d8	5.000	5.626	113	61 - 145	

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SW 8260B

SVE DRUMDL

Client: GOLDER SDG 1401116 Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water Preparation: EPA 5030B File ID: 1401116-01D73.d Sampled: 01/17/14 11:30

Initial/Final: 25mL / 25mL Lab ID: 1401116-01RE1 Received: 01/20/14 09:00

Dilution: 4.17 pH: 1 Prepared: 01/22/14 16:41

% Moisture: NA Analyzed: 01/22/14 19:05

Batch: 4012203 Sequence: 4A22005 Calibration: 4012201 Instrument: 5972hp73

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	5.000	5.135	103	63 - 143	

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SW 8260B

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Client: GOLDER SDG 1401116 Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water Preparation: EPA 5030B File ID: 1401116-0273.d Sampled: 01/17/14 00:00

Initial/Final: 25mL / 25mL Lab ID: 1401116-02 Received: 01/20/14 09:00

Dilution: 1 pH: 1 Prepared: 01/21/14 17:29

% Moisture: NA Analyzed: 01/21/14 20:59

Batch: 4012108 Sequence: 4A21008 Calibration: 4012201 Instrument: 5972hp73

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
74-87-3	Chloromethane		0.11	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
74-83-9	Bromomethane		0.11	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-69-4	Trichlorofluoromethane		0.060	0.50	*U*
107-02-8	Acrolein		1.0	5.0	*U*
75-35-4	1,1-Dichloroethene		0.040	0.50	*U*
67-64-1	Acetone		0.44	2.5	*U*
74-88-4	Iodomethane		0.030	0.50	*U*
75-15-0	Carbon disulfide		0.020	0.50	*U*
107-05-1	3-Chloropropene		0.050	0.50	*U*
75-05-8	Acetonitrile		0.030	0.50	*U*
75-09-2	Methylene chloride	0.14	0.020	0.50	*JB*
107-13-1	Acrylonitrile		0.36	5.0	*U*
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	*U*
75-34-3	1,1-Dichloroethane		0.020	0.50	*U*
108-05-4	Vinyl acetate		0.060	0.50	*U*
107-12-0	Propionitrile		1.4	25	*U*
78-93-3	2-Butanone		0.28	2.5	*U*
126-98-7	Methacrylonitrile		0.39	5.0	*U*
67-66-3	Chloroform		0.030	0.50	*U*
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
56-23-5	Carbon tetrachloride		0.030	0.50	*U*
107-06-2	1,2-Dichloroethane		0.030	0.50	*U*
78-83-1	Isobutyl alcohol		5.9	25	*U*
71-43-2	Benzene		0.030	0.50	*U*
79-01-6	Trichloroethene		0.030	0.50	*U*
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
74-95-3	Dibromomethane		0.030	0.50	*U*
123-91-1	1,4-Dioxane		5.4	25	*U*
80-62-6	Methyl Methacrylate		0.56	5.0	*U*

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Client: GOLDER | SDG 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Preparation: EPA 5030B | File ID: 1401116-0273.d | Sampled: 01/17/14 00:00

Initial/Final: 25mL / 25mL | Lab ID: 1401116-02 | Received: 01/20/14 09:00

Dilution: 1 | pH: 1 | Prepared: 01/21/14 17:29

% Moisture: NA | Analyzed: 01/21/14 20:59

Batch: 4012108 | Sequence: 4A21008 | Calibration: 4012201 | Instrument: 5972hp73

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-27-4	Bromodichloromethane		0.030	0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene	0.050	0.030	0.50	J
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
106-93-4	1,2-Dibromoethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene		0.040	0.50	U
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
76-01-7	Pentachloroethane		0.070	0.50	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
1330-20-7	Xylenes (total)		0.030	0.50	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.084	102	65 - 150	
1,2-Dichloroethane-d4	5.000	5.325	107	59 - 150	
Toluene-d8	5.000	4.922	98	61 - 145	

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Client: GOLDER | SDG 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Preparation: EPA 5030B | File ID: 1401116-0273.d | Sampled: 01/17/14 00:00

Initial/Final: 25mL / 25mL | Lab ID: 1401116-02 | Received: 01/20/14 09:00

Dilution: 1 | pH: 1 | Prepared: 01/21/14 17:29

% Moisture: NA | Analyzed: 01/21/14 20:59

Batch: 4012108 | Sequence: 4A21008 | Calibration: 4012201 | Instrument: 5972hp73

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	5.000	4.738	95	63 - 143	

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SW 8260B

VBLKCD

Client: GOLDER | SDG: 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Extraction: EPA 5030B | File ID: 4012108-BLK1R73.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 4012108-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 01/21/14 17:29

% Moisture: NA | Analyzed: 01/21/14 17:29

Batch: 4012108 | Sequence: 4A21008 | Calibration: 4012201 | Instrument: 5972hp73

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
74-87-3	Chloromethane		0.11	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
74-83-9	Bromomethane		0.11	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-69-4	Trichlorofluoromethane		0.060	0.50	U
107-02-8	Acrolein		1.0	5.0	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
67-64-1	Acetone		0.44	2.5	U
74-88-4	Iodomethane		0.030	0.50	U
75-15-0	Carbon disulfide		0.020	0.50	U
107-05-1	3-Chloropropene		0.050	0.50	U
75-05-8	Acetonitrile		0.030	0.50	U
75-09-2	Methylene chloride	0.13	0.020	0.50	J
107-13-1	Acrylonitrile		0.36	5.0	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
108-05-4	Vinyl acetate		0.060	0.50	U
107-12-0	Propionitrile		1.4	25	U
78-93-3	2-Butanone		0.28	2.5	U
126-98-7	Methacrylonitrile		0.39	5.0	U
67-66-3	Chloroform		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
56-23-5	Carbon tetrachloride		0.030	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
78-83-1	Isobutyl alcohol		5.9	25	U
71-43-2	Benzene		0.030	0.50	U
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
123-91-1	1,4-Dioxane		5.4	25	U

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SW 8260B

VBLKCD

Client: GOLDER | SDG: 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Extraction: EPA 5030B | File ID: 4012108-BLK1R73.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 4012108-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 01/21/14 17:29

% Moisture: NA | Analyzed: 01/21/14 17:29

Batch: 4012108 | Sequence: 4A21008 | Calibration: 4012201 | Instrument: 5972hp73

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene		0.030	0.50	U
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
106-93-4	1,2-Dibromoethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene		0.040	0.50	U
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
76-01-7	Pentachloroethane		0.070	0.50	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
1330-20-7	Xylenes (total)		0.030	0.50	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.042	101	65 - 150	

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

ANALYSIS DATA SHEET

SW 8260B

VBLKCD

Client: GOLDER | SDG: 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Extraction: EPA 5030B | File ID: 4012108-BLK1R73.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 4012108-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 01/21/14 17:29

% Moisture: NA | Analyzed: 01/21/14 17:29

Batch: 4012108 | Sequence: 4A21008 | Calibration: 4012201 | Instrument: 5972hp73

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	5.000	5.314	106	59 - 150	
Toluene-d8	5.000	5.095	102	61 - 145	
Bromofluorobenzene	5.000	4.906	98	63 - 143	

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

ANALYSIS DATA SHEET

SW 8260B

VBLKCE

Client: GOLDER | SDG: 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Extraction: EPA 5030B | File ID: 4012203-BLK1R73.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 4012203-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 01/22/14 16:41

% Moisture: NA | Analyzed: 01/22/14 16:41

Batch: 4012203 | Sequence: 4A22005 | Calibration: 4012201 | Instrument: 5972hp73

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
74-87-3	Chloromethane		0.11	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
74-83-9	Bromomethane		0.11	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-69-4	Trichlorofluoromethane		0.060	0.50	U
107-02-8	Acrolein		1.0	5.0	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
67-64-1	Acetone		0.44	2.5	U
74-88-4	Iodomethane		0.030	0.50	U
75-15-0	Carbon disulfide		0.020	0.50	U
107-05-1	3-Chloropropene		0.050	0.50	U
75-05-8	Acetonitrile		0.030	0.50	U
75-09-2	Methylene chloride	0.18	0.020	0.50	J
107-13-1	Acrylonitrile		0.36	5.0	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
108-05-4	Vinyl acetate		0.060	0.50	U
107-12-0	Propionitrile		1.4	25	U
78-93-3	2-Butanone		0.28	2.5	U
126-98-7	Methacrylonitrile		0.39	5.0	U
67-66-3	Chloroform		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
56-23-5	Carbon tetrachloride		0.030	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
78-83-1	Isobutyl alcohol		5.9	25	U
71-43-2	Benzene		0.030	0.50	U
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
123-91-1	1,4-Dioxane		5.4	25	U

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

ANALYSIS DATA SHEET

SW 8260B

VBLKCE

Client: GOLDER | SDG: 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Extraction: EPA 5030B | File ID: 4012203-BLK1R73.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 4012203-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 01/22/14 16:41

% Moisture: NA | Analyzed: 01/22/14 16:41

Batch: 4012203 | Sequence: 4A22005 | Calibration: 4012201 | Instrument: 5972hp73

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene		0.030	0.50	U
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
106-93-4	1,2-Dibromoethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene		0.040	0.50	U
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
76-01-7	Pentachloroethane		0.070	0.50	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
1330-20-7	Xylenes (total)		0.030	0.50	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.448	109	65 - 150	

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

ANALYSIS DATA SHEET

SW 8260B

VBLKCE

Client: GOLDER | SDG: 1401116 | Project: GSK GW-O&M ACTIVITIES/073-96115.2

Matrix: Water | Extraction: EPA 5030B | File ID: 4012203-BLK1R73.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 4012203-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 01/22/14 16:41

% Moisture: NA | Analyzed: 01/22/14 16:41

Batch: 4012203 | Sequence: 4A22005 | Calibration: 4012201 | Instrument: 5972hp73

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	5.000	5.613	112	59 - 150	
Toluene-d8	5.000	5.611	112	61 - 145	
Bromofluorobenzene	5.000	5.084	102	63 - 143	

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

A&D Environmental Services, Inc.
2718 Uwharrie Rd., Archdale, NC 27263
336-434-7750 FAX: 336-434-7752

Reserved for Facility Use | Approval Date: 4-8-15 | By: Steve see email | Expiration Date: 1 yr from Approval Date

☐ Solidification ☐ Recovery **Profile Number:** 20150311

A. Billing Information

Company: **Golder Associates** Account #:
Address: **5B Oak Branch Drive**
City/State: **Greensboro, NC** Zip: **27407** Contact: **Brian Eichlin**
Phone: **336-852-4903** Fax: **336-852-4904**

B. Generator Information/Location of Waste

Generator Name: GlaxoSmithKline Site Contact: Lindsey Walata
Address: 3029 E. Cornwallis Road
City/State: Durham, NC Zip: 27703
Contact Phone: 919-483-4640 EPD ID: NCD052547635
Type of Business: Closed Site SIC Code:

C. Waste Description

Common Name of Waste: Solid Waste - General Refuge / PPE / PVC piping
Process Generating Waste: Operations and Maintenance of Remediation System

D. Physical Properties

Physical State	Odor	Color	Viscosity	Specific Gravity
☑ 100% Solid	☑ None	Describe: Dark Gray	☐ Low	1.4 lb/gallon
☐ 100% Liquid	☐ Mild		☐ Medium	
☐ Sludge	☐ Strong		☐ High	
____ % Free Liquid	Describe:			

Flash Point		pH		Water	
☐ <73 F	☐ 140-199 F	☐ < 2	☐ 9.1 - 12.4	☐ < 5%	☐ 30-80%
☐ 73-99 F	☐ >199 F	☐ 2.1 - 4.9	☐ > 12.5	☐ 5-10%	☐ 80-100%
☐ 100-139 F	☑ N/A	☐ 5 - 9	☑ N/A	☐ 10-30%	☑ N/A

Is this waste incompatibile with other material? ☑ No ☐ Yes If Yes, explain:

E. Volume

Anticipated Volume: 1-10 ☐ Drums ☐ 5-Gallon ☐ 30-Gallon ☐ 55-Gallon ☐ Tote ☐ Bulk ☐ Tanker ☐ Pump Truck ☑ Other: Trash Bags

Estimated Frequency: ☐ Weekly ☐ Semimonthly ☐ Monthly ☐ Quarterly ☐ Other Year

F. Constituents

Total must be equal to 100%. All constituents, including debris must be identified.

Constituents	Actual %	Range
Sch 80 PVC Piping	50%	
General Refuge	30%	
PPE	20%	
	100%	

G. Other Hazards

☐ Radioactive
☐ Water Reactive
☐ Oxidizer
☐ OSHA
☐ Carcinogen
☐ Explosive
☐ Pesticide
☐ Polymerizable
☐ Organic Peroxide
☐ Infectious
☐ Pryophoric

H. Process Flow Chart

Using the space provided, draw a flow chart showing how waste is generated

I. Constituents

These values are based on ☐ Generator Knowledge ☑ Analytical Results

All analytical data provided relevant to this profile must be conducted by laboratories that have NELPA/NELAC accreditation.

Accreditation Number: E87047 Name: Compuchem

Address: 501 Madison Avenue, Cary, NC 27513 Phone: (919) 379-4100

Inorganic

Metals		Level	(mg/l)
D004	Arsenic	5.0	
D005	Barium	100.0	
D006	Cadmium	1.0	
D007	Chromium	5.0	
D008	Lead	5.0	
D009	Mercury	0.2	
D010	Selenium	1.0	
D011	Silver	5.0	

Other	Conc.
Ammonia	
Phosphorus	
Formaldehyde	
Total Solids	
PCBs	ND
Copper	
Nickel	
Zinc	

Pesticides/Herbicides		Level	(mg/l)
D012	Endrin		
D013	Lindane		
D014	Methoxychlor		
D015	Toxaphene		
D016	2,4-D		
D017	2,4,5-TP		
D020	Chlordane		
D031	Heptachlor		

Organic

Volatile Compounds		Level	(mg/l)
D018	Benzene	0.5	0.0064
D019	Carbon Tetrachloride	0.5	ND
D021	Chlorobenzene	100.0	0.00075
D022	Chloroform	6.0	0.0470
D028	1,2-Dichloroethane	0.5	0.0790
D029	1,1-Dichloroethylene	0.7	0.0045
D035	Methyl Ethyl Ketone	200.0	ND
D039	Tetrachloroethylene	0.7	0.0014
D040	Trichloroethylene	0.5	0.1100
D043	Vinyl Chloride	0.2	0.0010

Semi-Volatile Compounds		Level	(mg/l)
D023	o-Cresol	200.0	
D024	m-Cresol	200.0	
D025	p-Cresol	200.0	
D026	Cresol	200.0	
D027	1,4-Dichlorobenzene	7.5	
D030	2,4-Dinitrotoluene	0.13	
D032	Hexachlorobenzene	0.13	
D033	Hexachlorobutadiene	0.5	
D034	Hexachloroethane	3.0	
D036	Nitrobenzene	2.0	
D037	Pentachlorophenol	100.0	
D038	Pyridine	5.0	
D041	2,4,5-Trichlorophenol	400.0	
D042	2,4,6-Trichlorophenol	2.0	

J. General Information

1 ☑ No ☐ Yes Is this waste a hazardous material as defined in 49 CFR Section 172.101?
If yes, include shipping name, placard hazard class and packaging group:

2 ☑ No ☐ Yes Is this waste regulated as a reportable quantity as defined in 49 CFR Section 172.101 Appendix A?

3 ☑ No ☐ Yes Is this waste a marine pollutant as defined in 49 CFR Section 172.101 Appendix B?

4 ☑ No ☐ Yes Is this hazardous waste, as determined by performing the Hazardous Waste Determination prescribed at 40CFR262.11? (Attach Documentation)

5 ☑ No ☐ Yes Does this waste contain any amount of Listed Hazardous Waste in 40 CFR 261.31, Hazardous Waste from Non-specific Sources; 261.32, Hazardous Waste from Specific Sources; and 261.33, Discarded Commercial Chemical Products, Off specification Species, Container Residues, and Spill Residues?

6 ☑ No ☐ Yes Does waste fail any of the four Hazardous Waste Characteristics of Ignitibility, corrosivity, reactivity, and toxicity, as defined in 40 CFR 261.21, 261.22, 261.23, 261.23, respectively?

7 ☑ No ☐ Yes Is this waste state regulated? If Yes, define:

8 ☑ No ☐ Yes Are Material Safety Data Sheets and/or all analytical data relevant to this profile data sheet attached?

9 ☑ No ☐ Yes Is this waste derived from an Investigation of an Underground Storage Tank release (IDW)?

K. Sample

Has a sample been included? ☐ Yes ☑ No If yes, sampled by: _____ Date: _____

L. Generator's Certification

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If A&D Environmental Services, Inc. discovers a discrepancy during the approval process, Generator grants A&D Environmental Services Inc. the authority to amend the profile, as A&D Environmental Services, Inc. deems necessary, to reflect the discrepancy.

Generator Signature	Print Name	Date
Daniel Childress	DANIEL CHILDRESS	04/06/2015

"CONSULTANT ON BEHALF OF GENERATOR"

HAZARDOUS MANIFEST [013313940JJK]

SWMU-13 GAC UNITS [CH870568]

APRIL 9, 2015

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NCD052547635
2. Page 1 of 1
3. Emergency Response Phone: 800-255-3924-MIS0007951
4. Manifest Tracking Number: 013313940 JJK

GENERATOR

5. Generator's Name and Mailing Address
GlaxoSmithKline
5 Moore Drive/PO Box 13398
Durham, NC 27709-3398 USA
Generator's Phone: 919-483-4640

Generator's Site Address (if different than mailing address)
3025 East Cornwallis Road
Durham, NC 27709

6. Transporter 1 Company Name: A&D Environmental Services, Inc.
U.S. EPA ID Number: NCD986232221

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Deerpark, L.P.
2027 Independence Parkway South
La Porte, TX 77571 USA
Facility's Phone: 281-930-2300
U.S. EPA ID Number: TXD055141378

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance solid, n.o.s. (vinyl chloride), 9, PG III, ERG# 171	002	DM	600	P	D043
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) CH8P5005 (carbon) 2 x 55gal.
A&D Job#: 74391 PO#: 28797

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: DANIEL CHILDRESS "ON BEHALF OF GSK" Signature: [signature] Month 04 Day 09 Year 15

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Matt Wray Signature: [signature] Month 04 Day 09 Year 15
Transporter 2 Printed/Typed Name: Signature: Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name Signature Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
LAND DISPOSAL RESTRICTION FORM LDR-1

MANIFEST NO 01331940 JJK

THE HAZARDOUS WASTES IDENTIFIED ON THE HAZARDOUS WASTE MANIFEST IDENTIFIED ABOVE AND BEARING THE EPA HAZARDOUS WASTE CODES LISTED BELOW ARE RESTRICTED WASTES WHICH ARE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT UNDER THE LAND DISPOSAL RESTRICTIONS, 40 CFR PART 268 .7 (a)(2), AND RCRA SECTION 3004(D). IN ACCORDANCE WITH 40 CFR 268.7(a), THE EPA WASTE CODE, WASTE SUBCATEGORY, AND TREATABILITY GROUPS, AS APPLICABLE, ARE INCLUDED BELOW.

INSTRUCTIONS -- COMPLETE ALL SECTIONS. REFER TO PAGE 3 OF THIS FORM FOR KEY TERMS/DEFINITIONS.

Column 1 - Line Item: Enter the manifest line item number (e.g., 11a) that corresponds to the waste code(s).

Column 2 - Waste Codes/Subcategory: Check off all applicable waste codes. For D001 through D043, also check applicable subcategory; for F001 through F005, check applicable constituents.

Column 3 - Wastewater/Non-wastewater: Check off "WW" for wastewater and "Non-WW" for non-wastewaters.

Column 4 - LDR Handling Code: Circle the appropriate handling code, as follows:

1 = The waste is a characteristic hazardous waste D001, D002, D003, D004-D011, or D018-43 which is intended for treatment/disposal in a CWA system, CWA-equivalent system, or Class I SDWA system. Underlying Hazardous Constituents (UHC's) are NOT required to be identified.

1A = The waste is a characteristic hazardous waste D001 High TOC Ignitable Liquids Subcategory (i.e., greater than or equal to 10% TOC). Pursuant to 40 CFR 268.40, the waste must be treated using organic recovery (RORGS) or combustion (CMBST) technology. UHC's are NOT required to be identified.

2 = The waste is a characteristic hazardous waste D001 (other than High TOC Ignitable Liquids), D002, D003 Explosive, Water Reactive or Other Reactive subcategory, D004-D011, D012-17 non-wastewater, or D018-43 which is intended for treatment/disposal in a non-CWA system, non-CWA-equivalent system, or non-Class I SDWA system located in the United States. All UHC's which are reasonably expected to be present must be identified, except for D001 waste that is intended to be treated using organic recovery (RORGS) or combustion (CMBST) technologies. Identify UHC's by completing Sections I and IV of CHI Form LDR-1 Addendum and attach completed Addendum to this form.

3 = The waste is a characteristic (i.e., D-code) or listed (i.e., F-, K-, U-, or P-code) hazardous waste which is intended for export and treatment/disposal at a facility located outside the United States. LDR treatment standards do not apply to hazardous waste treated/disposed in a foreign country, and per USEPA guidance, the identification of UHC's (if applicable) is not required for hazardous waste that is intended to be exported. Note however that if the exported waste is subsequently returned for treatment/disposal in the United States, all applicable LDR regulations would apply and a revised LDR notification would be required.

4 = The waste meets the definition of hazardous debris pursuant to 40 CFR 268.2(h) and is intended for treatment/ disposal in compliance with the alternate debris treatment technologies of 40 CFR 268.45. In accordance with the requirements of 40 CFR 268.7(a)(2) : the contaminants subject to treatment (CSTT's) must be identified as part of this notification. Identify CSTT's by completing Section III and IV of the CHI Form LDR-1 Addendum and attach completed Addendum to this form. These constituents are being treated to comply with 40 CFR 268.45.

5 = The waste is a characteristic waste D003 Reactive Sulfide, Reactive Cyanide, or Unexploded Ordnance subcategory, a characteristic waste D012- 17 wastewater, or a listed (i.e., F-, K-, U-, or P-code) hazardous waste. UHC's are NOT required to be identified.

6 = The waste is a lab pack that is intended for incineration using the alternative lab pack treatment standard under 40 CFR 268.42(c). UHC's are NOT required to be identified; however, the generator must complete and attach the lab pack certification statement on CHI Form LDR-LP. Note that in accordance with 40 CFR Part 268 Appendix IV, lab packs which contain waste codes D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, and U151 are not eligible for alternative lab pack treatment standard.

*** **NOTE: IF THE WASTE IS A SOIL CONTAMINATED WITH A LISTED OR CHARACTERISTIC WASTE AND THE GENERATOR WANTS TO USE THE ALTERNATE TREATMENT STANDARD FOR SOILS, CONTACT CORPORATE COMPLIANCE FOR THE APPROPRIATE LDR NOTIFICATION FORM.**

SECTION I. CHARACTERISTIC WASTES D001 THROUGH D043

COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / SUBCATEGORY	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
_____	[ ] D001 Ignitables, except High TOC subcategory	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D001 High TOC Ignitable Liquids Subcategory (Greater than or equal to 10% TOC)	[ ] Non-WW only	1A 3 6
_____	[ ] D002 Corrosives	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D003		
	[ ] Reactive Sulfide, per 261.23 (a)(5)	[ ] WW [ ] Non-WW	1 3 4 5 6
	[ ] Reactive Cyanide, per 261.23(a)(5)	[ ] WW [ ] Non-WW	1 3 4 5 6
	[ ] Explosive, per 261.23(a)(6), (7) & (8)	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] Water Reactive, per 261.23(a)(2), (3) & (4)	[ ] Non-WW only	1 2 3 4 6
	[ ] Other Reactive, per 261.23(a)(1)	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] Unexploded Ordnance, Emergency Response	[ ] WW [ ] Non-WW	1 3 4 5 6
_____	[ ] D004 Arsenic	[ ] WW [ ] Non-WW	1 3 4 5 6
_____	[ ] D005 Barium	[ ] WW [ ] Non-WW	1 3 4 5 6
_____	[ ] D006		
	[ ] Cadmium	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] Cadmium Containing Batteries	[ ] Non-WW only	2 3 6
_____	[ ] D007 Chromium	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D008		
	[ ] Lead	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ] Lead Acid Batteries	[ ] Non-WW only	2 3 6

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
LAND DISPOSAL RESTRICTION FORM LDR-1

MANIFEST NO 013313146 JJK

SECTION I. CHARACTERISTIC WASTES D001-43 (CONTINUED)

COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / SUBCATEGORY	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
_____	[ ] D009		
	[ ] Low Mercury, less than 260 mg/kg Mercury	[ ] WW [ ] Non-WW	1 2 3 4
	[ ] High Mercury Organic Subcategory	[ ] Non-WW only	2 3 4
	[ ] High Mercury Inorganic Subcategory	[ ] Non-WW only	2 3 4
_____	[ ] D010 Selenium	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D011 Silver	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D012 Endrin	[ ] WW [ ] Non-WW	2 3 4 5 6
_____	[ ] D013 Lindane	[ ] WW [ ] Non-WW	2 3 4 5 6
_____	[ ] D014 Methoxychlor	[ ] WW [ ] Non-WW	2 3 4 5 6
_____	[ ] D015 Toxaphene	[ ] WW [ ] Non-WW	2 3 4 5 6
_____	[ ] D016 2,4-D	[ ] WW [ ] Non-WW	2 3 4 5 6
_____	[ ] D017 2,4,5-TP (Silvex)	[ ] WW [ ] Non-WW	2 3 4 5 6
_____	[ ] D018 Benzene	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D019 Carbon tetrachloride	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D020 Chlordane	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D021 Chlorobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D022 Chloroform	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D023 o-Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D024 m-Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D025 p-Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D026 Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D027 1,4-Dichlorobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D028 1,2-Dichloroethane	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D029 1,1-Dichloroethylene	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D030 2,4-Dinitrotoluene	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D031 Heptachlor (and its epoxide)	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D032 Hexachlorobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D033 Hexachlorobutadiene	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D034 Hexachloroethane	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D035 Methyl ethyl ketone	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D036 Nitrobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D037 Pentachlorophenol	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D038 Pyridine	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D039 Tetrachloroethylene	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D040 Trichloroethylene	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D041 2,4,5-Trichlorophenol	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ] D042 2,4,6-Trichlorophenol	[ ] WW [ ] Non-WW	1 2 3 4 6
1	[X] D043 Vinyl Chloride	[ ] WW [X] Non-WW	1 (2) 3 4 6

SECTION II. SPENT SOLVENT WASTES F001 THROUGH F005

COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / SUBCATEGORY	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
_____	[ ] F001 [ ] F002 [ ] F003 [ ] F004 [ ] F005	[ ] WW [ ] Non-WW	3 4 5 6

_____ [ ] 1. ALL F001-F005
_____ [ ] 2. Acetone
_____ [ ] 3. Benzene
_____ [ ] 4. n-Butyl alcohol
_____ [ ] 5. Carbon disulfide
_____ [ ] 6. Carbon tetrachloride
_____ [ ] 7. Chlorobenzene
_____ [ ] 8. o-Cresol
_____ [ ] 9. m-Cresol (difficult to distinguish from p-cresol)
_____ [ ] 10. p-Cresol (difficult to distinguish from m-cresol)
_____ [ ] 11. Cresol - mixed isomers (sum of o-, m- and p-cresol)
_____ [ ] 12. Cyclohexanone
_____ [ ] 13. o-Dichlorobenzene
_____ [ ] 14. 2-Ethoxyethanol (F005 only)
_____ [ ] 15. Ethyl acetate
_____ [ ] 16. Ethyl benzene
_____ [ ] 17. Ethyl ether
_____ [ ] 18. Isobutyl alcohol
_____ [ ] 19. Methanol
_____ [ ] 20. Methylene chloride
_____ [ ] 21. Methyl ethyl ketone
_____ [ ] 22. Methyl isobutyl ketone
_____ [ ] 23. Nitrobenzene
_____ [ ] 24. 2-Nitropropane (F005 only)
_____ [ ] 25. Pyridine
_____ [ ] 26. Tetrachloroethylene
_____ [ ] 27. Toluene
_____ [ ] 28. 1,1,1-Trichloroethane
_____ [ ] 29. 1,1,2-Trichloroethane
_____ [ ] 30. Trichloroethylene
_____ [ ] 31. 1,1,2-Trichloro-1,2,2-trifluoroethane
_____ [ ] 32. Trichloromonofluoromethane
_____ [ ] 33. Xylene - mixed isomers (sum of o-, m-, and p-xylene)

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
LAND DISPOSAL RESTRICTION FORM LDR-1

MANIFEST NO 013313944 JJK

SECTION III. CALIFORNIA LIST WASTES

COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / SUBCATEGORY	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
_____	Hazardous waste containing one or more of the following California List constituents:	[ ] WW [ ] Non-WW	1 2 3 4 6

[ ] ALL CALIFORNIA LIST CONSTITUENTS
[ ] Liquids with nickel greater than or equal to 134 mg/l
[ ] Liquids with thallium greater than or equal to 130 mg/l
[ ] Liquids with PCB's > or = 50 ppm
[ ] Waste containing HOC's > or = 1,000 mg/kg

SECTION IV. OTHER LISTED WASTES (F006-12, F019-F028, F037-38, F039, K-, U-, AND P-CODES)

COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / SUBCATEGORY	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
_____	_____	[ ] WW [ ] Non-WW	3 4 5 6
_____	_____	[ ] WW [ ] Non-WW	3 4 5 6
_____	_____	[ ] WW [ ] Non-WW	3 4 5 6
_____	_____	[ ] WW [ ] Non-WW	3 4 5 6
_____	_____	[ ] WW [ ] Non-WW	3 4 5 6

[ ] CHECK HERE IF ADDITIONAL LISTED WASTE CODES ARE PRESENT. COMPLETE AND ATTACH LDR-1 CONTINUATION SHEET.
[ ] CHECK HERE IF WASTE CODE F039 (MULTISOURCE LEACHATE) IS PRESENT. IDENTIFY F039 CONSTITUENTS BY COMPLETING SECTIONS II AND IV OF CHI FORM LDR-1 ADDENDUM AND ATTACH COMPLETED ADDENDUM TO THIS FORM.

SECTION V. CONTACT NAME AND DATE

Print Name: DANIEL CHILDRESS "ON BEHALF OF CWE" Date: 04/09/15

KEY TERMS/DEFINITIONS

CLASS I SDWA SYSTEM means a Class I deep well facility regulated under the Safe Drinking Water Act (SDWA).

CWA SYSTEM means a centralized wastewater treatment facility discharging under a Clean Water Act (CWA) permit. For example, a CWA facility would treat organic or inorganic aqueous wastes and discharge the treated effluent to the local sewer system. Examples of CWA treatment systems owned and operated by Clean Harbors include the wastewater treatment operations at Baltimore (including the CES system), Bristol, Chicago, Cincinnati and Cleveland.

CWA-EQUIVALENT SYSTEM means a "zero discharge system" that engages in "CWA-equivalent" treatment before land disposal. Zero-discharge facilities treat hazardous wastes using "CWA-equivalent" treatment methods, but do not discharge the treatment effluent to a sewer or water body (e.g., spray irrigation land farm). "CWA-equivalent" treatment methods means biological treatment for organics, alkaline chlorination, or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

HIGH TOC IGNITABLE LIQUIDS SUBCATEGORY means an ignitable liquid hazardous waste (waste code D001) which contains greater than or equal to 10% total organic carbon (TOC). Pursuant to 40 CFR 268.40, such wastes must be treated using organic recovery (RORGS) or combustion (CMBST) technology. Examples of RORGS technologies include the CES unit at Clean Harbors of Baltimore. Examples of CMBST technologies include hazardous waste fuel blending and subsequent reuse at a cement kiln, or destruction at a RCRA incinerator.

WASTEWATERS are wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS). [See 40 CFR 268.2(f)]

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH870568

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***NCD052547635*** GENERATOR NAME: ***GlaxoSmithKline***

GENERATOR CODE (Assigned by Clean Harbors) ***GL12161*** CITY ***Durham*** STATE/PROVINCE ***NC*** ZIP/POSTAL CODE ***27703***

ADDRESS ***3029 East Cornwallis Road***

PHONE: **(336) 229-0058**

CUSTOMER CODE (Assigned by Clean Harbors) ***CA000008*** CUSTOMER NAME: ***A&D Environmental Services Inc***

ADDRESS ***Po Box 963 3149 Lear Drive*** CITY ***Burlington*** STATE/PROVINCE ***NC*** ZIP/POSTAL CODE ***27216***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Spent activated Carbon***

PROCESS GENERATING WASTE: **Filtering of groundwater**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- [x] SOLID WITHOUT FREE LIQUID
- POWDER
- MONOLITHIC SOLID
- LIQUID WITH NO SOLIDS
- LIQUID/SOLID MIXTURE
  - % FREE LIQUID
  - % SETTLED SOLID
  - % TOTAL SUSPENDED SOLID
- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS

1 2 3

% BY VOLUME (Approx.)

TOP	***0.00***
MIDDLE	***0.00***
BOTTOM	***0.00***

VISCOSITY (If liquid present)
- 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

Black

ODOR
- [x] NONE
- MILD
- STRONG

Describe:

BOILING POINT ºF (ºC)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT ºF (ºC)
- < 140 (<60)
- [x] 140-200 (60-93)
- > 200 (>93)

TOTAL ORGANIC CARBON
- <= 1%
- 1-9%
- [x] >= 10%

FLASH POINT ºF (ºC)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93)

pH
- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- [x] 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

ASH
- < 0.1
- [x] 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- Unknown

BTU/LB (MJ/kg)
- < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- [x] 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
1,1-DICHLOROETHENE	0.0000000	--	0.0190000	PPM
1,2-DICHLOROETHANE	0.0000000	--	0.3300000	PPM
ACTIVATED CARBON	97.0000000	--	99.0000000	%
BENZENE	0.0000000	--	7.0000000	PPB
CHLOROFORM	0.0000000	--	24.0000000	PPB
TRICHLOROETHYLENE	0.0000000	--	12.0000000	PPB
VINYL CHLORIDE	0.0000000	--	2.0000000	PPM
WATER	0.5000000	--	5.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [x] NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G44*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W310***

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5	*0.0007*			
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0				
D022	CHLOROFORM	6.0	*0.0240*			
D028	1,2-DICHLOROETHANE	0.5	*0.3300*			
D029	1,1-DICHLOROETHYLENE	0.7	*0.0190*			
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5	*0.0120*			
D043	VINYL CHLORIDE	0.2	*2.0000*			
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

NONE
☑ < 1000 PPM
>= 1000 PPM

PCBs

NONE
☑ < 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

☑ YES NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCE	EXPLOSIVE	FUMING	☑ OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	NONE OF THE ABOVE

F. REGULATORY STATUS

☑ YES NO USEPA HAZARDOUS WASTE?

D043

YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

☑ YES NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: *This is subject to LDR.*
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR (CESQG)?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES ☑ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11 2 PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

☑ YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES ☑ NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (VINYL CHLORIDE), 9, PG III

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ONE TIME WEEKLY MONTHLY ☑ QUARTERLY YEARLY OTHER

☑ **CONTAINERIZED**

1-5 CONTAINERS/SHIPMENT

STORAGE CAPACITY:
CONTAINER TYPE:

CUBIC YARD BOX PALLET

TOTE TANK ☑ DRUM

OTHER:

DRUM SIZE: *55*

BULK LIQUID

GALLONS/SHIPMENT: *0 Min -0 Max* GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: *0 Min - 0 Max*

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
Daniel Childress	DANIEL CHILDRESS	ENV. SCIENTIST/CONSULTANT	04/06/2015

"CONSULTANT ON BEHALF OF GENERATOR"

TABLE 1

Summary of Detections
SWMU-13 Spent Liquid GAC TCLP
GlaxoSmithKline -- RTP, NC
South Campus, North Site

03/09/15		Concentrations (ug/L)				
EPA HW No.(1)	ANALYTE	GACA1		GACB1		Regulatory Level (2)
D043	Vinyl Chloride	7800		5500		200
D029	1,1-Dichloroethene	27		ND		700
D035	2-Butanone	420		250	J	200000
D022	Chloroform	120		58	J	70
D028	1,2-Dichloroethane	330		120	J	500
D018	Benzene	17	J	ND		500
D040	Trichloroethene	34		ND		500

NOTES:
ND = Not detected at or above reporting limit.
TCLP = Toxicity Characteristic Leaching Procedure (Method 1311)
1) Environmental Protection Agency hazardous waste number
2) Regulatory limits as presented in 40 CFR Part 261 Table 1 - *Maximum Concentration of Contaminants for the Toxicity Characteristic*

ANALYSES DATA PACKAGE COVER PAGE

Client: GOLDER

Project: GSK GW-O&M ACTIVITIES JAN. 2015/073-9611502

Laboratory: COMPUCHEM

SDG: 1503020

Client Sample Id:	Analysis:	Lab Sample Id:
GACA1-030915	SW 8260B	1503020-01
GACA1-030915	SW 8260B	1503020-01RE1
GACB1-030915	SW 8260B	1503020-02
ZHEBSA	SW 8260B	1503020-03

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions addressed in the narrative. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Quentisha Forrester

Name: Quentisha Forrester

Date: 03/17/2015

Title: Chemist III

CompuChem
A Division Of
Liberty Analytical Corp.

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1503020
PROTOCOL: SW-846

SAMPLE IDENTIFICATION: GACA1-030915 GACB1-030915

The 2 soil samples listed above was received intact, at 4.2°C with proper documentation, in sealed shipping container, on March 9, 2015. The samples were scheduled for the requested analysis of the volatile fraction only. Toxicity Characteristic Leaching Procedure (TCLP) (Method 1311), SW-846, 3rd Edition, Update 4, 8260B was used to prepare and analyze the sample2. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices are included in the sample data sections.

VOLATILES

Analysis holding time requirement was met for the samples.

Volatile Project/Target Compound List (TCL) analytes were confirmed above the Contract Required Quantitation Limit (CRQL) identified in the samples. The samples were originally analyzed at a dilution. After the initial analysis of sample GACA1-030915 a further dilution was required. We have reported data from both analyses of sample GACA1-030915.

The system monitoring compounds (SMCs) met recovery criteria in the analysis of the samples, and all of the internal standards met retention time and response criteria in the analysis of the samples.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

No Manual integrations were performed on any of the process files associated with this SDG.

The associated method blanks met all quality control criteria.

No matrix spike/matrix spike duplicate (MS/MSD) samples were requested for this SDG. The associated Laboratory Control Samples (LCS/LCSD) met all accuracy and precision criteria.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Quentisha Forrester
Chemist III
March 18, 2015

ANALYSIS DATA SHEET

SW 8260B

GACA1-030915

Client: GOLDER SDG 1503020 Project: GSK GW-O&M ACTIVITIES JAN. 2015/073-9611502

Matrix: Soil Preparation: EPA 5030B File ID: 1503020-0159.d Sampled: 03/09/15 13:25

Initial/Final: 5mL / 5mL Lab ID: 1503020-01 Received: 03/09/15 14:25

Dilution: 5 pH: 5 Prepared: 03/13/15 21:49

% Moisture: NA Analyzed: 03/14/15 00:58

Batch: 5031314 Sequence: 5C13007 Calibration: 5031602 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-35-4	1,1-Dichloroethene	27	2.7	25	*D*
78-93-3	2-Butanone	420	7.5	63	*D*
67-66-3	Chloroform	120	1.4	25	*D*
56-23-5	Carbon tetrachloride		1.6	25	*U*
107-06-2	1,2-Dichloroethane	330	1.2	25	*D*
71-43-2	Benzene	17	1.4	25	*JD*
79-01-6	Trichloroethene	34	1.4	25	*D*
127-18-4	Tetrachloroethene		2.1	25	*U*
108-90-7	Chlorobenzene		1.4	25	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	50.00	49.55	99	66 - 128	
1,2-Dichloroethane-d4	50.00	47.67	95	55 - 147	
Toluene-d8	50.00	51.58	103	50 - 150	
Bromofluorobenzene	50.00	49.85	100	70 - 132	

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ANALYSIS DATA SHEET

SW 8260B

GACA1-030915DL

Client: GOLDER SDG 1503020 Project: GSK GW-O&M ACTIVITIES JAN. 2015/073-9611502

Matrix: Soil Preparation: EPA 5030B File ID: 1503020-01D59.d Sampled: 03/09/15 13:25

Initial/Final: 5mL / 5mL Lab ID: 1503020-01RE1 Received: 03/09/15 14:25

Dilution: 50 pH: Prepared: 03/16/15 19:21

% Moisture: NA Analyzed: 03/17/15 02:01

Batch: 5031604 Sequence: 5C16008 Calibration: 5031602 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-01-4	Vinyl chloride	7800	24	250	*D*

ANALYSIS DATA SHEET

SW 8260B

GACB1-030915

Client: GOLDER SDG 1503020 Project: GSK GW-O&M ACTIVITIES JAN. 2015/073-9611502

Matrix: Soil Preparation: EPA 5030B File ID: 1503020-02D259.d Sampled: 03/09/15 13:30

Initial/Final: 5mL / 5mL Lab ID: 1503020-02 Received: 03/09/15 14:25

Dilution: 41.67 pH: Prepared: 03/16/15 19:21

% Moisture: NA Analyzed: 03/17/15 02:32

Batch: 5031604 Sequence: 5C16008 Calibration: 5031602 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-01-4	Vinyl chloride	5500	20	210	*D*
75-35-4	1,1-Dichloroethene		22	210	*U*
78-93-3	2-Butanone	250	63	520	*JD*
67-66-3	Chloroform	58	11	210	*JD*
56-23-5	Carbon tetrachloride		13	210	*U*
107-06-2	1,2-Dichloroethane	120	9.6	210	*JD*
71-43-2	Benzene		12	210	*U*
79-01-6	Trichloroethene		12	210	*U*
127-18-4	Tetrachloroethene		18	210	*U*
108-90-7	Chlorobenzene		11	210	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	50.00	49.34	99	66 - 128	
1,2-Dichloroethane-d4	50.00	55.07	110	55 - 147	
Toluene-d8	50.00	48.56	97	50 - 150	
Bromofluorobenzene	50.00	48.79	98	70 - 132	

Environmental Testing Laboratories CompuChem A Division Of Liberty Analytical Corp.

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ANALYSIS DATA SHEET

SW 8260B

ZHEBSA

Client: GOLDER SDG 1503020 Project: GSK GW-O&M ACTIVITIES JAN. 2015/073-9611502

Matrix: Soil Preparation: EPA 5030B File ID: 1503020-0359.d Sampled: 03/09/15 00:00

Initial/Final: 5mL / 5mL Lab ID: 1503020-03 Received: 03/09/15 14:25

Dilution: 5 pH: 5 Prepared: 03/13/15 21:49

% Moisture: NA Analyzed: 03/14/15 00:27

Batch: 5031314 Sequence: 5C13007 Calibration: 5031602 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-01-4	Vinyl chloride		2.4	25	*U*
75-35-4	1,1-Dichloroethene		2.7	25	*U*
78-93-3	2-Butanone		7.5	63	*U*
67-66-3	Chloroform		1.4	25	*U*
56-23-5	Carbon tetrachloride		1.6	25	*U*
107-06-2	1,2-Dichloroethane		1.2	25	*U*
71-43-2	Benzene		1.4	25	*U*
79-01-6	Trichloroethene		1.4	25	*U*
127-18-4	Tetrachloroethene		2.1	25	*U*
108-90-7	Chlorobenzene		1.4	25	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	50.00	51.44	103	66 - 128	
1,2-Dichloroethane-d4	50.00	52.18	104	55 - 147	
Toluene-d8	50.00	48.86	98	50 - 150	
Bromofluorobenzene	50.00	55.12	110	70 - 132	

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ANALYSIS DATA SHEET

SW 8260B

VBLKIP

Client: GOLDER | SDG: 1503020 | Project: GSK GW-O&M ACTIVITIES JAN. 2015/073-9611502

Matrix: Water | Extraction: EPA 5030B | File ID: 5031314-BLK1R59.d | QC Type: Blank

Initial/Final: 5mL / 5mL | Lab ID: 5031314-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/13/15 21:49

% Moisture: NA | Analyzed: 03/13/15 21:49

Batch: 5031314 | Sequence: 5C13007 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-01-4	Vinyl chloride		0.48	5.0	U
75-35-4	1,1-Dichloroethene		0.53	5.0	U
78-93-3	2-Butanone		1.5	13	U
67-66-3	Chloroform		0.27	5.0	U
56-23-5	Carbon tetrachloride		0.31	5.0	U
107-06-2	1,2-Dichloroethane		0.23	5.0	U
71-43-2	Benzene		0.28	5.0	U
79-01-6	Trichloroethene		0.28	5.0	U
127-18-4	Tetrachloroethene		0.42	5.0	U
108-90-7	Chlorobenzene		0.27	5.0	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	50.00	49.10	98	66 - 128	
1,2-Dichloroethane-d4	50.00	53.22	106	55 - 147	
Toluene-d8	50.00	47.57	95	50 - 150	
Bromofluorobenzene	50.00	49.18	98	70 - 132	

Environmental Testing Laboratories CompuChem A Division Of Liberty Analytical Corp.

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ANALYSIS DATA SHEET

SW 8260B

VBLKIR

Client: GOLDER | SDG: 1503020 | Project: GSK GW-O&M ACTIVITIES JAN. 2015/073-9611502

Matrix: Water | Extraction: EPA 5030B | File ID: 5031604-BLK159.d | QC Type: Blank

Initial/Final: 5mL / 5mL | Lab ID: 5031604-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/16/15 19:21

% Moisture: NA | Analyzed: 03/16/15 19:21

Batch: 5031604 | Sequence: 5C16008 | Calibration: 5031602 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-01-4	Vinyl chloride		0.48	5.0	U
75-35-4	1,1-Dichloroethene		0.53	5.0	U
78-93-3	2-Butanone		1.5	13	U
67-66-3	Chloroform		0.27	5.0	U
56-23-5	Carbon tetrachloride		0.31	5.0	U
107-06-2	1,2-Dichloroethane		0.23	5.0	U
71-43-2	Benzene		0.28	5.0	U
79-01-6	Trichloroethene		0.28	5.0	U
127-18-4	Tetrachloroethene		0.42	5.0	U
108-90-7	Chlorobenzene		0.27	5.0	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	50.00	52.41	105	66 - 128	
1,2-Dichloroethane-d4	50.00	56.52	113	55 - 147	
Toluene-d8	50.00	48.96	98	50 - 150	
Bromofluorobenzene	50.00	51.43	103	70 - 132	

Environmental Testing Laboratories CompuChem A Division Of Liberty Analytical Corp.

ACCREDITED IN ACCORDANCE WITH nelac

NON-HAZARDOUS MANIFEST [25040]

SVE CONDENSATE [20150310]

OCTOBER 19, 2015

A&D Environmental Services , Bill of Lading / Material Manifest

A&D Job No:	Generator ID Number	Page 1 of	Emergency Response Phone	Tracking Number
76562				25040

Generator's Name and Mailing Address

Generator's site address (if different from mailing address)

302 E Cornwallis Rd
Durham NC 27703

Transporter 1 [✓] 2 [ ] Company Name **A&D Environmental Services, Inc.** US EPA ID No: NCD986232221

Transporter 1 [ ] 2 [ ] Company Name **A&D Environmental Services (SC), LLC** US EPA ID No: SCD987598331

[✓] Designated Facility	[ ] Designated Facility	[ ] Designated Facility	[ ] Designated Facility
A&D Environmental Services, Inc. 2718 Uwharrie Road Archdale, NC 27263 336-434-7750 NCD986232221	A&D Environmental Services, Inc. 3149 Lear Drive Burlington, NC 27215 336-229-0058 NCR000138628	A&D Environmental Services (SC), LLC 1741 Calks Ferry Road Lexington, SC 29073 803-957-9175 SCD987598331	A&D Environmental Services (SC), LLC 1321 White Horse Road, Suite C Greenville, SC 29605 864-234-6055

HM	Hazardous Materials Shipping Name and Description (if applicable)	No.	Type	QTY	Wt/Vol	Profile Number
	Non hazardous liquid NOS. (Condensate water	~~512~~ 1	TT	512	gal	20150310

	Petroleum Products for Recycle		No.	Type	QTY	Wt/Vol	Profile Number
X	NA1993, Diesel fuel, 3, III	ERG# 128					
X	NA1993, Fuel oil (No.1,2,4,5 or 6), 3, III	ERG# 128					
X	UN1203, Gasoline, 3, II	ERG# 128					
	USED OIL (Not a USDOT Hazardous Material)						
	Petroleum Contact Water (Not a USDOT Hazardous Material)						

Universal Waste Lamps, Batteries, Ballasts, and Electronics for Recycle

HM	No.	Type	Est. Wt.	Count	Shipping Name and Description (if applicable)		Common Name	Discrepancy
X					RQ, UN2809, Mercury contained in manufactured articles, 8, III	ERG# 172	Mercury Containing Articles	
X					RQ, UN3432, Polychlorinated biphenyls, solid, 9, II	ERG# 171	TSCA Exempt PCB Lamp Ballasts	
X					UN2800, Batteries, wet, nonspillable, 8, III	ERG# 154	Sealed Lead Acid Batteries	
X					UN2794, Batteries, wet, filled with acid, 8, III	ERG# 154	Lead Acid Batteries	
X					UN2795, Batteries, wet, filled with alkali, 8, III	ERG# 154	Wet NiCad Batteries	
X					UN3090, Lithium batteries, 9, II	ERG# 138	Lithium Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III	ERG# 154	Alkaline Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III	ERG# 154	NiCad Batteries	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)		Fluorescent lamps 4' or <	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)		Fluorescent lamps 4'	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)		Circular/U-tube lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)		Compact Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)		Shattershield	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)		HID/MV/UV Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)		Incandescent Lamps	
					Non-PCB Light Ballasts for Recycle (Not DOT-Regulated)		Non-PCB Light Ballasts	
					Electronic Equipment for Recycle (Not DOT-Regulated)		Electronics	

Generator's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are a hazardous waste as defined by EPA 40CFR Part 261 or any applicable state law, and unless specifically identified above the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2ppm) of PCBs as defined by EPA 40 CFR Parts 279 and 761.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
DANIEL CHILDRESS CONSULTANT ON BEHALF OF GSK	[signature]	10	19	15

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Rodney Reinerson	[signature]	10	19	15

Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

Discrepancy Indication / Additional Information:

Designated Facility Certification: I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy indicated above.

Printed/Typed Name	Signature	Month	Day	Year
Travis Chapp	[signature]	10	19	15

A&D Environmental Services, Inc.
2718 Uwharrie Road, Archdale, NC 27263
336-434-7750 FAX: 336-434-7752

Reserved for Facility Use | Approval Date: 4-8-15 By: Steve see email Expiration Date: 4-8-16

☐ Solidification ☐ Recovery **Profile Number:** 20150310

A. Billing Information

Company: **Golder Associates** Account #:
Address: **5B Oak Branch Drive**
City/State: **Greensboro, NC** Zip: **27407** Contact: **Brian Eichlin**
Phone: **336-852-4903** Fax:

B. Generator Information/Location of Waste

Generator Name: GlaxoSmithKline Site Contact: Lindsey Walata
Address: 3029 E. Cornwallis Road
City/State: Durham, NC Zip: 27703
Contact Phone: 919-483-4640 EPD ID: NCD052547635
Type of Business: Closed Site SIC Code:

C. Waste Description

Common Name of Waste: VOC Impacted Stormwater/Groundwater
Process Generating Waste: Soil Vapor Extraction System

D. Physical Properties

Physical State	Odor	Color	Viscosity	Specific Gravity
☐ 100% Solid	☑ None	Describe: Dirty Water	☑ Low	8.35 lb/gallon
☑ 100% Liquid	☐ Mild		☐ Medium	
☐ Sludge	☐ Strong		☐ High	
>95 % Free Liquid	Describe:			

Flash Point		pH		Water	
☐ <73 F	☐ 140-199 F	☐ < 2	☐ 9.1 - 12.4	☐ < 5%	☐ 30-80%
☐ 73-99 F	☐ >199 F	☐ 2.1 - 4.9	☐ > 12.5	☐ 5-10%	☑ 80-100%
☐ 100-139 F	☑ N/A	☑ 5 - 9	☐ N/A	☐ 10-30%	☐ N/A

Is this waste incompatibile with other material? ☑ No ☐ Yes If Yes, explain:

E. Volume

Anticipated Volume: 1-20 ☑ Drums ☐ 5-Gallon ☐ 30-Gallon ☑ 55-Gallon ☐ Tote ☐ Bulk ☐ Tanker ☐ Pump Truck ☐ Other:

Estimated Frequency: ☐ Weekly ☐ Semimonthly ☐ Monthly ☐ Quarterly ☑ Other Year

F. Constituents

Total must be equal to 100%. All constituents, including debris must be identified.

Constituents	Actual %	Range
VOC Impacted Stormwater/Groundwater	100%	
	100%	

G. Other Hazards

☐ Radioactive
☐ Water Reactive
☐ Oxidizer
☐ OSHA
☐ Carcinogen
☐ Explosive
☐ Pesticide
☐ Polymerizable
☐ Organic Peroxide
☐ Infectious
☐ Pyrophoric

H. Process Flow Chart

Using the space provided, draw a flow chart showing how waste is generated

Liquids condense in bottom of knockout pot and piping for SVE system.

I. Constituents

These values are based on ☐ Generator Knowledge ☑ Analytical Results

All analytical data provided relevant to this profile must be conducted by laboratories that have NELPA/NELAC accreditation.

Accreditation Number: E87047 Name: Compuchem

Address: 501 Madison Avenue, Cary, NC 27513 Phone: (919) 379-4100

Inorganic

Metals		Level	(mg/l)
D004	Arsenic	5.0	
D005	Barium	100.0	
D006	Cadmium	1.0	
D007	Chromium	5.0	
D005	Lead	5.0	
D009	Mercury	0.2	
D010	Selenium	1.0	
D011	Silver	5.0	

Other	Conc.
Ammonia	
Phosphorus	
Formaldehyde	
Total Solids	
PCBs	ND
Copper	
Nickel	
Zinc	

Pesticides/Herbicides		Level	(mg/l)
D012	Endrin		
D013	Lindane		
D014	Methoxychlor		
D015	Toxaphene		
D016	2,4-D		
D017	2,4,5-TP		
D020	Chlordane		
D031	Heptachlor		

Organic

Volatile Compounds		Level	(mg/l)
D018	Benzene	0.5	0.0064
D019	Carbon Tetrachloride	0.5	ND
D021	Chlorobenzene	100.0	0.00075
D022	Chloroform	6.0	0.0470
D028	1,2-Dichloroethane	0.5	0.0790
D029	1,1-Dichloroethylene	0.7	0.0045
D035	Methyl Ethyl Ketone	200.0	ND
D039	Tetrachloroethylene	0.7	0.0014
D040	Trichloroethylene	0.5	0.1100
D043	Vinyl Chloride	0.2	0.0010

Semi-Volatile Compounds		Level	(mg/l)
D023	o-Cresol	200.0	
D024	m-Cresol	200.0	
D025	p-Cresol	200.0	
D026	Cresol	200.0	
D027	1,4-Dichlorobenzene	7.5	
D030	2,4-Dinitrotoluene	0.13	
D032	Hexachlorobenzene	0.13	
D033	Hexachlorobutadiene	0.5	
D034	Hexachloroethane	3.0	
D036	Nitrobenzene	2.0	
D037	Pentachlorophenol	100.0	
D038	Pyridine	5.0	
D041	2,4,5-Trichlorophenol	400.0	
D042	2,4,6-Trichlorophenol	2.0	

J. General Information

1 ☑ No ☐ Yes Is this waste a hazardous material as defined in 49 CFR Section 172.101?
If yes, include shipping name, placard hazard class and packaging group:

2 ☑ No ☐ Yes Is this waste regulated as a reportable quantity as defined in 49 CFR Section 172.101 Appendix A?

3 ☑ No ☐ Yes Is this waste a marine pollutant as defined in 49 CFR Section 172.101 Appendix B?

4 ☑ No ☐ Yes Is this hazardous waste, as determined by performing the Hazardous Waste Determination prescribed at 40CFR262.11? (Attach Documentation)

5 ☑ No ☐ Yes Does this waste contain any amount of Listed Hazardous Waste in 40 CFR 261.31, Hazardous Waste from Non-specific Sources; 261.32, Hazardous Waste from Specific Sources; and 261.33, Discarded Commercial Chemical Products, Off specification Species, Container Residues, and Spill Residues?

6 ☑ No ☐ Yes Does waste fail any of the four Hazardous Waste Characteristics of ignitibility, corrosivity, reactivity, and toxicity, as defined in 40 CFR 261.21, 261.22, 261.23, 261.23, respectively?

7 ☑ No ☐ Yes Is this waste state regulated? If Yes, define:

8 ☑ No ☐ Yes Are Material Safety Data Sheets and/or all analytical data relevant to this profile data sheet attached?

9 ☑ No ☐ Yes Is this waste derived from an Investigation of an Underground Storage Tank release (IDW)?

K. Sample

Has a sample been included? ☐ Yes ☑ No If yes, sampled by: _____ Date: _____

L. Generator's Certification

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If A&D Environmental Services, Inc. discovers a discrepancy during the approval process, Generator grants A&D Environmental Services Inc. the authority to amend the profile, as A&D Environmental Services, Inc. deems necessary, to reflect the discrepancy.

Generator Signature	Print Name	Date
Daniel Childress	DANIEL CHILDRESS	04/06/2015

"CONSULTANT ON BEHALF OF GENERATOR"

Summary of Detections
SVE Drum Water Samples
North Site, GlaxoSmithKline
Durham, NC

Laboratory Sample ID	SVE Drum DL[4]		SVE Leak	SVE Headers	SVE Condensate		NC 2L / IMAC Standard [1,2]	Maximum Concentration of Contaminants for Toxicity Characteristic[6]
Sample Date	01/17/14		05/02/14	05/02/14	10/14/15			
Constituent								
VOCs by EPA 8260	**ug/L**		**ug/L**	**ug/L**	**ug/L**		**ug/L**	**ug/L**
vinyl chloride	1.0	J	ND (0.070)	ND (18)	ND (0.070)		0.03	200
1,1-dichloroethene	4.5		0.19	ND (10)	0.20	J	350	700
trans-1,2-dichloroethene	5.2		0.15	ND (13)	0.054	J	100	NS
cis-1,2-dichloroethene	640[8]	E	12	26	13		70	NS
1,1-dichloroethane	5		ND (0.020)	ND (5)	0.39	J	6	NS
1,2-dichloroethane	79		2.8	ND (7.5)	5.6		0.4	500
1,4-dioxane	47	J	ND (5.4)	ND (1400)	44		3	NS
1,1,2-trichloroethane	0.74		ND (0.040)	ND (10)	ND (0.040)		0.6[2]	NS
1,1,2,2-tetrachloroethane	1.5		ND (0.050)	ND (13)	ND (0.050)		0.2	NS
acetone	ND		13	ND (110)	4.0	B	6,000	NS
acrolein	ND		28	10,000	ND (1.0)		4[2]	NS
benzene	6.4		ND (0.030)	ND (7.5)	0.15	J	1	500
carbon disulfide	ND		16	ND (5.0)	0.066	J	700	NS
toluene	37		0.64	14	0.040	B	600	NS
tetrachloroethene	1.4		0.16	ND (15)	0.29	J	0.7	700
chlorobenzene	0.75		0.025	ND (5.0)	0.12	J	50	100,000
ethylbenzene	2.6		ND (0.040)	ND (10)	ND (0.040)		600	NS
chloroform	47		3.2	8.5	14		70	6,000
methylene chloride	2.6		0.17	25	0.27	B	5	NS
trichloroethene	110		5	ND (7.5)	22		3	500
Xylenes (total)	21		0.28	ND (7.5)	ND (0.030)		500	NS
PCBs by 8082	**ug/l**		**ug/l**	**ug/l**	**ug/L**		**ug/l**	**ug/l**
Aroclor-1016	<0.073		<0.073	<0.073	----			
Aroclor-1221	<0.064		<0.064	<0.064	----			
Aroclor-1232	<0.065		<0.065	<0.065	----			
Aroclor-1242	<0.14		<0.14	<0.14	----			
Aroclor-1248	<0.044		<0.044	<0.044	----			
Aroclor-1254	<0.072		<0.072	<0.072	----			
Aroclor-1260	<0.05		<0.05	<0.05	----			
Total PCBs	ND		ND	ND	----		0.09[2]	0.5[7]

Notes:
1) NC 2L standards effective April 1, 2013. Highlighted and bold indicate exceedance.
2) IMAC (Interim Maximum Allowable Concentration) Standard effective April 1, 2011.
Highlighted and bold indicate exceedance
3) J = estimated concentration between method detection limit and reporting limit
4) B = blank-qualified data
5) Sample dilution factor of 4.17x during January 2014.
6) Methylene chloride and toluene detected in trip blank sample at 0.14 ug/L and 0.05 ug/L, respectively
7) Toxicity characteristic maximum contaminant concentrations from 40 CFR Subpart C Part 261.24
There were no exceedances of Maximum Concentration of Contaminants for Toxicity Characteristic
8) Per 40 CFR 761.79(b)(1) aqueous wastes containing less than 0.5 ug/l are not regulated by TSCA.
NS = no standard; ND = not detected (method detection limit)
9) Reporting of cis-1,2-DCE was not reported in the original laboratory report on 1/27/14. The report was revised on 2/4/14 to include cis-1,2-DCE. The concentration was E flagged, which indicates it exceeded the the upper level of the calibration range for the instrument and was diluted and reanalyzed and the final result is reported. All other constituent concentrations are taken from the 1/27/14 laboratory report

NON-HAZARDOUS MANIFEST [26200]

IW-02 DRILLING [20150769]

OCTOBER 23, 2015

A&D Environmental Services — Bill of Lading / Material Manifest

A&D Job No:	Generator ID Number	Page 1 of	Emergency Response Phone	Tracking Number
7664	NCD052547635	1	800-255-3924-MIS0007851	26200

Generator's Name and Mailing Address
GlaxoSmithKline
5 Moore Drive/PO Box 13398
Durham, NC 27709-3398 USA
919-483-4640

Generator's site address (if different from mailing address)
3029 East Cornwallis Road
Durham, NC 27709

Transporter 1 [ ] 2 [ ] Company Name: A&D Environmental Services, Inc. — US EPA ID No: NCD986232221

Transporter 1 [X] 2 [ ] Company Name: A&D Environmental Services (SC), LLC — US EPA ID No: SCD987598331

[X] Designated Facility	[ ] Designated Facility	[ ] Designated Facility	[ ] Designated Facility
A&D Environmental Services, Inc. 2718 Uwharrie Road Archdale, NC 27263 336-434-7750 NCD986232221	A&D Environmental Services, Inc. 3149 Lear Drive Burlington, NC 27215 336-229-0058 NCR000138628	A&D Environmental Services (SC), LLC 1741 Calks Ferry Road Lexington, SC 29073 803-957-9175 SCD987598331	A&D Environmental Services (SC), LLC 1321 White Horse Road, Suite C Greenville, SC 29605 864-234-6055

HM	Hazardous Materials Shipping Name and Description (if applicable)	No.	Type	QTY	Wt/Vol	Profile Number
	Non-Regulated Material(IDW-Liquids)	3	DM	1200	P	20150310
	Non-Regulated Material(IDW-Solids)	8	DM	3200	P	

	Petroleum Products for Recycle		No.	Type	QTY	Wt/Vol	Profile Number
X	NA1993, Diesel fuel, 3, III	ERG# 128					
X	NA1993, Fuel oil (No.1,2,4,5 or 6), 3, III	ERG# 128					
X	UN1203, Gasoline, 3, II	ERG# 128					
	USED OIL (Not a USDOT Hazardous Material)						
	Petroleum Contact Water (Not a USDOT Hazardous Material)						

Universal Waste Lamps, Batteries, Ballasts, and Electronics for Recycle

HM	No.	Type	Est. Wt.	Count	Shipping Name and Description (if applicable)	Common Name	Discrepancy
X					RQ, UN2809, Mercury contained in manufactured articles, 8, III ERG# 172	Mercury Containing Articles	
X					RQ, UN3432, Polychlorinated biphenyls, solid, 9, II ERG# 171	TSCA Exempt PCB Lamp Ballasts	
X					UN2800, Batteries, wet, nonspillable, 8, III ERG# 154	Sealed Lead Acid Batteries	
X					UN2794, Batteries, wet, filled with acid, 8, III ERG# 154	Lead Acid Batteries	
X					UN2795, Batteries, wet, filled with alkali, 8, III ERG# 154	Wet NiCad Batteries	
X					UN3090, Lithium batteries, 9, II ERG# 138	Lithium Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III ERG# 154	Alkaline Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III ERG# 154	NiCad Batteries	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Fluorescent lamps 4' or <	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Fluorescent lamps 4'	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Circular/U-tube lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Compact Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Shattershield	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	HID/MV/UV Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Incandescent Lamps	
					Non-PCB Light Ballasts for Recycle (Not DOT-Regulated)	Non-PCB Light Ballasts	
					Electronic Equipment for Recycle (Not DOT-Regulated)	Electronics	

Generator's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are a hazardous waste as defined by EPA 40CFR Part 261 or any applicable state law, and unless specifically identified above the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2ppm) of PCBs as defined by EPA 40 CFR Parts 279 and 761.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
DANIEL CHILDRESS CONSULTANT ON BEHALF OF GSK	[signature]	10	23	15

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Tony Jeffries	Tony Jeffries	10	23	15

Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

Discrepancy Indication / Additional Information:

Designated Facility Certification: I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy indicated above.

Printed/Typed Name	Signature	Month	Day	Year
TRAVIS CLARK	[signature]	11	10	15

A&D Environmental Services, Inc.
2718 Uwharrie Road, Archdale, NC 27263
336-434-7750 FAX: 336-434-7752

Reserved for Facility Use Approval Date: 11/3/15 By: email Steve Flinchum Expiration Date: _____

☐ Solidification ☐ Recovery **Profile Number:** 20150769

A. Billing Information

Company: Golder Associates Account #: _____
Address: 5B Oak Branch Drive
City/State: Greensboro, NC Zip: 27407 Contact: Brian Eichlin
Phone: 336-852-4903 Fax: _____

B. Generator Information/Location of Waste

Generator Name: GlaxoSmithKline Site Contact: Lindsey Walata
Address: 3029 East Cornwallis Road
City/State: Durham, NC Zip: 27703
Contact Phone: 919-483-4640 EPD ID: NCD052547635
Type of Business: _____ SIC Code: _____

C. Waste Description

Common Name of Waste: IDW-Vadose Soils with Water
Process Generating Waste: Site investigation - Sonic Rig

D. Physical Properties

Physical State	Odor	Color	Viscosity	Specific Gravity
☐ 100% Solid	☑ None	Describe: Dirt	☐ Low	>10 lb/gallon
☐ 100% Liquid	☐ Mild		☐ Medium	
☑ Sludge	☐ Strong		☑ High	
____ % Free Liquid	Describe: _____			

Flash Point		pH		Water	
☐ <73 F	☐ 140-199 F	☐ < 2	☐ 9.1 - 12.4	☐ < 5%	☐ 30-80%
☐ 73-99 F	☐ >199 F	☐ 2.1 - 4.9	☐ > 12.5	☐ 5-10%	☐ 80-100%
☐ 100-139 F	☑ N/A	☑ 5 - 9	☐ N/A	☐ 10-30%	☑ N/A

Is this waste incompatibile with other material? ☑ No ☐ Yes If Yes, explain: _____

E. Volume

Anticipated Volume: 1-5 ☐ Drums ☐ 5-Gallon ☐ 30-Gallon ☑ 55-Gallon ☐ Tote ☐ Bulk ☐ Tanker ☐ Pump Truck ☐ Other: _____

Estimated Frequency: ☐ Weekly ☐ Semimonthly ☐ Monthly ☐ Quarterly ☑ Other Year

F. Constituents

Total must be equal to 100%. All constituents, including debris must be identified.

Constituents	Actual %	Range
IDW-Vadose Soils	100%	
	100%	

G. Other Hazards

☐ Radioactive
☐ Water Reactive
☐ Oxidizer
☐ OSHA
☐ Carcinogen
☐ Explosive
☐ Pesticide
☐ Polymerizable
☐ Organic Peroxide
☐ Infectious
☐ Pyrophoric

H. Process Flow Chart

Using the space provided, draw a flow chart showing how waste is generated

I. Constituents

These values are based on ☐ Generator Knowledge ☑ Analytical Results

All analytical data provided relevant to this profile must be conducted by laboratories that have NELPA/NELAC accreditation.

Accreditation Number: E87047 Name: Liberty Analytical

Address: 501 Madison Avenue, Cary, NC 27513 Phone: 919-379-4100

Inorganic

Metals		Level	(mg/l)
D004	Arsenic	5.0	
D005	Barium	100.0	
D006	Cadmium	1.0	
D007	Chromium	5.0	
D008	Lead	5.0	
D009	Mercury	0.2	
D010	Selenium	1.0	
D011	Silver	5.0	

Other	Conc.
Ammonia	
Phosphorus	
Formaldehyde	
Total Solids	
PCBs	
Copper	
Nickel	
Zinc	

Pesticides/Herbicides		Level	(mg/l)
D012	Endrin		
D013	Lindane		
D014	Methoxychlor		
D015	Toxaphene		
D016	2,4-D		
D017	2,4,5-TP		
D020	Chlordane		
D031	Heptachlor		

Organic

Volatile Compounds		Level	(mg/l)
D018	Benzene	0.5	0.0003
D019	Carbon Tetrachloride	0.5	0
D021	Chlorobenzene	100.0	0
D022	Chloroform	6.0	0.011
D028	1,2-Dichloroethane	0.5	0.0027
D029	1,1-Dichloroethylene	0.7	0.00022
D035	Methyl Ethyl Ketone	200.0	0
D039	Tetrachloroethylene	0.7	0
D040	Trichloroethylene	0.5	0.015
D043	Vinyl Chloride	0.2	0.00048

Semi-Volatile Compounds		Level	(mg/l)
D023	o-Cresol	200.0	
D024	m-Cresol	200.0	
D025	p-Cresol	200.0	
D026	Cresol	200.0	
D027	1,4-Dichlorobenzene	7.5	
D030	2,4-Dinitrotoluene	0.13	
D032	Hexachlorobenzene	0.13	
D033	Hexachlorobutadiene	0.5	
D034	Hexachloroethane	3.0	
D036	Nitrobenzene	2.0	
D037	Pentachlorophenol	100.0	
D038	Pyridine	5.0	
D041	2,4,5-Trichlorophenol	400.0	
D042	2,4,6-Trichlorophenol	2.0	

J. General Information

1. ☑ No ☐ Yes Is this waste a hazardous material as defined in 49 CFR Section 172.101?
   If yes, include shipping name, placard hazard class and packaging group:
2. ☑ No ☐ Yes Is this waste regulated as a reportable quantity as defined in 49 CFR Section 172.101 Appendix A?
3. ☑ No ☐ Yes Is this waste a marine pollutant as defined in 49 CFR Section 172.101 Appendix B?
4. ☑ No ☐ Yes Is this hazardous waste, as determined by performing the Hazardous Waste Determination prescribed at 40CFR262.11? (Attach Documentation)
5. ☑ No ☐ Yes Does this waste contain any amount of Listed Hazardous Waste in 40 CFR 261.31, Hazardous Waste from Non-specific Sources; 261.32, Hazardous Waste from Specific Sources; and 261.33, Discarded Commercial Chemical Products, Off specification Species, Container Residues, and Spill Residues?
6. ☑ No ☐ Yes Does waste fail any of the four Hazardous Waste Characteristics of ignitibility, corrosivity, reactivity, and toxicity, as defined in 40 CFR 261.21, 261.22, 261.23, 261.23, respectively?
7. ☑ No ☐ Yes Is this waste state regulated? If Yes, define:
8. ☑ No ☐ Yes Are Material Safety Data Sheets and/or all analytical data relevant to this profile data sheet attached?
9. ☑ No ☐ Yes Is this waste derived from an Investigation of an Underground Storage Tank release (IDW)?

K. Sample

Has a sample been included? ☐ Yes ☑ No If yes, sampled by: _____ Date: _____

L. Generator's Certification

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If A&D Environmental Services, Inc. discovers a discrepancy during the approval process, Generator grants A&D Environmental Services Inc. the authority to amend the profile, as A&D Environmental Services, Inc. deems necessary, to reflect the discrepancy.

Generator Signature	Print Name	Date
	Brian J. Eichlin	11/2/15

on behalf of GlaxoSmithKline

ANALYSES DATA PACKAGE COVER PAGE

Client: GOLDER

Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Laboratory: Liberty Analytical

SDG: 1510122

Client Sample Id:	Analysis:	Lab Sample Id:
DRUM1	SW 8260B	1510122-01
DRUM2	SW 8260B	1510122-02
DRUM3	SW 8260B	1510122-03
DRUM3	SW 8260B	1510122-03RE1
TRIP BLANK	SW 8260B	1510122-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions addressed in the narrative. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Quentisha Forrester

Name: Quentisha Forrester

Date: 10/21/2015

Title: Chemist III

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem
A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1510122
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: DRUM1 DRUM2 DRUM3

The 3 aqueous samples listed above were received intact, refrigerated at 5.4°C, with proper documentation, in sealed shipping containers, on October 20, 2015. The samples listed above were scheduled for the requested analysis of the volatile fraction only. SW-846, 3rd Edition, Update 3, 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices are included in the sample data sections.

VOLATILES

The Analysis holding time requirements were met for all the samples in this SDG. The pH values of samples DRUM1 and DRUM2 were equal to 1, and the pH value of sample DRUM3 was equal to 7.

Volatile Project/Target Compound List (TCL) analytes were identified above the Reporting Limits (RL) in all of these samples. Samples DRUM1, DRUM2 and DRUM3 were originally analyzed at dilutions based on a 50X Screen. After the initial analysis of sample DRUM3 a further dilution was required. We have reported data from both analyses of sample DRUM3.

Manual integrations were performed in this SDG, as indicated in the detailed Manual Integration Summary report that is located in section S. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All of the surrogates met recovery criteria in the analyses of the samples. All of the internal standards met response and retention time criteria in the analyses of the samples.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

The associated method blank met all quality control criteria.

Duplicate matrix spikes were not requested with this SDG. The associated Laboratory Control Samples (LCS/LCSD) met all quality control criteria.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Quentisha Forrester
Chemist III
October 21, 2015

ANALYSIS DATA SHEET

SW 8260B

DRUM1

Client: GOLDER | SDG 1510122 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510122-01D90.d | Sampled: 10/20/15 08:15

Initial/Final: 25mL / 25mL | Lab ID: 1510122-01 | Received: 10/20/15 09:40

Dilution: 5 | pH: 1 | Prepared: 10/20/15 18:02

% Moisture: NA | Analyzed: 10/20/15 22:29

Batch: 5102014 | Sequence: 5J20007 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.15	2.5	*U*
74-87-3	Chloromethane		0.55	2.5	*U*
75-01-4	Vinyl chloride		0.35	2.5	*U*
74-83-9	Bromomethane		0.55	2.5	*U*
75-00-3	Chloroethane		1.0	2.5	*U*
75-69-4	Trichlorofluoromethane		0.30	2.5	*U*
107-02-8	Acrolein		5.2	25	*U*
75-35-4	1,1-Dichloroethene	2.3	0.20	2.5	*JD*
67-64-1	Acetone	14	2.2	13	*D*
74-88-4	Iodomethane		0.15	2.5	*U*
75-15-0	Carbon disulfide		0.10	2.5	*U*
107-05-1	3-Chloropropene		0.25	2.5	*U*
75-05-8	Acetonitrile		0.15	2.5	*U*
75-09-2	Methylene chloride	1.6	0.10	2.5	*JD*
107-13-1	Acrylonitrile		1.8	25	*U*
156-60-5	trans-1,2-Dichloroethene	0.91	0.25	2.5	*JD*
75-34-3	1,1-Dichloroethane		0.10	2.5	*U*
108-05-4	Vinyl acetate		0.30	2.5	*U*
156-59-2	cis-1,2-Dichloroethene	130	0.15	2.5	*D*
107-12-0	Propionitrile		7.0	130	*U*
78-93-3	2-Butanone		1.4	13	*U*
126-98-7	Methacrylonitrile		2.0	25	*U*
67-66-3	Chloroform	15	0.15	2.5	*D*
71-55-6	1,1,1-Trichloroethane		0.10	2.5	*U*
56-23-5	Carbon tetrachloride		0.15	2.5	*U*
107-06-2	1,2-Dichloroethane	19	0.15	2.5	*D*
78-83-1	Isobutyl alcohol		30	130	*U*
71-43-2	Benzene	2.4	0.15	2.5	*JD*
79-01-6	Trichloroethene	120	0.15	2.5	*D*
78-87-5	1,2-Dichloropropane		0.60	2.5	*U*
74-95-3	Dibromomethane		0.15	2.5	*U*
123-91-1	1,4-Dioxane		27	130	*U*
80-62-6	Methyl Methacrylate		2.8	25	*U*
75-27-4	Bromodichloromethane		0.15	2.5	*U*
10061-01-5	cis-1,3-Dichloropropene		0.20	2.5	*U*

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ANALYSIS DATA SHEET

SW 8260B

DRUM1

Client: GOLDER | SDG 1510122 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510122-01D90.d | Sampled: 10/20/15 08:15

Initial/Final: 25mL / 25mL | Lab ID: 1510122-01 | Received: 10/20/15 09:40

Dilution: 5 | pH: 1 | Prepared: 10/20/15 18:02

% Moisture: NA | Analyzed: 10/20/15 22:29

Batch: 5102014 | Sequence: 5J20007 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		2.1	13	*U*
108-88-3	Toluene	0.65	0.15	2.5	*JD*
10061-02-6	trans-1,3-Dichloropropene		0.25	2.5	*U*
79-00-5	1,1,2-Trichloroethane		0.20	2.5	*U*
97-63-2	Ethyl Methacrylate		2.1	25	*U*
127-18-4	Tetrachloroethene		0.30	2.5	*U*
591-78-6	2-Hexanone		2.6	13	*U*
124-48-1	Dibromochloromethane		0.20	2.5	*U*
106-93-4	1,2-Dibromoethane		0.20	2.5	*U*
108-90-7	Chlorobenzene		0.10	2.5	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.10	2.5	*U*
100-41-4	Ethylbenzene	0.33	0.20	2.5	*JD*
100-42-5	Styrene		0.10	2.5	*U*
75-25-2	Bromoform		0.15	2.5	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.25	2.5	*U*
96-18-4	1,2,3-Trichloropropane		0.45	2.5	*U*
110-57-6	trans-1,4-Dichloro-2-butene		1.7	10	*U*
76-01-7	Pentachloroethane		0.35	2.5	*U*
541-73-1	1,3-Dichlorobenzene		0.20	2.5	*U*
106-46-7	1,4-Dichlorobenzene		0.15	2.5	*U*
95-50-1	1,2-Dichlorobenzene		0.15	2.5	*U*
96-12-8	1,2-Dibromo-3-chloropropane		1.3	2.5	*U*
120-82-1	1,2,4-Trichlorobenzene		0.30	2.5	*U*
87-68-3	Hexachlorobutadiene		0.15	2.5	*U*
1330-20-7	Xylenes (total)	1.6	0.15	2.5	*JD*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.390	108	65 - 150	
1,2-Dichloroethane-d4	5.000	5.670	113	59 - 150	
Toluene-d8	5.000	5.210	104	61 - 145	
Bromofluorobenzene	5.000	4.832	97	63 - 143	

Liberty Analytical

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ANALYSIS DATA SHEET

SW 8260B

DRUM2

Client: GOLDER SDG 1510122 Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water Preparation: EPA 5030B File ID: 1510122-02D90.d Sampled: 10/20/15 08:20

Initial/Final: 25mL / 25mL Lab ID: 1510122-02 Received: 10/20/15 09:40

Dilution: 3.85 pH: 1 Prepared: 10/20/15 18:02

% Moisture: NA Analyzed: 10/20/15 23:01

Batch: 5102014 Sequence: 5J20007 Calibration: 5102004 Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.12	1.9	*U*
74-87-3	Chloromethane		0.42	1.9	*U*
75-01-4	Vinyl chloride		0.27	1.9	*U*
74-83-9	Bromomethane		0.42	1.9	*U*
75-00-3	Chloroethane		0.77	1.9	*U*
75-69-4	Trichlorofluoromethane		0.23	1.9	*U*
107-02-8	Acrolein		4.0	19	*U*
75-35-4	1,1-Dichloroethene	1.5	0.15	1.9	*JD*
67-64-1	Acetone	11	1.7	9.6	*D*
74-88-4	Iodomethane		0.12	1.9	*U*
75-15-0	Carbon disulfide		0.077	1.9	*U*
107-05-1	3-Chloropropene		0.19	1.9	*U*
75-05-8	Acetonitrile		0.12	1.9	*U*
75-09-2	Methylene chloride	1.2	0.077	1.9	*JD*
107-13-1	Acrylonitrile		1.4	19	*U*
156-60-5	trans-1,2-Dichloroethene	0.90	0.19	1.9	*JD*
75-34-3	1,1-Dichloroethane		0.077	1.9	*U*
108-05-4	Vinyl acetate		0.23	1.9	*U*
156-59-2	cis-1,2-Dichloroethene	79	0.12	1.9	*D*
107-12-0	Propionitrile		5.4	96	*U*
78-93-3	2-Butanone		1.1	9.6	*U*
126-98-7	Methacrylonitrile		1.5	19	*U*
67-66-3	Chloroform	15	0.12	1.9	*D*
71-55-6	1,1,1-Trichloroethane		0.077	1.9	*U*
56-23-5	Carbon tetrachloride		0.12	1.9	*U*
107-06-2	1,2-Dichloroethane	14	0.12	1.9	*D*
78-83-1	Isobutyl alcohol		23	96	*U*
71-43-2	Benzene	1.5	0.12	1.9	*JD*
79-01-6	Trichloroethene	97	0.12	1.9	*D*
78-87-5	1,2-Dichloropropane		0.46	1.9	*U*
74-95-3	Dibromomethane		0.12	1.9	*U*
123-91-1	1,4-Dioxane		21	96	*U*
80-62-6	Methyl Methacrylate		2.2	19	*U*
75-27-4	Bromodichloromethane		0.12	1.9	*U*
10061-01-5	cis-1,3-Dichloropropene		0.15	1.9	*U*

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ANALYSIS DATA SHEET

SW 8260B

DRUM2

Client: GOLDER | SDG 1510122 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510122-02D90.d | Sampled: 10/20/15 08:20

Initial/Final: 25mL / 25mL | Lab ID: 1510122-02 | Received: 10/20/15 09:40

Dilution: 3.85 | pH: 1 | Prepared: 10/20/15 18:02

% Moisture: NA | Analyzed: 10/20/15 23:01

Batch: 5102014 | Sequence: 5J20007 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		1.6	9.6	*U*
108-88-3	Toluene	0.48	0.12	1.9	*JD*
10061-02-6	trans-1,3-Dichloropropene		0.19	1.9	*U*
79-00-5	1,1,2-Trichloroethane		0.15	1.9	*U*
97-63-2	Ethyl Methacrylate		1.6	19	*U*
127-18-4	Tetrachloroethene		0.23	1.9	*U*
591-78-6	2-Hexanone		2.0	9.6	*U*
124-48-1	Dibromochloromethane		0.15	1.9	*U*
106-93-4	1,2-Dibromoethane		0.15	1.9	*U*
108-90-7	Chlorobenzene		0.077	1.9	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.077	1.9	*U*
100-41-4	Ethylbenzene	0.38	0.15	1.9	*JD*
100-42-5	Styrene		0.077	1.9	*U*
75-25-2	Bromoform		0.12	1.9	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.19	1.9	*U*
96-18-4	1,2,3-Trichloropropane		0.35	1.9	*U*
110-57-6	trans-1,4-Dichloro-2-butene		1.3	7.7	*U*
76-01-7	Pentachloroethane		0.27	1.9	*U*
541-73-1	1,3-Dichlorobenzene		0.15	1.9	*U*
106-46-7	1,4-Dichlorobenzene		0.12	1.9	*U*
95-50-1	1,2-Dichlorobenzene		0.12	1.9	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.96	1.9	*U*
120-82-1	1,2,4-Trichlorobenzene		0.23	1.9	*U*
87-68-3	Hexachlorobutadiene		0.12	1.9	*U*
1330-20-7	Xylenes (total)	1.7	0.12	1.9	*JD*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	4.959	99	65 - 150	
1,2-Dichloroethane-d4	5.000	5.218	104	59 - 150	
Toluene-d8	5.000	4.888	98	61 - 145	
Bromofluorobenzene	5.000	4.528	91	63 - 143	

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SW 8260B

DRUM3

Client: GOLDER | SDG 1510122 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510122-03D90.d | Sampled: 10/20/15 08:25

Initial/Final: 25mL / 25mL | Lab ID: 1510122-03 | Received: 10/20/15 09:40

Dilution: 5 | pH: 7 | Prepared: 10/20/15 18:02

% Moisture: NA | Analyzed: 10/20/15 23:34

Batch: 5102014 | Sequence: 5J20007 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.15	2.5	*U*
74-87-3	Chloromethane		0.55	2.5	*U*
75-01-4	Vinyl chloride	0.71	0.35	2.5	*JD*
74-83-9	Bromomethane		0.55	2.5	*U*
75-00-3	Chloroethane		1.0	2.5	*U*
75-69-4	Trichlorofluoromethane		0.30	2.5	*U*
107-02-8	Acrolein		5.2	25	*U*
75-35-4	1,1-Dichloroethene	3.8	0.20	2.5	*D*
67-64-1	Acetone	8.6	2.2	13	*JD*
74-88-4	Iodomethane		0.15	2.5	*U*
75-15-0	Carbon disulfide		0.10	2.5	*U*
107-05-1	3-Chloropropene		0.25	2.5	*U*
75-05-8	Acetonitrile		0.15	2.5	*U*
75-09-2	Methylene chloride	4.1	0.10	2.5	*D*
107-13-1	Acrylonitrile		1.8	25	*U*
156-60-5	trans-1,2-Dichloroethene	1.8	0.25	2.5	*JD*
75-34-3	1,1-Dichloroethane		0.10	2.5	*U*
108-05-4	Vinyl acetate		0.30	2.5	*U*
107-12-0	Propionitrile		7.0	130	*U*
78-93-3	2-Butanone		1.4	13	*U*
126-98-7	Methacrylonitrile		2.0	25	*U*
67-66-3	Chloroform	20	0.15	2.5	*D*
71-55-6	1,1,1-Trichloroethane		0.10	2.5	*U*
56-23-5	Carbon tetrachloride		0.15	2.5	*U*
107-06-2	1,2-Dichloroethane	44	0.15	2.5	*D*
78-83-1	Isobutyl alcohol		30	130	*U*
71-43-2	Benzene	4.5	0.15	2.5	*D*
79-01-6	Trichloroethene	190	0.15	2.5	*D*
78-87-5	1,2-Dichloropropane		0.60	2.5	*U*
74-95-3	Dibromomethane		0.15	2.5	*U*
123-91-1	1,4-Dioxane		27	130	*U*
80-62-6	Methyl Methacrylate		2.8	25	*U*
75-27-4	Bromodichloromethane		0.15	2.5	*U*
10061-01-5	cis-1,3-Dichloropropene		0.20	2.5	*U*
108-10-1	4-Methyl-2-pentanone		2.1	13	*U*

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SW 8260B

DRUM3

Client: GOLDER | SDG 1510122 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510122-03D90.d | Sampled: 10/20/15 08:25

Initial/Final: 25mL / 25mL | Lab ID: 1510122-03 | Received: 10/20/15 09:40

Dilution: 5 | pH: 7 | Prepared: 10/20/15 18:02

% Moisture: NA | Analyzed: 10/20/15 23:34

Batch: 5102014 | Sequence: 5J20007 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-88-3	Toluene	1.3	0.15	2.5	*JD*
10061-02-6	trans-1,3-Dichloropropene		0.25	2.5	*U*
79-00-5	1,1,2-Trichloroethane		0.20	2.5	*U*
97-63-2	Ethyl Methacrylate		2.1	25	*U*
127-18-4	Tetrachloroethene		0.30	2.5	*U*
591-78-6	2-Hexanone		2.6	13	*U*
124-48-1	Dibromochloromethane		0.20	2.5	*U*
106-93-4	1,2-Dibromoethane		0.20	2.5	*U*
108-90-7	Chlorobenzene		0.10	2.5	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.10	2.5	*U*
100-41-4	Ethylbenzene	0.31	0.20	2.5	*JD*
100-42-5	Styrene		0.10	2.5	*U*
75-25-2	Bromoform		0.15	2.5	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.25	2.5	*U*
96-18-4	1,2,3-Trichloropropane		0.45	2.5	*U*
110-57-6	trans-1,4-Dichloro-2-butene		1.7	10	*U*
76-01-7	Pentachloroethane		0.35	2.5	*U*
541-73-1	1,3-Dichlorobenzene		0.20	2.5	*U*
106-46-7	1,4-Dichlorobenzene		0.15	2.5	*U*
95-50-1	1,2-Dichlorobenzene		0.15	2.5	*U*
96-12-8	1,2-Dibromo-3-chloropropane		1.3	2.5	*U*
120-82-1	1,2,4-Trichlorobenzene		0.30	2.5	*U*
87-68-3	Hexachlorobutadiene		0.15	2.5	*U*
1330-20-7	Xylenes (total)	1.3	0.15	2.5	*JD*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.165	103	65 - 150	
1,2-Dichloroethane-d4	5.000	5.369	107	59 - 150	
Toluene-d8	5.000	4.926	99	61 - 145	
Bromofluorobenzene	5.000	4.786	96	63 - 143	

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SW 8260B

DRUM3DL

Client: GOLDER | SDG 1510122 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510122-03D290.d | Sampled: 10/20/15 08:25

Initial/Final: 25mL / 25mL | Lab ID: 1510122-03RE1 | Received: 10/20/15 09:40

Dilution: 12.5 | pH: 7 | Prepared: 10/20/15 18:02

% Moisture: NA | Analyzed: 10/21/15 00:39

Batch: 5102014 | Sequence: 5J20007 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
156-59-2	cis-1,2-Dichloroethene	280	0.38	6.3	*D*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.381	108	65 - 150	
1,2-Dichloroethane-d4	5.000	5.696	114	59 - 150	
Toluene-d8	5.000	5.305	106	61 - 145	
Bromofluorobenzene	5.000	4.843	97	63 - 143	

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SW 8260B

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Client: GOLDER | SDG 1510122 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510122-0490.d | Sampled: 10/20/15 00:00

Initial/Final: 25mL / 25mL | Lab ID: 1510122-04 | Received: 10/20/15 09:40

Dilution: 1 | pH: 1 | Prepared: 10/20/15 18:02

% Moisture: NA | Analyzed: 10/20/15 21:57

Batch: 5102014 | Sequence: 5J20007 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
74-87-3	Chloromethane		0.11	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
74-83-9	Bromomethane		0.11	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-69-4	Trichlorofluoromethane		0.060	0.50	U
107-02-8	Acrolein		1.0	5.0	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
67-64-1	Acetone		0.44	2.5	U
74-88-4	Iodomethane		0.030	0.50	U
75-15-0	Carbon disulfide		0.020	0.50	U
107-05-1	3-Chloropropene		0.050	0.50	U
75-05-8	Acetonitrile		0.030	0.50	U
75-09-2	Methylene chloride		0.020	0.50	U
107-13-1	Acrylonitrile		0.36	5.0	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
108-05-4	Vinyl acetate		0.060	0.50	U
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	U
107-12-0	Propionitrile		1.4	25	U
78-93-3	2-Butanone		0.28	2.5	U
126-98-7	Methacrylonitrile		0.39	5.0	U
67-66-3	Chloroform		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
56-23-5	Carbon tetrachloride		0.030	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
78-83-1	Isobutyl alcohol		5.9	25	U
71-43-2	Benzene		0.030	0.50	U
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
123-91-1	1,4-Dioxane		5.4	25	U
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U

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SW 8260B

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Client: GOLDER | SDG 1510122 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510122-0490.d | Sampled: 10/20/15 00:00

Initial/Final: 25mL / 25mL | Lab ID: 1510122-04 | Received: 10/20/15 09:40

Dilution: 1 | pH: 1 | Prepared: 10/20/15 18:02

% Moisture: NA | Analyzed: 10/20/15 21:57

Batch: 5102014 | Sequence: 5J20007 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene		0.030	0.50	U
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
106-93-4	1,2-Dibromoethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene		0.040	0.50	U
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
76-01-7	Pentachloroethane		0.070	0.50	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
1330-20-7	Xylenes (total)		0.030	0.50	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.185	104	65 - 150	
1,2-Dichloroethane-d4	5.000	5.295	106	59 - 150	
Toluene-d8	5.000	4.955	99	61 - 145	
Bromofluorobenzene	5.000	4.789	96	63 - 143	

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SW 8260B

VBLKIA

Client: GOLDER | SDG: 1510122 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Extraction: EPA 5030B | File ID: 5102014-BLK1R90.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 5102014-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 10/20/15 18:02

% Moisture: NA | Analyzed: 10/20/15 18:34

Batch: 5102014 | Sequence: 5J20007 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
74-87-3	Chloromethane		0.11	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
74-83-9	Bromomethane		0.11	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-69-4	Trichlorofluoromethane		0.060	0.50	U
107-02-8	Acrolein		1.0	5.0	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
67-64-1	Acetone		0.44	2.5	U
74-88-4	Iodomethane		0.030	0.50	U
75-15-0	Carbon disulfide		0.020	0.50	U
107-05-1	3-Chloropropene		0.050	0.50	U
75-05-8	Acetonitrile		0.030	0.50	U
75-09-2	Methylene chloride		0.020	0.50	U
107-13-1	Acrylonitrile		0.36	5.0	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
108-05-4	Vinyl acetate		0.060	0.50	U
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	U
107-12-0	Propionitrile		1.4	25	U
78-93-3	2-Butanone		0.28	2.5	U
126-98-7	Methacrylonitrile		0.39	5.0	U
67-66-3	Chloroform		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
56-23-5	Carbon tetrachloride		0.030	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
78-83-1	Isobutyl alcohol		5.9	25	U
71-43-2	Benzene		0.030	0.50	U
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
123-91-1	1,4-Dioxane		5.4	25	U
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U

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SW 8260B

VBLKIA

Client: GOLDER | SDG: 1510122 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Extraction: EPA 5030B | File ID: 5102014-BLK1R90.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 5102014-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 10/20/15 18:02

% Moisture: NA | Analyzed: 10/20/15 18:34

Batch: 5102014 | Sequence: 5J20007 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene		0.030	0.50	U
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
106-93-4	1,2-Dibromoethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene		0.040	0.50	U
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
76-01-7	Pentachloroethane		0.070	0.50	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
1330-20-7	Xylenes (total)		0.030	0.50	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	4.743	95	65 - 150	
1,2-Dichloroethane-d4	5.000	5.102	102	59 - 150	
Toluene-d8	5.000	4.884	98	61 - 145	
Bromofluorobenzene	5.000	4.453	89	63 - 143	

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ANALYSES DATA PACKAGE COVER PAGE

Client: GOLDER

Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Laboratory: Liberty Analytical

SDG: 1510130

Client Sample Id:	Analysis:	Lab Sample Id:
DRUM4	SW 8260B	1510130-01
DRUM10	SW 8260B	1510130-02
TRIP BLANK	SW 8260B	1510130-03
DRUM11	SW 8260B	1510130-04
DRUM11	SW 8260B	1510130-04RE1
TRIP BLANK2	SW 8260B	1510130-05

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions addressed in the narrative. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Quentisha Forrester

Name: Quentisha Forrester

Date: 10/22/2015

Title: Chemist III

Liberty Analytical

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

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CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1510130
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: DRUM4 DRUM10 TRIP BLANK DRUM11 TRIP BLANK2

The 5 aqueous samples listed above were received intact, refrigerated at 5.3°C and 5.8°C, with proper documentation, in sealed shipping containers, on October 21, 2015. The samples listed above were scheduled for the requested analysis of the volatile fraction only. SW-846, 3rd Edition, Update 3, 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices are included in the sample data sections.

VOLATILES

The Analysis holding time requirements were met for all the samples in this SDG. The pH values of samples TRIP BLANK and TRIP BLANK2 were equal to 1, and the pH values of samples DRUM4, DRUM10 and DRUM11 were equal to 6, 8 and 12, respectively.

Volatile Project/Target Compound List (TCL) analytes were identified above the Reporting Limits (RL) in 3 of these samples. In the analysis of sample DRUM11 the surrogate Dibromofluoromethane was not recovered. Sample DRUM11 was reanalyzed and the surrogate Dibromofluoromethane was recovered at 2%. We have reported data from both analyses of sample DRUM11.

Manual integrations were performed in this SDG, as indicated in the detailed Manual Integration Summary report that is located in section S. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All of the surrogates met recovery criteria in the analyses of the samples with the exception mentioned above. All of the internal standards met response and retention time criteria in the analyses of the samples.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

The associated method blank met all quality control criteria.

Duplicate matrix spikes were not requested with this SDG. The associated Laboratory Control Samples (LCS/LCSD) met all quality control criteria with the following exceptions. In the analysis of VLCSIB the recovery of Hexachlorobutadiene was biased low, and the %RPD of Hexachlorobutadiene and Pentachloroethane were outside of the QC limits.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Quentisha Forrester
Chemist III
October 22, 2015

ANALYSIS DATA SHEET

SW 8260B

DRUM10

Client: GOLDER | SDG 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510130-02R90.d | Sampled: 10/21/15 11:30

Initial/Final: 25mL / 25mL | Lab ID: 1510130-02 | Received: 10/21/15 12:00

Dilution: 1 | pH: 8 | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/21/15 21:48

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
74-87-3	Chloromethane		0.11	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
74-83-9	Bromomethane		0.11	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-69-4	Trichlorofluoromethane		0.060	0.50	*U*
107-02-8	Acrolein		1.0	5.0	*U*
75-35-4	1,1-Dichloroethene	0.22	0.040	0.50	*J*
67-64-1	Acetone	9.4	0.44	2.5	
74-88-4	Iodomethane		0.030	0.50	*U*
75-15-0	Carbon disulfide	0.12	0.020	0.50	*J*
107-05-1	3-Chloropropene		0.050	0.50	*U*
75-05-8	Acetonitrile		0.030	0.50	*U*
75-09-2	Methylene chloride	0.32	0.020	0.50	*JB*
107-13-1	Acrylonitrile		0.36	5.0	*U*
156-60-5	trans-1,2-Dichloroethene	0.094	0.050	0.50	*J*
75-34-3	1,1-Dichloroethane		0.020	0.50	*U*
108-05-4	Vinyl acetate		0.060	0.50	*U*
156-59-2	cis-1,2-Dichloroethene	14	0.030	0.50	
107-12-0	Propionitrile		1.4	25	*U*
78-93-3	2-Butanone		0.28	2.5	*U*
126-98-7	Methacrylonitrile		0.39	5.0	*U*
67-66-3	Chloroform	11	0.030	0.50	
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
56-23-5	Carbon tetrachloride		0.030	0.50	*U*
107-06-2	1,2-Dichloroethane	2.5	0.030	0.50	
78-83-1	Isobutyl alcohol		5.9	25	*U*
71-43-2	Benzene	0.35	0.030	0.50	*J*
79-01-6	Trichloroethene	14	0.030	0.50	
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
74-95-3	Dibromomethane		0.030	0.50	*U*
123-91-1	1,4-Dioxane		5.4	25	*U*
80-62-6	Methyl Methacrylate		0.56	5.0	*U*
75-27-4	Bromodichloromethane	1.5	0.030	0.50	
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	*U*

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ANALYSIS DATA SHEET

SW 8260B

DRUM10

Client: GOLDER | SDG 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510130-02R90.d | Sampled: 10/21/15 11:30

Initial/Final: 25mL / 25mL | Lab ID: 1510130-02 | Received: 10/21/15 12:00

Dilution: 1 | pH: 8 | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/21/15 21:48

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene	0.27	0.030	0.50	J
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane	0.82	0.040	0.50	
106-93-4	1,2-Dibromoethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene	0.16	0.040	0.50	J
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
76-01-7	Pentachloroethane		0.070	0.50	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
1330-20-7	Xylenes (total)	0.81	0.030	0.50	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	4.269	85	65 - 150	
1,2-Dichloroethane-d4	5.000	5.136	103	59 - 150	
Toluene-d8	5.000	4.955	99	61 - 145	
Bromofluorobenzene	5.000	4.731	95	63 - 143	

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ANALYSIS DATA SHEET

SW 8260B

DRUM11

Client: GOLDER | SDG 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510130-0490.d | Sampled: 10/21/15 15:15

Initial/Final: 25mL / 25mL | Lab ID: 1510130-04 | Received: 10/21/15 12:00

Dilution: 1 | pH: 12 | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/22/15 00:06

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
74-87-3	Chloromethane		0.11	0.50	*U*
75-01-4	Vinyl chloride	0.48	0.070	0.50	*J*
74-83-9	Bromomethane		0.11	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-69-4	Trichlorofluoromethane		0.060	0.50	*U*
107-02-8	Acrolein		1.0	5.0	*U*
75-35-4	1,1-Dichloroethene	0.11	0.040	0.50	*J*
67-64-1	Acetone	14	0.44	2.5	
74-88-4	Iodomethane		0.030	0.50	*U*
75-15-0	Carbon disulfide	0.13	0.020	0.50	*J*
107-05-1	3-Chloropropene		0.050	0.50	*U*
75-05-8	Acetonitrile		0.030	0.50	*U*
75-09-2	Methylene chloride	0.24	0.020	0.50	*JB*
107-13-1	Acrylonitrile		0.36	5.0	*U*
156-60-5	trans-1,2-Dichloroethene	0.075	0.050	0.50	*J*
75-34-3	1,1-Dichloroethane		0.020	0.50	*U*
108-05-4	Vinyl acetate		0.060	0.50	*U*
156-59-2	cis-1,2-Dichloroethene	9.0	0.030	0.50	
107-12-0	Propionitrile		1.4	25	*U*
78-93-3	2-Butanone		0.28	2.5	*U*
126-98-7	Methacrylonitrile		0.39	5.0	*U*
67-66-3	Chloroform	11	0.030	0.50	
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
56-23-5	Carbon tetrachloride		0.030	0.50	*U*
107-06-2	1,2-Dichloroethane	1.4	0.030	0.50	
78-83-1	Isobutyl alcohol		5.9	25	*U*
71-43-2	Benzene	0.25	0.030	0.50	*J*
79-01-6	Trichloroethene	8.5	0.030	0.50	
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
74-95-3	Dibromomethane		0.030	0.50	*U*
123-91-1	1,4-Dioxane		5.4	25	*U*
80-62-6	Methyl Methacrylate		0.56	5.0	*U*
75-27-4	Bromodichloromethane	1.2	0.030	0.50	
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	*U*

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ANALYSIS DATA SHEET

SW 8260B

DRUM11

Client: GOLDER | SDG 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510130-0490.d | Sampled: 10/21/15 15:15

Initial/Final: 25mL / 25mL | Lab ID: 1510130-04 | Received: 10/21/15 12:00

Dilution: 1 | pH: 12 | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/22/15 00:06

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		0.42	2.5	*U*
108-88-3	Toluene	0.20	0.030	0.50	*J*
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	*U*
79-00-5	1,1,2-Trichloroethane		0.040	0.50	*U*
97-63-2	Ethyl Methacrylate		0.41	5.0	*U*
127-18-4	Tetrachloroethene		0.060	0.50	*U*
591-78-6	2-Hexanone		0.51	2.5	*U*
124-48-1	Dibromochloromethane	0.77	0.040	0.50	
106-93-4	1,2-Dibromoethane		0.040	0.50	*U*
108-90-7	Chlorobenzene		0.020	0.50	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	*U*
100-41-4	Ethylbenzene	0.21	0.040	0.50	*J*
100-42-5	Styrene		0.020	0.50	*U*
75-25-2	Bromoform		0.030	0.50	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	*U*
96-18-4	1,2,3-Trichloropropane		0.090	0.50	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	*U*
76-01-7	Pentachloroethane		0.070	0.50	*U*
541-73-1	1,3-Dichlorobenzene		0.040	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*
95-50-1	1,2-Dichlorobenzene		0.030	0.50	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	*U*
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	*U*
87-68-3	Hexachlorobutadiene		0.030	0.50	*U*
1330-20-7	Xylenes (total)	1.1	0.030	0.50	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	ND		65 - 150	*
1,2-Dichloroethane-d4	5.000	5.290	106	59 - 150	
Toluene-d8	5.000	5.111	102	61 - 145	
Bromofluorobenzene	5.000	4.841	97	63 - 143	

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ANALYSIS DATA SHEET

SW 8260B

DRUM11RE

Client: GOLDER | SDG 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510130-04R90.d | Sampled: 10/21/15 15:15

Initial/Final: 25mL / 25mL | Lab ID: 1510130-04RE1 | Received: 10/21/15 12:00

Dilution: 1 | pH: 12 | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/22/15 01:11

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
74-87-3	Chloromethane		0.11	0.50	*U*
75-01-4	Vinyl chloride	0.41	0.070	0.50	*J*
74-83-9	Bromomethane		0.11	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-69-4	Trichlorofluoromethane		0.060	0.50	*U*
107-02-8	Acrolein		1.0	5.0	*U*
75-35-4	1,1-Dichloroethene	0.21	0.040	0.50	*J*
67-64-1	Acetone	20	0.44	2.5	
74-88-4	Iodomethane		0.030	0.50	*U*
75-15-0	Carbon disulfide	0.092	0.020	0.50	*J*
107-05-1	3-Chloropropene		0.050	0.50	*U*
75-05-8	Acetonitrile		0.030	0.50	*U*
75-09-2	Methylene chloride	0.35	0.020	0.50	*JB*
107-13-1	Acrylonitrile		0.36	5.0	*U*
156-60-5	trans-1,2-Dichloroethene	0.10	0.050	0.50	*J*
75-34-3	1,1-Dichloroethane		0.020	0.50	*U*
108-05-4	Vinyl acetate		0.060	0.50	*U*
156-59-2	cis-1,2-Dichloroethene	13	0.030	0.50	
107-12-0	Propionitrile		1.4	25	*U*
78-93-3	2-Butanone		0.28	2.5	*U*
126-98-7	Methacrylonitrile		0.39	5.0	*U*
67-66-3	Chloroform	11	0.030	0.50	
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
56-23-5	Carbon tetrachloride		0.030	0.50	*U*
107-06-2	1,2-Dichloroethane	2.3	0.030	0.50	
78-83-1	Isobutyl alcohol		5.9	25	*U*
71-43-2	Benzene	0.33	0.030	0.50	*J*
79-01-6	Trichloroethene	13	0.030	0.50	
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
74-95-3	Dibromomethane		0.030	0.50	*U*
123-91-1	1,4-Dioxane		5.4	25	*U*
80-62-6	Methyl Methacrylate		0.56	5.0	*U*
75-27-4	Bromodichloromethane	0.66	0.030	0.50	
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	*U*

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ANALYSIS DATA SHEET

SW 8260B

DRUM11RE

Client: GOLDER | SDG 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510130-04R90.d | Sampled: 10/21/15 15:15

Initial/Final: 25mL / 25mL | Lab ID: 1510130-04RE1 | Received: 10/21/15 12:00

Dilution: 1 | pH: 12 | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/22/15 01:11

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene	0.24	0.030	0.50	J
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane	0.49	0.040	0.50	J
106-93-4	1,2-Dibromoethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene	0.21	0.040	0.50	J
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
76-01-7	Pentachloroethane		0.070	0.50	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
1330-20-7	Xylenes (total)	1.0	0.030	0.50	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	0.1172	2	65 - 150	*
1,2-Dichloroethane-d4	5.000	5.265	105	59 - 150	
Toluene-d8	5.000	5.043	101	61 - 145	
Bromofluorobenzene	5.000	4.691	94	63 - 143	

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ANALYSIS DATA SHEET

SW 8260B

DRUM4

Client: GOLDER | SDG 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510130-01R90.d | Sampled: 10/21/15 11:00

Initial/Final: 25mL / 25mL | Lab ID: 1510130-01 | Received: 10/21/15 12:00

Dilution: 1 | pH: 6 | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/21/15 21:16

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
74-87-3	Chloromethane		0.11	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
74-83-9	Bromomethane		0.11	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-69-4	Trichlorofluoromethane		0.060	0.50	*U*
107-02-8	Acrolein		1.0	5.0	*U*
75-35-4	1,1-Dichloroethene	0.21	0.040	0.50	*J*
67-64-1	Acetone	12	0.44	2.5	
74-88-4	Iodomethane		0.030	0.50	*U*
75-15-0	Carbon disulfide	0.056	0.020	0.50	*J*
107-05-1	3-Chloropropene		0.050	0.50	*U*
75-05-8	Acetonitrile		0.030	0.50	*U*
75-09-2	Methylene chloride	0.23	0.020	0.50	*JB*
107-13-1	Acrylonitrile		0.36	5.0	*U*
156-60-5	trans-1,2-Dichloroethene	0.088	0.050	0.50	*J*
75-34-3	1,1-Dichloroethane		0.020	0.50	*U*
108-05-4	Vinyl acetate		0.060	0.50	*U*
156-59-2	cis-1,2-Dichloroethene	14	0.030	0.50	
107-12-0	Propionitrile		1.4	25	*U*
78-93-3	2-Butanone		0.28	2.5	*U*
126-98-7	Methacrylonitrile		0.39	5.0	*U*
67-66-3	Chloroform	1.4	0.030	0.50	
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
56-23-5	Carbon tetrachloride		0.030	0.50	*U*
107-06-2	1,2-Dichloroethane	2.7	0.030	0.50	
78-83-1	Isobutyl alcohol		5.9	25	*U*
71-43-2	Benzene	0.64	0.030	0.50	
79-01-6	Trichloroethene	15	0.030	0.50	
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
74-95-3	Dibromomethane		0.030	0.50	*U*
123-91-1	1,4-Dioxane		5.4	25	*U*
80-62-6	Methyl Methacrylate		0.56	5.0	*U*
75-27-4	Bromodichloromethane		0.030	0.50	*U*
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	*U*

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SW 8260B

DRUM4

Client: GOLDER | SDG 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510130-01R90.d | Sampled: 10/21/15 11:00

Initial/Final: 25mL / 25mL | Lab ID: 1510130-01 | Received: 10/21/15 12:00

Dilution: 1 | pH: 6 | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/21/15 21:16

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene	0.80	0.030	0.50	
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
106-93-4	1,2-Dibromoethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene	0.34	0.040	0.50	J
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
76-01-7	Pentachloroethane		0.070	0.50	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
1330-20-7	Xylenes (total)	1.3	0.030	0.50	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	4.982	100	65 - 150	
1,2-Dichloroethane-d4	5.000	4.923	98	59 - 150	
Toluene-d8	5.000	4.969	99	61 - 145	
Bromofluorobenzene	5.000	4.524	90	63 - 143	

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SW 8260B

TRIP BLANK

Client: GOLDER | SDG 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510130-0390.d | Sampled: 10/21/15 00:00

Initial/Final: 25mL / 25mL | Lab ID: 1510130-03 | Received: 10/21/15 12:00

Dilution: 1 | pH: 1 | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/21/15 20:43

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
74-87-3	Chloromethane		0.11	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
74-83-9	Bromomethane		0.11	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-69-4	Trichlorofluoromethane		0.060	0.50	U
107-02-8	Acrolein		1.0	5.0	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
67-64-1	Acetone		0.44	2.5	U
74-88-4	Iodomethane		0.030	0.50	U
75-15-0	Carbon disulfide		0.020	0.50	U
107-05-1	3-Chloropropene		0.050	0.50	U
75-05-8	Acetonitrile		0.030	0.50	U
75-09-2	Methylene chloride		0.020	0.50	U
107-13-1	Acrylonitrile		0.36	5.0	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
108-05-4	Vinyl acetate		0.060	0.50	U
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	U
107-12-0	Propionitrile		1.4	25	U
78-93-3	2-Butanone		0.28	2.5	U
126-98-7	Methacrylonitrile		0.39	5.0	U
67-66-3	Chloroform		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
56-23-5	Carbon tetrachloride		0.030	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
78-83-1	Isobutyl alcohol		5.9	25	U
71-43-2	Benzene		0.030	0.50	U
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
123-91-1	1,4-Dioxane		5.4	25	U
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U

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SW 8260B

TRIP BLANK

Client: GOLDER SDG 1510130 Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water Preparation: EPA 5030B File ID: 1510130-0390.d Sampled: 10/21/15 00:00

Initial/Final: 25mL / 25mL Lab ID: 1510130-03 Received: 10/21/15 12:00

Dilution: 1 pH: 1 Prepared: 10/21/15 17:53

% Moisture: NA Analyzed: 10/21/15 20:43

Batch: 5102109 Sequence: 5J21005 Calibration: 5102004 Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene	0.040	0.030	0.50	J
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
106-93-4	1,2-Dibromoethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene		0.040	0.50	U
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
76-01-7	Pentachloroethane		0.070	0.50	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
1330-20-7	Xylenes (total)		0.030	0.50	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.218	104	65 - 150	
1,2-Dichloroethane-d4	5.000	5.276	106	59 - 150	
Toluene-d8	5.000	5.191	104	61 - 145	
Bromofluorobenzene	5.000	4.790	96	63 - 143	

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SW 8260B

TRIP BLANK2

Client: GOLDER | SDG 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510130-0590.d | Sampled: 10/21/15 00:00

Initial/Final: 25mL / 25mL | Lab ID: 1510130-05 | Received: 10/21/15 12:00

Dilution: 1 | pH: 1 | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/22/15 00:38

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
74-87-3	Chloromethane		0.11	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
74-83-9	Bromomethane		0.11	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-69-4	Trichlorofluoromethane		0.060	0.50	U
107-02-8	Acrolein		1.0	5.0	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
67-64-1	Acetone		0.44	2.5	U
74-88-4	Iodomethane		0.030	0.50	U
75-15-0	Carbon disulfide		0.020	0.50	U
107-05-1	3-Chloropropene		0.050	0.50	U
75-05-8	Acetonitrile		0.030	0.50	U
75-09-2	Methylene chloride		0.020	0.50	U
107-13-1	Acrylonitrile		0.36	5.0	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
108-05-4	Vinyl acetate		0.060	0.50	U
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	U
107-12-0	Propionitrile		1.4	25	U
78-93-3	2-Butanone		0.28	2.5	U
126-98-7	Methacrylonitrile		0.39	5.0	U
67-66-3	Chloroform		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
56-23-5	Carbon tetrachloride		0.030	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
78-83-1	Isobutyl alcohol		5.9	25	U
71-43-2	Benzene		0.030	0.50	U
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
123-91-1	1,4-Dioxane		5.4	25	U
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U

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SW 8260B

TRIP BLANK2

Client: GOLDER | SDG 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Preparation: EPA 5030B | File ID: 1510130-0590.d | Sampled: 10/21/15 00:00

Initial/Final: 25mL / 25mL | Lab ID: 1510130-05 | Received: 10/21/15 12:00

Dilution: 1 | pH: 1 | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/22/15 00:38

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		0.42	2.5	*U*
108-88-3	Toluene	0.056	0.030	0.50	*J*
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	*U*
79-00-5	1,1,2-Trichloroethane		0.040	0.50	*U*
97-63-2	Ethyl Methacrylate		0.41	5.0	*U*
127-18-4	Tetrachloroethene		0.060	0.50	*U*
591-78-6	2-Hexanone		0.51	2.5	*U*
124-48-1	Dibromochloromethane		0.040	0.50	*U*
106-93-4	1,2-Dibromoethane		0.040	0.50	*U*
108-90-7	Chlorobenzene		0.020	0.50	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	*U*
100-41-4	Ethylbenzene		0.040	0.50	*U*
100-42-5	Styrene		0.020	0.50	*U*
75-25-2	Bromoform		0.030	0.50	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	*U*
96-18-4	1,2,3-Trichloropropane		0.090	0.50	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	*U*
76-01-7	Pentachloroethane		0.070	0.50	*U*
541-73-1	1,3-Dichlorobenzene		0.040	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*
95-50-1	1,2-Dichlorobenzene		0.030	0.50	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	*U*
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	*U*
87-68-3	Hexachlorobutadiene		0.030	0.50	*U*
1330-20-7	Xylenes (total)		0.030	0.50	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.210	104	65 - 150	
1,2-Dichloroethane-d4	5.000	5.426	109	59 - 150	
Toluene-d8	5.000	5.192	104	61 - 145	
Bromofluorobenzene	5.000	4.813	96	63 - 143	

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ANALYSIS DATA SHEET

SW 8260B

VBLKIB

Client: GOLDER SDG: 1510130 Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water Extraction: EPA 5030B File ID: 5102109-BLK1R90.d QC Type: Blank

Initial/Final: 25mL / 25mL Lab ID: 5102109-BLK1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 10/21/15 17:53

% Moisture: NA Analyzed: 10/21/15 17:53

Batch: 5102109 Sequence: 5J21005 Calibration: 5102004 Instrument: 5973hp90

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
74-87-3	Chloromethane		0.11	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
74-83-9	Bromomethane		0.11	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-69-4	Trichlorofluoromethane		0.060	0.50	U
107-02-8	Acrolein		1.0	5.0	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
67-64-1	Acetone		0.44	2.5	U
74-88-4	Iodomethane		0.030	0.50	U
75-15-0	Carbon disulfide		0.020	0.50	U
107-05-1	3-Chloropropene		0.050	0.50	U
75-05-8	Acetonitrile		0.030	0.50	U
75-09-2	Methylene chloride	0.069	0.020	0.50	J
107-13-1	Acrylonitrile		0.36	5.0	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
108-05-4	Vinyl acetate		0.060	0.50	U
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	U
107-12-0	Propionitrile		1.4	25	U
78-93-3	2-Butanone		0.28	2.5	U
126-98-7	Methacrylonitrile		0.39	5.0	U
67-66-3	Chloroform		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
56-23-5	Carbon tetrachloride		0.030	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
78-83-1	Isobutyl alcohol		5.9	25	U
71-43-2	Benzene		0.030	0.50	U
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
123-91-1	1,4-Dioxane		5.4	25	U
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ANALYSIS DATA SHEET

SW 8260B

VBLKIB

Client: GOLDER | SDG: 1510130 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502-1 day

Matrix: Water | Extraction: EPA 5030B | File ID: 5102109-BLK1R90.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 5102109-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 10/21/15 17:53

% Moisture: NA | Analyzed: 10/21/15 17:53

Batch: 5102109 | Sequence: 5J21005 | Calibration: 5102004 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene		0.030	0.50	U
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
106-93-4	1,2-Dibromoethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene		0.040	0.50	U
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
76-01-7	Pentachloroethane		0.070	0.50	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
1330-20-7	Xylenes (total)		0.030	0.50	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	4.344	87	65 - 150	
1,2-Dichloroethane-d4	5.000	5.166	103	59 - 150	
Toluene-d8	5.000	4.806	96	61 - 145	
Bromofluorobenzene	5.000	4.405	88	63 - 143	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

HAZARDOUS MANIFEST [013315308JJK]

IW-02 DEVELOPMENT WATER [CH1056131]

OCTOBER 23, 2015

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NCD052547635

2. Page 1 of 1

3. Emergency Response Phone: 800-255-3924-MIS0007951

4. Manifest Tracking Number: 013315308 JJK

5. Generator's Name and Mailing Address
GlaxoSmithKline
5 Moore Drive/PO Box 13398
Durham, NC 27709-3398 USA
Generator's Phone: 919-483-4640

Generator's Site Address (if different than mailing address)
3029 East Cornwallis Road
Durham, NC 27709

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC
U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name: Clean Harbors Environmental Svcs Inc.
U.S. EPA ID Number: MAD039322250

8. Designated Facility Name and Site Address
Clean Harbors Deerpark, L.P.
2027 Independence Parkway South
La Porte, TX 77571 USA
Facility's Phone: 281-930-2300
U.S. EPA ID Number: TXD055141378

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3082, Waste Environmentally hazardous substance liquid, n.o.s. (trichloroethylene), 9, PG III, ERG# 171 vinylchloride	2	DM	700	P	D040 D043 D029 D022 D028 D018
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) CH1056131(IDW-Liquids) 2 x55gal.
A&D Job#: 76664 PO#: 32514
150343 P130

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: DANIEL CHILDRESS CONSULTANT ON BEHALF OF GSK
Signature:
Month 10 Day 23 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter signature (for exports only):
Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Tony Jeffries
Signature: Tony Jeffries
Month 10 Day 23 Year 15
Transporter 2 Printed/Typed Name: Anna Nuccio
Signature: Anna Nuccio
Month 10 Day 29 Year 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H040 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sandy Beach
Signature: Sandy Beach
Month 11 Day 5 Year 15

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: NCD052547635

22. Page: 2 of 2

23. Manifest Tracking Number: 013315808JJK

24. Generator's Name: GlaxoSmithKline

25. Transporter 3 Company Name: BOBBIE D WOODZIK — U.S. EPA ID Number: ALD 067158891

26. Transporter 4 Company Name: Clean Harbors — U.S. EPA ID Number: MAD 039322250

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes

TTD

32. Special Handling Instructions and Additional Information

GENERATOR

33. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name: CRAIG MILLER — Signature: [signature] — Month 10 Day 31 Year 15

34. Transporter 4 Acknowledgment of Receipt of Materials

Printed/Typed Name: A. Gohring — Signature: A. Gohring — Month 11 Day 2 Year 15

TRANSPORTER

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

DESIGNATED FACILITY

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH1056131

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***NCD052547635*** GENERATOR NAME: ***GlaxoSmithKline***

GENERATOR CODE (Assigned by Clean Harbors) ***GL12161*** CITY ***Durham*** STATE/PROVINCE ***NC*** ZIP/POSTAL CODE ***27703***

ADDRESS ***3029 East Cornwallis Road*** PHONE: **(336) 229-0058**

CUSTOMER CODE (Assigned by Clean Harbors) ***CA000008*** CUSTOMER NAME: ***A&D Environmental Services Inc***

ADDRESS ***Po Box 963 3149 Lear Drive*** CITY ***Burlington*** STATE/PROVINCE ***NC*** ZIP/POSTAL CODE ***27216***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***IDW Liquids***

PROCESS GENERATING WASTE: **Ground Water Sampling**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE

- SOLID WITHOUT FREE LIQUID
- POWDER
- MONOLITHIC SOLID
- [x] LIQUID WITH NO SOLIDS
- LIQUID/SOLID MIXTURE

% FREE LIQUID ***99.00 - 100.00***
% SETTLED SOLID ***0.00 - 1.00***
% TOTAL SUSPENDED SOLID ***0.00 - 1.00***

- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS

1 [x] 2 3

% BY VOLUME (Approx.)

TOP	***99.00***
MIDDLE	***0.00***
BOTTOM	***1.00***

VISCOSITY (If liquid present)

- [x] 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

varies

ODOR

- NONE
- [x] MILD
- STRONG

Describe:

BOILING POINT ºF (ºC)

- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- [x] >= 130 (>54)

MELTING POINT ºF (ºC)

- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON

- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT ºF (ºC)

- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- [x] > 200 (>93)

pH

- <= 2
- 2.1 - 6.9
- 7 (Neutral)
- [x] 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY

- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- [x] 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

ASH

- [x] < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- Unknown

BTU/LB (MJ/kg)

- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
1,1-DICHLOROETHANE	0.0000000	--	310.0000000	PPB
1,1-DICHLOROETHENE	0.0000000	--	700.0000000	PPB
1,2-DICHLOROETHANE	0.0000000	--	11000.0000000	PPB
BENZENE	0.0000000	--	1400.0000000	PPB
CHLOROBENZENE	0.0000000	--	110.0000000	PPB
CHLOROFORM	0.0000000	--	18000.0000000	PPB
CIS-1,2-DICHLOROETHENE	0.0000000	--	75000.0000000	PPB
ETHYLBENZENE	0.0000000	--	150.0000000	PPB
METHYLENE CHLORIDE	0.0000000	--	2600.0000000	PPB
SEDIMENT	0.5000000	--	2.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [x] NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE.	***G44***	SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE.	***W113***

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5	*1.4000*			
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0	*0.1100*			
D022	CHLOROFORM	6.0	*18.0000*			
D028	1,2-DICHLOROETHANE	0.5	*11.0000*			
D029	1,1-DICHLOROETHYLENE	0.7	*0.7000*			
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5	*54.0000*			
D043	VINYL CHLORIDE	0.2	*0.4700*			
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

- NONE
- ☑ < 1000 PPM
- >= 1000 PPM

PCBs

- ☑ NONE
- < 50 PPM
- >=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCES	EXPLOSIVE	FUMING	☑ OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	NONE OF THE ABOVE

F. REGULATORY STATUS

✔ YES NO USEPA HAZARDOUS WASTE?

D018 D022 D028 D029 D040 D043

YES ✔ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code *OUTS119H*

YES ✔ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

✔ YES NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: *This is subject to LDR.*
VARIANCE INFO:

YES ✔ NO IS THIS A UNIVERSAL WASTE?

YES NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR (CESQG)?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ✔ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ✔ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ✔ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ✔ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ✔ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

✔ YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES ✔ NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

UN3082, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S., (TRICHLOROETHYLENE, CHLOROFORM), 9, PG III

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ONE TIME WEEKLY MONTHLY QUARTERLY ✔ YEARLY OTHER

✔ **CONTAINERIZED**

1-20 CONTAINERS/SHIPMENT

STORAGE CAPACITY: *10*

CONTAINER TYPE:

CUBIC YARD BOX PALLET

TOTE TANK ✔ DRUM

OTHER:

DRUM SIZE: *55*

BULK LIQUID

GALLONS/SHIPMENT: *0 Min -0 Max* GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: *0 Min - 0 Max*

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge.I also certify that any samples submitted are representative of the actual waste.If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
[redacted]wire.com	"On behalf of GSK" Brian J. Eichlin	Principal	9/30/2015

This waste profile has been submitted using Clean Harbors' electronic signature system.

Addendum

D. COMPOSITION

CHEMICAL	MIN	--	MAX	UOM
TOLUENE	0.0000000	--	660.0000000	PPB
TRANS-1,2-DICHLOROETHENE	0.0000000	--	150.0000000	PPB
TRICHLOROETHYLENE	0.0000000	--	54000.0000000	PPB
VINYL CHLORIDE	0.0000000	--	470.0000000	PPB
WATER	99.5000000	--	99.9990000	%
XYLENES	0.0000000	--	630.0000000	PPB

G. DOT/TDG INFORMATION

ANALYSIS DATA SHEET

SW 8260B

IW-17

Client: GOLDER SDG 1506071 Project: GSK GW-O&M ACTIVITIES JUNE 2015/073-9611502

Matrix: Water Preparation: EPA 5030B File ID: 1506071-16D91.d Sampled: 06/18/15 12:43

Initial/Final: 25mL / 25mL Lab ID: 1506071-16 Received: 06/19/15 12:00

Dilution: 2500 pH: 1 Prepared: 06/30/15 17:57

% Moisture: NA Analyzed: 06/30/15 23:21

Batch: 5063009 Sequence: 5F30008 Calibration: 5062402 Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		75	1300	*U*
74-87-3	Chloromethane		280	1300	*U*
75-01-4	Vinyl chloride	470	180	1300	*JD*
74-83-9	Bromomethane		280	1300	*U*
75-00-3	Chloroethane		500	1300	*U*
75-69-4	Trichlorofluoromethane		150	1300	*U*
107-02-8	Acrolein		2600	13000	*U*
75-35-4	1,1-Dichloroethene	700	100	1300	*JD*
67-64-1	Acetone		1100	6300	*U*
74-88-4	Iodomethane		75	1300	*U*
75-15-0	Carbon disulfide		50	1300	*U*
107-05-1	3-Chloropropene		130	1300	*U*
75-05-8	Acetonitrile		75	1300	*U*
75-09-2	Methylene chloride	2600	50	1300	*BD*
107-13-1	Acrylonitrile		900	13000	*U*
156-60-5	trans-1,2-Dichloroethene	150	130	1300	*JD*
75-34-3	1,1-Dichloroethane	310	50	1300	*JD*
108-05-4	Vinyl acetate		150	1300	*U*
156-59-2	cis-1,2-Dichloroethene	75000	75	1300	*D*
107-12-0	Propionitrile		3500	63000	*U*
78-93-3	2-Butanone		700	6300	*U*
126-98-7	Methacrylonitrile		980	13000	*U*
67-66-3	Chloroform	18000	75	1300	*D*
71-55-6	1,1,1-Trichloroethane		50	1300	*U*
56-23-5	Carbon tetrachloride		75	1300	*U*
107-06-2	1,2-Dichloroethane	11000	75	1300	*D*
78-83-1	Isobutyl alcohol		15000	63000	*U*
71-43-2	Benzene	1400	75	1300	*D*
79-01-6	Trichloroethene	54000	75	1300	*D*
78-87-5	1,2-Dichloropropane		300	1300	*U*
74-95-3	Dibromomethane		75	1300	*U*
123-91-1	1,4-Dioxane		14000	63000	*U*
80-62-6	Methyl Methacrylate		1400	13000	*U*
75-27-4	Bromodichloromethane		75	1300	*U*
10061-01-5	cis-1,3-Dichloropropene		100	1300	*U*

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ANALYSIS DATA SHEET

SW 8260B

IW-17

Client: GOLDER | SDG 1506071 | Project: GSK GW-O&M ACTIVITIES JUNE 2015/073-9611502

Matrix: Water | Preparation: EPA 5030B | File ID: 1506071-16D91.d | Sampled: 06/18/15 12:43

Initial/Final: 25mL / 25mL | Lab ID: 1506071-16 | Received: 06/19/15 12:00

Dilution: 2500 | pH: 1 | Prepared: 06/30/15 17:57

% Moisture: NA | Analyzed: 06/30/15 23:21

Batch: 5063009 | Sequence: 5F30008 | Calibration: 5062402 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		1100	6300	*U*
108-88-3	Toluene	660	75	1300	*JBD*
10061-02-6	trans-1,3-Dichloropropene		130	1300	*U*
79-00-5	1,1,2-Trichloroethane		100	1300	*U*
97-63-2	Ethyl Methacrylate		1000	13000	*U*
127-18-4	Tetrachloroethene		150	1300	*U*
591-78-6	2-Hexanone		1300	6300	*U*
124-48-1	Dibromochloromethane		100	1300	*U*
106-93-4	1,2-Dibromoethane		100	1300	*U*
108-90-7	Chlorobenzene	110	50	1300	*JD*
630-20-6	1,1,1,2-Tetrachloroethane		50	1300	*U*
100-41-4	Ethylbenzene	150	100	1300	*JD*
100-42-5	Styrene		50	1300	*U*
75-25-2	Bromoform		75	1300	*U*
79-34-5	1,1,2,2-Tetrachloroethane		130	1300	*U*
96-18-4	1,2,3-Trichloropropane		230	1300	*U*
110-57-6	trans-1,4-Dichloro-2-butene		830	5000	*U*
76-01-7	Pentachloroethane		180	1300	*U*
541-73-1	1,3-Dichlorobenzene		100	1300	*U*
106-46-7	1,4-Dichlorobenzene		75	1300	*U*
95-50-1	1,2-Dichlorobenzene		75	1300	*U*
96-12-8	1,2-Dibromo-3-chloropropane		630	1300	*U*
120-82-1	1,2,4-Trichlorobenzene		150	1300	*U*
87-68-3	Hexachlorobutadiene		75	1300	*U*
1330-20-7	Xylenes (total)	630	75	1300	*JD*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	4.856	97	65 - 150	
1,2-Dichloroethane-d4	5.000	4.735	95	59 - 150	
Toluene-d8	5.000	5.046	101	61 - 145	
Bromofluorobenzene	5.000	6.281	126	63 - 143	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

HAZARDOUS MANIFEST [013315358JJK]

IW-02 DEVELOPMENT WATER [CH1056131]

NOVEMBER 25, 2015

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NCD052547635
2. Page 1 of 1
3. Emergency Response Phone: 800-255-3924-MIS0007951
4. Manifest Tracking Number: 013315358 JJK

5. Generator's Name and Mailing Address
GlaxoSmithKline
5 Moore Drive/PO Box 13398
Durham, NC 27709-3398 USA
Generator's Phone: 919-483-4640

Generator's Site Address (if different than mailing address)
3029 East Cornwallis Road
Durham, NC 27709

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC
U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name: Clean Harbors Env. Clues Inc
U.S. EPA ID Number: MAD039322250

8. Designated Facility Name and Site Address
Clean Harbors Deerpark, L.P.
2027 Independence Parkway South
La Porte, TX 77571 USA
Facility's Phone: 281-930-2300
U.S. EPA ID Number: TXD055141378

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN3082, Waste Environmentally hazardous substance liquid, n.o.s. (trichloroethylene, vinyl chloride), 9, PG III, ERG# 171	001	DM	200	P	D040 D022	D043 D028	D029 D018
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
9b.1) CH1056131(IDW-Liquids) 1 x55gal.
A&D Job#: 76950 PO#: 33175
1503835082

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: DANIEL CHILDRESS CONSULTANT ON BEHALF OF GSK
Signature: [signature]
Month 11 Day 25 Year 15

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT WRAY
Signature: [signature]
Month 11 Day 25 Year 15
Transporter 2 Printed/Typed Name: Gina Chambers
Signature: [signature]
Month 12 Day 14 Year 15

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H040 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Terrysha Woods
Signature: [signature]
Month 12 Day 16 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: NCD052547635 | 22. Page: 2 of 2 | 23. Manifest Tracking Number: 013315358JJK

24. Generator's Name: GlaxoSmithKline

25. Transporter 3 Company Name: Robbie D. Wood Inc. | U.S. EPA ID Number: CUD067138991

26. Transporter 4 Company Name: Clean Harbors | U.S. EPA ID Number: MAD039322220

GENERATOR

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes

TPO

32. Special Handling Instructions and Additional Information

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials
Printed/Typed Name: GARLAND E. Smyrl | Signature: [signature] | Month 12 Day 18 Year 15

34. Transporter ____ Acknowledgment of Receipt of Materials
Printed/Typed Name: T Woods | Signature: [signature] | Month 12 Day 12 Year 15

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH1056131

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***NCD052547635*** GENERATOR NAME: ***GlaxoSmithKline***

GENERATOR CODE (Assigned by Clean Harbors) ***GL12161*** CITY ***Durham*** STATE/PROVINCE ***NC*** ZIP/POSTAL CODE ***27703***

ADDRESS ***3029 East Cornwallis Road*** PHONE: **(336) 229-0058**

CUSTOMER CODE (Assigned by Clean Harbors) ***CA000008*** CUSTOMER NAME: ***A&D Environmental Services Inc***

ADDRESS ***Po Box 963 3149 Lear Drive*** CITY ***Burlington*** STATE/PROVINCE ***NC*** ZIP/POSTAL CODE ***27216***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***IDW Liquids***

PROCESS GENERATING WASTE: **Ground Water Sampling**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE

- SOLID WITHOUT FREE LIQUID
- POWDER
- MONOLITHIC SOLID
- [x] LIQUID WITH NO SOLIDS
- LIQUID/SOLID MIXTURE

% FREE LIQUID ***99.00 - 100.00***
% SETTLED SOLID ***0.00 - 1.00***
% TOTAL SUSPENDED SOLID ***0.00 - 1.00***

- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS

1 [x] 2 3

% BY VOLUME (Approx.)

TOP	***99.00***
MIDDLE	***0.00***
BOTTOM	***1.00***

VISCOSITY (If liquid present)

- [x] 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

varies

ODOR

- NONE
- [x] MILD
- STRONG

Describe:

BOILING POINT ºF (ºC)

- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- [x] >= 130 (>54)

MELTING POINT ºF (ºC)

- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON

- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT ºF (ºC)

- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- [x] > 200 (>93)

pH

- <= 2
- 2.1 - 6.9
- 7 (Neutral)
- [x] 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY

- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- [x] 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

ASH

- [x] < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- Unknown

BTU/LB (MJ/kg)

- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
1,1-DICHLOROETHANE	0.0000000	--	310.0000000	PPB
1,1-DICHLOROETHENE	0.0000000	--	700.0000000	PPB
1,2-DICHLOROETHANE	0.0000000	--	11000.0000000	PPB
BENZENE	0.0000000	--	1400.0000000	PPB
CHLOROBENZENE	0.0000000	--	110.0000000	PPB
CHLOROFORM	0.0000000	--	18000.0000000	PPB
CIS-1,2-DICHLOROETHENE	0.0000000	--	75000.0000000	PPB
ETHYLBENZENE	0.0000000	--	150.0000000	PPB
METHYLENE CHLORIDE	0.0000000	--	2600.0000000	PPB
SEDIMENT	0.5000000	--	2.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [x] NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE.	***G44***	SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE.	***W113***

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5	*1.4000*			
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0	*0.1100*			
D022	CHLOROFORM	6.0	*18.0000*			
D028	1,2-DICHLOROETHANE	0.5	*11.0000*			
D029	1,1-DICHLOROETHYLENE	0.7	*0.7000*			
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5	*54.0000*			
D043	VINYL CHLORIDE	0.2	*0.4700*			
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

- NONE
- ☑ < 1000 PPM
- >= 1000 PPM

PCBs

- ☑ NONE
- < 50 PPM
- >=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCES	EXPLOSIVE	FUMING	☑ OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	NONE OF THE ABOVE

F. REGULATORY STATUS

✔ YES NO USEPA HAZARDOUS WASTE?

D018 D022 D028 D029 D040 D043

YES ✔ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code *OUTS119H*

YES ✔ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

✔ YES NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: *This is subject to LDR.*
VARIANCE INFO:

YES ✔ NO IS THIS A UNIVERSAL WASTE?

YES NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR (CESQG)?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ✔ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ✔ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ✔ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ✔ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ✔ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

✔ YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES ✔ NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

UN3082, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S., (TRICHLOROETHYLENE, CHLOROFORM), 9, PG III

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ONE TIME WEEKLY MONTHLY QUARTERLY ✔ YEARLY OTHER

✔ **CONTAINERIZED**

1-20 CONTAINERS/SHIPMENT

STORAGE CAPACITY: *10*

CONTAINER TYPE:

CUBIC YARD BOX PALLET

TOTE TANK ✔ DRUM

OTHER:

DRUM SIZE: *55*

BULK LIQUID

GALLONS/SHIPMENT: *0 Min -0 Max* GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: *0 Min - 0 Max*

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge.I also certify that any samples submitted are representative of the actual waste.If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
[redacted]wire.com	"On behalf of GSK" Brian J. Eichlin	Principal	9/30/2015

This waste profile has been submitted using Clean Harbors' electronic signature system.

Addendum

D. COMPOSITION

CHEMICAL	MIN	--	MAX	UOM
TOLUENE	0.0000000	--	660.0000000	PPB
TRANS-1,2-DICHLOROETHENE	0.0000000	--	150.0000000	PPB
TRICHLOROETHYLENE	0.0000000	--	54000.0000000	PPB
VINYL CHLORIDE	0.0000000	--	470.0000000	PPB
WATER	99.5000000	--	99.9990000	%
XYLENES	0.0000000	--	630.0000000	PPB

G. DOT/TDG INFORMATION

ANALYSIS DATA SHEET

SW 8260B

IW-17

Client: GOLDER SDG 1506071 Project: GSK GW-O&M ACTIVITIES JUNE 2015/073-9611502

Matrix: Water Preparation: EPA 5030B File ID: 1506071-16D91.d Sampled: 06/18/15 12:43

Initial/Final: 25mL / 25mL Lab ID: 1506071-16 Received: 06/19/15 12:00

Dilution: 2500 pH: 1 Prepared: 06/30/15 17:57

% Moisture: NA Analyzed: 06/30/15 23:21

Batch: 5063009 Sequence: 5F30008 Calibration: 5062402 Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		75	1300	*U*
74-87-3	Chloromethane		280	1300	*U*
75-01-4	Vinyl chloride	470	180	1300	*JD*
74-83-9	Bromomethane		280	1300	*U*
75-00-3	Chloroethane		500	1300	*U*
75-69-4	Trichlorofluoromethane		150	1300	*U*
107-02-8	Acrolein		2600	13000	*U*
75-35-4	1,1-Dichloroethene	700	100	1300	*JD*
67-64-1	Acetone		1100	6300	*U*
74-88-4	Iodomethane		75	1300	*U*
75-15-0	Carbon disulfide		50	1300	*U*
107-05-1	3-Chloropropene		130	1300	*U*
75-05-8	Acetonitrile		75	1300	*U*
75-09-2	Methylene chloride	2600	50	1300	*BD*
107-13-1	Acrylonitrile		900	13000	*U*
156-60-5	trans-1,2-Dichloroethene	150	130	1300	*JD*
75-34-3	1,1-Dichloroethane	310	50	1300	*JD*
108-05-4	Vinyl acetate		150	1300	*U*
156-59-2	cis-1,2-Dichloroethene	75000	75	1300	*D*
107-12-0	Propionitrile		3500	63000	*U*
78-93-3	2-Butanone		700	6300	*U*
126-98-7	Methacrylonitrile		980	13000	*U*
67-66-3	Chloroform	18000	75	1300	*D*
71-55-6	1,1,1-Trichloroethane		50	1300	*U*
56-23-5	Carbon tetrachloride		75	1300	*U*
107-06-2	1,2-Dichloroethane	11000	75	1300	*D*
78-83-1	Isobutyl alcohol		15000	63000	*U*
71-43-2	Benzene	1400	75	1300	*D*
79-01-6	Trichloroethene	54000	75	1300	*D*
78-87-5	1,2-Dichloropropane		300	1300	*U*
74-95-3	Dibromomethane		75	1300	*U*
123-91-1	1,4-Dioxane		14000	63000	*U*
80-62-6	Methyl Methacrylate		1400	13000	*U*
75-27-4	Bromodichloromethane		75	1300	*U*
10061-01-5	cis-1,3-Dichloropropene		100	1300	*U*

Liberty Analytical

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ANALYSIS DATA SHEET

SW 8260B

IW-17

Client: GOLDER | SDG 1506071 | Project: GSK GW-O&M ACTIVITIES JUNE 2015/073-9611502

Matrix: Water | Preparation: EPA 5030B | File ID: 1506071-16D91.d | Sampled: 06/18/15 12:43

Initial/Final: 25mL / 25mL | Lab ID: 1506071-16 | Received: 06/19/15 12:00

Dilution: 2500 | pH: 1 | Prepared: 06/30/15 17:57

% Moisture: NA | Analyzed: 06/30/15 23:21

Batch: 5063009 | Sequence: 5F30008 | Calibration: 5062402 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		1100	6300	*U*
108-88-3	Toluene	660	75	1300	*JBD*
10061-02-6	trans-1,3-Dichloropropene		130	1300	*U*
79-00-5	1,1,2-Trichloroethane		100	1300	*U*
97-63-2	Ethyl Methacrylate		1000	13000	*U*
127-18-4	Tetrachloroethene		150	1300	*U*
591-78-6	2-Hexanone		1300	6300	*U*
124-48-1	Dibromochloromethane		100	1300	*U*
106-93-4	1,2-Dibromoethane		100	1300	*U*
108-90-7	Chlorobenzene	110	50	1300	*JD*
630-20-6	1,1,1,2-Tetrachloroethane		50	1300	*U*
100-41-4	Ethylbenzene	150	100	1300	*JD*
100-42-5	Styrene		50	1300	*U*
75-25-2	Bromoform		75	1300	*U*
79-34-5	1,1,2,2-Tetrachloroethane		130	1300	*U*
96-18-4	1,2,3-Trichloropropane		230	1300	*U*
110-57-6	trans-1,4-Dichloro-2-butene		830	5000	*U*
76-01-7	Pentachloroethane		180	1300	*U*
541-73-1	1,3-Dichlorobenzene		100	1300	*U*
106-46-7	1,4-Dichlorobenzene		75	1300	*U*
95-50-1	1,2-Dichlorobenzene		75	1300	*U*
96-12-8	1,2-Dibromo-3-chloropropane		630	1300	*U*
120-82-1	1,2,4-Trichlorobenzene		150	1300	*U*
87-68-3	Hexachlorobutadiene		75	1300	*U*
1330-20-7	Xylenes (total)	630	75	1300	*JD*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	4.856	97	65 - 150	
1,2-Dichloroethane-d4	5.000	4.735	95	59 - 150	
Toluene-d8	5.000	5.046	101	61 - 145	
Bromofluorobenzene	5.000	6.281	126	63 - 143	

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NON-HAZARDOUS MANIFEST [26292]

IW-36 DRILLING, GENERAL TRASH [20150707]

NOVEMBER 25, 2015

A&D Environmental Services — Bill of Lading / Material Manifest

A&D Job No:	Generator ID Number	Page 1 of	Emergency Response Phone	Tracking Number
76950	NCD052547635	1	800-255-3924-MIS0007951	26292

Generator's Name and Mailing Address
GlaxoSmithKline
5 Moore Drive/PO Box 13398
Durham, NC 27709-3398 USA
919-483-4640

Generator's site address (if different from mailing address)
3029 East Cornwallis Road
Durham, NC 27709

Transporter 1 [ ] 2 [ ] Company Name **A&D Environmental Services, Inc.** US EPA ID No: **NCD986232221**

Transporter 1 [X] 2 [ ] Company Name **A&D Environmental Services (SC), LLC** US EPA ID No: **SCD987598331**

[X] Designated Facility	[ ] Designated Facility	[ ] Designated Facility	[ ] Designated Facility
A&D Environmental Services, Inc. 2718 Uwharrie Road Archdale, NC 27263 336-434-7750 NCD986232221	A&D Environmental Services, Inc. 3149 Lear Drive Burlington, NC 27215 336-229-0058 NCR000138628	A&D Environmental Services (SC), LLC 1741 Calks Ferry Road Lexington, SC 29073 803-957-9175 SCD987598331	A&D Environmental Services (SC), LLC 1321 White Horse Road, Suite C Greenville, SC 29605 864-234-6055

HM	Hazardous Materials Shipping Name and Description (if applicable)	No.	Type	QTY	Wt/Vol	Profile Number
	Non-Regulated Material(IDW-Liquids)	007	DM	2100	P	20150310
	Non-Regulated Material(IDW-General Trash)	004	BA	100	P	20150311
	Non-Regulated Material (IDW-General Trash)	008	Dm	300	P	20150311

	Petroleum Products for Recycle		No.	Type	QTY	Wt/Vol	Profile Number
X	NA1993, Diesel fuel, 3, III	ERG# 128					
X	NA1993, Fuel oil (No.1,2,4,5 or 6), 3, III	ERG# 128					
X	UN1203, Gasoline, 3, II	ERG# 128					
	USED OIL (Not a USDOT Hazardous Material)						
	Petroleum Contact Water (Not a USDOT Hazardous Material)						

Universal Waste Lamps, Batteries, Ballasts, and Electronics for Recycle

HM	No.	Type	Est. Wt.	Count	Shipping Name and Description (if applicable)	Common Name	Discrepancy
X					RQ, UN2809, Mercury contained in manufactured articles, 8, III ERG# 172	Mercury Containing Articles	
X					RQ, UN3432, Polychlorinated biphenyls, solid, 9, II ERG# 171	TSCA Exempt PCB Lamp Ballasts	
X					UN2800, Batteries, wet, nonspillable, 8, III ERG# 154	Sealed Lead Acid Batteries	
X					UN2794, Batteries, wet, filled with acid, 8, III ERG# 154	Lead Acid Batteries	
X					UN2795, Batteries, wet, filled with alkali, 8, III ERG# 154	Wet NiCad Batteries	
X					UN3090, Lithium batteries, 9, II ERG# 138	Lithium Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III ERG# 154	Alkaline Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III ERG# 154	NiCad Batteries	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Fluorescent lamps 4' or <	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Fluorescent lamps 4'	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Circular/U-tube lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Compact Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Shattershield	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	HID/MV/UV Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e)	Incandescent Lamps	
					Non-PCB Light Ballasts for Recycle (Not DOT-Regulated)	Non-PCB Light Ballasts	
					Electronic Equipment for Recycle (Not DOT-Regulated)	Electronics	

Generator's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are a hazardous waste as defined by EPA 40CFR Part 261 or any applicable state law, and unless specifically identified above the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2ppm) of PCBs as defined by EPA 40 CFR Parts 279 and 761.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
DANIEL CHILDRESS CONSULTANT ON BEHALF OF GSK	[signature]	11	25	15
Transporter 1 Printed/Typed Name	**Signature**	**Month**	**Day**	**Year**
MATT WRAY	[signature]	11	25	15
Transporter 2 Printed/Typed Name	**Signature**	**Month**	**Day**	**Year**

Discrepancy Indication / Additional Information:

Designated Facility Certification: I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy indicated above.

Printed/Typed Name	Signature	Month	Day	Year
TRAVIS CLAPP	[signature]	12	03	15

DESIGNATED FACILITY TO GENERATOR

KK

A&D Environmental Services, Inc.

2718 Uwharrie Rd., Archdale, NC 27263
336-434-7750 FAX: 336-434-7752

Reserved for Facility Use Approval Date: 10/8/15 By: SRF Expiration Date: 1 yr from Approval Date

☐ Solidification ☒ Recovery **Profile Number:** 20150707

A. Billing Information

Company: **Golder Associates** Account #:
Address: **5B Oak Branch Drive**
City/State: **Greensboro, NC** Zip: **27407** Contact: **Brian Eichlin**
Phone: **(336) 852-4903** Fax: **(336) 852-4904**

B. Generator Information/Location of Waste

Generator Name: GlaxoSmithKline Site Contact: Lindsey Walata
Address: 3029 East Cornwallis Road
City/State: Durham, NC Zip: 27703
Contact Phone: (919) 483-4640 EPD ID: NCD052547635
Type of Business: Mfg SIC Code:

C. Waste Description

Common Name of Waste: VOC impacted groundwater
Process Generating Waste: Deepening and re-development of groundwater monitoring well

D. Physical Properties

Physical State	Odor	Color	Viscosity	Specific Gravity
☐ 100% Solid	☒ None	Describe:	☒ Low	
☒ 100% Liquid	☐ Mild	Varies	☐ Medium	8.35 lb/gallon
☐ Sludge	☐ Strong		☐ High	
>95 % Free Liquid	Describe:			

Flash Point		pH		Water	
☐ <73 F	☐ 140-199 F	☐ < 2	☐ 9.1 - 12.4	☐ < 5%	☐ 30-80%
☐ 73-99 F	☒ >199 F	☐ 2.1 - 4.9	☐ > 12.5	☐ 5-10%	☒ 80-100%
☐ 100-139 F	☐ N/A	☒ 5 - 9	☐ N/A	☐ 10-30%	☐ N/A

Is this waste incompatibile with other material? ☒ No ☐ Yes If Yes, explain:

E. Volume

Anticipated Volume: 2 ☒ Drums ☐ 5-Gallon ☐ 30-Gallon ☐ 55-Gallon ☐ Tote ☐ Bulk ☐ Tanker ☐ Pump Truck ☐ Other:

Estimated Frequency: ☒ Weekly ☐ Semimonthly ☐ Monthly ☐ Quarterly ☐ Other

F. Constituents

Total must be equal to 100%. All constituents, including debris must be identified.

Constituents	Actual %	Range
VOC Impacted Groundwater	99%	
Sediment	1%	
	100%	

G. Other Hazards

☐ Radioactive
☐ Water Reactive
☐ Oxidizer
☐ OSHA
☐ Carcinogen
☐ Explosive
☐ Pesticide
☐ Polymerizable
☐ Organic Peroxide
☐ Infectious
☐ Pryophoric

H. Process Flow Chart

Using the space provided, draw a flow chart showing how waste is generated

I. Constituents

These values are based on ☐ Generator Knowledge ☑ Analytical Results ☐ MSDS

All analytical data provided relevant to this profile must be conducted by laboratories that have NELAP/NELAC accreditation.

Accreditation Number: E87047 Name: CompuChem

Address: 501 Madison Avenue, Cary, NC 27513 Phone: (919) 379-4100

Inorganic

Metals		Level	(mg/l)
D004	Arsenic	5.0	
D005	Barium	100.0	
D006	Cadmium	1.0	
D007	Chromium	5.0	
D008	Lead	5.0	
D009	Mercury	0.2	
D010	Selenium	1.0	
D011	Silver	5.0	

Other	Conc.
Ammonia	
Phosphorus	
Formaldehyde	
Total Solids	
PCBs	
Copper	
Nickel	
Zinc	

Pesticides/Herbicides		Level	(mg/l)
D012	Endrin		
D013	Lindane		
D014	Methoxychlor		
D015	Toxaphene		
D016	2,4-D		
D017	2,4,5-TP		
D020	Chlordane		
D031	Heptachlor		

Organic

Volatile Compounds		Level	(mg/l)
D018	Benzene	0.5	ND
D019	Carbon Tetrachloride	0.5	ND
D021	Chlorobenzene	100.0	ND
D022	Chloroform	6.0	0.0029
D028	1,2-Dichloroethane	0.5	ND
D029	1,1-Dichloroethylene	0.7	0.01
D035	Methyl Ethyl Ketone	200.0	ND
D039	Tetrachloroethylene	0.7	0.004
D040	Trichloroethlene	0.5	0.094
D043	Vinyl Chloride	0.2	ND

Semi-Volatile Compounds		Level	(mg/l)
D023	o-Cresol	200.0	
D024	m-Cresol	200.0	
D025	p-Cresol	200.0	
D026	Cresol	200.0	
D027	1,4-Dichlorobenzene	7.5	
D030	2,4-Dinitrotoluene	0.13	
D032	Hexchlorobenzene	0.13	
D033	Hexachlorobutadiene	0.5	
D034	Hexachloroethane	3.0	
D036	Nitrolbenzene	2.0	
D037	Pentachlorophenol	100.0	
D038	Pyridine	5.0	
D041	2,4,5-Trichlorophenol	400.0	
D042	2,4,6-Trichlorophenol	2.0	

J. General Information

1 ☑ No ☐ Yes Is this waste a hazardous material as defined in 49 CFR Section 172.101?
If yes, include shipping name, placard hazard class and packaging group:

2 ☑ No ☐ Yes Is this waste regulated as a reportable quantity as defined in 49 CFR Section 172.101 Appendix A?

3 ☑ No ☐ Yes Is this waste a marine pollutant as defined in 49 CFR Section 172.101 Appendix B?

4 ☑ No ☐ Yes Is this hazardous waste, as determined by performing the Hazardos Waste Determination prescribed at CFR262.11? (Attach Documentation)

5 ☑ No ☐ Yes Does this waste contain any amount of Listed Hazardous Waste in 40 CFR 261.31, Hazardous Waste from Non-specific Sources; 261.32, Hazardous Waste from Specific Sources; and 261.33, Discarded Commercial Chemical Products, Off specification Species, Container Residues, and Spill Residues?

6 ☑ No ☐ Yes Does waste fail any of the four Hazardous Waste Characteristics of ignitibility, corrosivity, reactivity, and toxicity, as defined in 40 CFR 261.21, 261.22, 261.23, 261.23, respectively?

7 ☑ No ☐ Yes Is this waste state regulated? If Yes, define:

8 ☐ No ☑ Yes Are Material Safety Data Sheets and/or all analytical data relevant to this profile data sheet attached?

9 ☑ No ☐ Yes Is this waste derived from an Investigation of an Underground Storage Tank release (IDW)?

K. Sample

Has a sample been included? ☐ Yes ☑ No If yes, sampled by: _____ Date: _____

L. Generator's Certification

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If A&D Environmental Services discovers a descrepancy during the approval process, Generator grants A&D Environmental Services the authority to amend the profile, as A&D Environmental Services LLC deems necessary, to reflect the descrepancy.

Generator Signature	Print Name	Date
[signature]	Brian J. Eichler	9/30/2015

on behalf "Glaxo"

ANALYSES DATA PACKAGE COVER PAGE

Client: GOLDER

Project: GSK GW-O&M ACTIVITIES JUNE 2015/073-9611502

Laboratory: Liberty Analytical

SDG: 1506070

Client Sample Id:	Analysis:	Lab Sample Id:
GW-16S	SW 8260B	1506070-01
GW-41SR	SW 8260B	1506070-02
MW-1	SW 8260B	1506070-03
GW-48S	SW 8260B	1506070-04
MW-B111	SW 8260B	1506070-05
GW-32S	SW 8260B	1506070-06
GW-6I	SW 8260B	1506070-07
GW-6I DUP	SW 8260B	1506070-08
MW-B107	SW 8260B	1506070-09
W-1	SW 8260B	1506070-10
IW-36	SW 8260B	1506070-11
GW-53S	SW 8260B	1506070-12
EW-04D	SW 8260B	1506070-13
FB-1	SW 8260B	1506070-14
TB-1	SW 8260B	1506070-15

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions addressed in the narrative. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Quentisha Forrester

Name: Quentisha Forrester

Date: 06/24/2015

Title: Chemist III

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1506070
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS:

			GW-16S	GW-41SR	MW-1	GW-48S	
MW-B111	GW-32S	GW-6I	GW-6I DUP	MW-B107	W-1	IW-36	GW-53S
EW-04D	FB-1	TB-1					

The 15 aqueous samples listed above were received intact, refrigerated at 2.0°C, with proper documentation, in sealed shipping containers, on June 19, 2015. The samples listed above were scheduled for the requested analysis of the volatile fraction only. SW-846, 3rd Edition, Update 3, 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices are included in the sample data sections.

VOLATILES

The Analysis holding time requirements were met for all the samples in this SDG. The pH values of these samples were equal to 1.

Volatile Project/Target Compound List (TCL) analytes were identified above the Contract Required Quantitation Limit (CRQL) in some of these samples. Samples GW-16S, GW-41SR, W-1, IW-36 and EW-04D were initially analyzed at a dilution based on the results of a Screen.

Manual integrations were performed in this SDG, as indicated in the detailed Manual Integration Summary report that is located in section S. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All of the surrogates met recovery criteria in the analyses of the samples. All of the internal standards met response and retention time criteria in the analyses of the samples.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

The associated method blank met all quality control criteria.

MW-B107 was used as the original to prepare the duplicate matrix spikes as requested. The associated duplicate matrix spikes met all of the advisory accuracy and precision criteria. The associated Laboratory Control Sample (LCS) met all quality control criteria.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Quentisha Forrester
Chemist III
June 24, 2015

ANALYSIS DATA SHEET

SW 8260B

IW-36

Client: GOLDER SDG 1506070 Project: GSK GW-O&M ACTIVITIES JUNE 2015/073-9611502

Matrix: Water Preparation: EPA 5030B File ID: 1506070-11D90.d Sampled: 06/17/15 09:24

Initial/Final: 25mL / 25mL Lab ID: 1506070-11 Received: 06/19/15 12:00

Dilution: 3.12 pH: 1 Prepared: 06/23/15 20:20

% Moisture: NA Analyzed: 06/24/15 04:57

Batch: 5062317 Sequence: 5F23010 Calibration: 5061104 Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.094	1.6	*U*
74-87-3	Chloromethane		0.34	1.6	*U*
75-01-4	Vinyl chloride		0.22	1.6	*U*
74-83-9	Bromomethane		0.34	1.6	*U*
75-00-3	Chloroethane		0.62	1.6	*U*
75-69-4	Trichlorofluoromethane		0.19	1.6	*U*
107-02-8	Acrolein		3.2	16	*U*
75-35-4	1,1-Dichloroethene	10	0.12	1.6	*D*
67-64-1	Acetone		1.4	7.8	*U*
74-88-4	Iodomethane		0.094	1.6	*U*
75-15-0	Carbon disulfide	0.44	0.062	1.6	*JD*
107-05-1	3-Chloropropene		0.16	1.6	*U*
75-05-8	Acetonitrile		0.094	1.6	*U*
75-09-2	Methylene chloride		0.062	1.6	*U*
107-13-1	Acrylonitrile		1.1	16	*U*
156-60-5	trans-1,2-Dichloroethene	0.28	0.16	1.6	*JD*
75-34-3	1,1-Dichloroethane	0.81	0.062	1.6	*JD*
108-05-4	Vinyl acetate		0.19	1.6	*U*
156-59-2	cis-1,2-Dichloroethene	59	0.094	1.6	*D*
107-12-0	Propionitrile		4.4	78	*U*
78-93-3	2-Butanone		0.87	7.8	*U*
126-98-7	Methacrylonitrile		1.2	16	*U*
67-66-3	Chloroform	2.9	0.094	1.6	*D*
71-55-6	1,1,1-Trichloroethane		0.062	1.6	*U*
56-23-5	Carbon tetrachloride		0.094	1.6	*U*
107-06-2	1,2-Dichloroethane		0.094	1.6	*U*
78-83-1	Isobutyl alcohol		18	78	*U*
71-43-2	Benzene		0.094	1.6	*U*
79-01-6	Trichloroethene	94	0.094	1.6	*D*
78-87-5	1,2-Dichloropropane		0.37	1.6	*U*
74-95-3	Dibromomethane		0.094	1.6	*U*
123-91-1	1,4-Dioxane		17	78	*U*
80-62-6	Methyl Methacrylate		1.7	16	*U*
75-27-4	Bromodichloromethane		0.094	1.6	*U*
10061-01-5	cis-1,3-Dichloropropene		0.12	1.6	*U*

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ANALYSIS DATA SHEET

SW 8260B

IW-36

Client: GOLDER | SDG 1506070 | Project: GSK GW-O&M ACTIVITIES JUNE 2015/073-9611502

Matrix: Water | Preparation: EPA 5030B | File ID: 1506070-11D90.d | Sampled: 06/17/15 09:24

Initial/Final: 25mL / 25mL | Lab ID: 1506070-11 | Received: 06/19/15 12:00

Dilution: 3.12 | pH: 1 | Prepared: 06/23/15 20:20

% Moisture: NA | Analyzed: 06/24/15 04:57

Batch: 5062317 | Sequence: 5F23010 | Calibration: 5061104 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		1.3	7.8	*U*
108-88-3	Toluene	0.19	0.094	1.6	*JBD*
10061-02-6	trans-1,3-Dichloropropene		0.16	1.6	*U*
79-00-5	1,1,2-Trichloroethane		0.12	1.6	*U*
97-63-2	Ethyl Methacrylate		1.3	16	*U*
127-18-4	Tetrachloroethene	4.0	0.19	1.6	*D*
591-78-6	2-Hexanone		1.6	7.8	*U*
124-48-1	Dibromochloromethane		0.12	1.6	*U*
106-93-4	1,2-Dibromoethane		0.12	1.6	*U*
108-90-7	Chlorobenzene		0.062	1.6	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.062	1.6	*U*
100-41-4	Ethylbenzene		0.12	1.6	*U*
100-42-5	Styrene		0.062	1.6	*U*
75-25-2	Bromoform		0.094	1.6	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.16	1.6	*U*
96-18-4	1,2,3-Trichloropropane		0.28	1.6	*U*
110-57-6	trans-1,4-Dichloro-2-butene		1.0	6.2	*U*
76-01-7	Pentachloroethane		0.22	1.6	*U*
541-73-1	1,3-Dichlorobenzene		0.12	1.6	*U*
106-46-7	1,4-Dichlorobenzene		0.094	1.6	*U*
95-50-1	1,2-Dichlorobenzene		0.094	1.6	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.78	1.6	*U*
120-82-1	1,2,4-Trichlorobenzene		0.19	1.6	*U*
87-68-3	Hexachlorobutadiene		0.094	1.6	*U*
1330-20-7	Xylenes (total)		0.094	1.6	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	6.233	125	65 - 150	
1,2-Dichloroethane-d4	5.000	6.321	126	59 - 150	
Toluene-d8	5.000	5.231	105	61 - 145	
Bromofluorobenzene	5.000	4.886	98	63 - 143	

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ANALYSIS DATA SHEET

SW 8260B

TB-1

Client: GOLDER SDG 1506070 Project: GSK GW-O&M ACTIVITIES JUNE 2015/073-9611502

Matrix: Water Preparation: EPA 5030B File ID: 1506070-1590.d Sampled: 06/15/15 00:00

Initial/Final: 25mL / 25mL Lab ID: 1506070-15 Received: 06/19/15 12:00

Dilution: 1 pH: 1 Prepared: 06/23/15 20:20

% Moisture: NA Analyzed: 06/24/15 07:05

Batch: 5062317 Sequence: 5F23010 Calibration: 5061104 Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
74-87-3	Chloromethane		0.11	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
74-83-9	Bromomethane		0.11	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-69-4	Trichlorofluoromethane		0.060	0.50	U
107-02-8	Acrolein		1.0	5.0	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
67-64-1	Acetone		0.44	2.5	U
74-88-4	Iodomethane		0.030	0.50	U
75-15-0	Carbon disulfide		0.020	0.50	U
107-05-1	3-Chloropropene		0.050	0.50	U
75-05-8	Acetonitrile		0.030	0.50	U
75-09-2	Methylene chloride		0.020	0.50	U
107-13-1	Acrylonitrile		0.36	5.0	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
108-05-4	Vinyl acetate		0.060	0.50	U
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	U
107-12-0	Propionitrile		1.4	25	U
78-93-3	2-Butanone		0.28	2.5	U
126-98-7	Methacrylonitrile		0.39	5.0	U
67-66-3	Chloroform		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
56-23-5	Carbon tetrachloride		0.030	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
78-83-1	Isobutyl alcohol		5.9	25	U
71-43-2	Benzene		0.030	0.50	U
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
123-91-1	1,4-Dioxane		5.4	25	U
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U

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ANALYSIS DATA SHEET

SW 8260B

TB-1

Client: GOLDER SDG 1506070 Project: GSK GW-O&M ACTIVITIES JUNE 2015/073-9611502

Matrix: Water Preparation: EPA 5030B File ID: 1506070-1590.d Sampled: 06/15/15 00:00

Initial/Final: 25mL / 25mL Lab ID: 1506070-15 Received: 06/19/15 12:00

Dilution: 1 pH: 1 Prepared: 06/23/15 20:20

% Moisture: NA Analyzed: 06/24/15 07:05

Batch: 5062317 Sequence: 5F23010 Calibration: 5061104 Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		0.42	2.5	*U*
108-88-3	Toluene	0.030	0.030	0.50	*JB*
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	*U*
79-00-5	1,1,2-Trichloroethane		0.040	0.50	*U*
97-63-2	Ethyl Methacrylate		0.41	5.0	*U*
127-18-4	Tetrachloroethene		0.060	0.50	*U*
591-78-6	2-Hexanone		0.51	2.5	*U*
124-48-1	Dibromochloromethane		0.040	0.50	*U*
106-93-4	1,2-Dibromoethane		0.040	0.50	*U*
108-90-7	Chlorobenzene		0.020	0.50	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	*U*
100-41-4	Ethylbenzene		0.040	0.50	*U*
100-42-5	Styrene		0.020	0.50	*U*
75-25-2	Bromoform		0.030	0.50	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	*U*
96-18-4	1,2,3-Trichloropropane		0.090	0.50	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	*U*
76-01-7	Pentachloroethane		0.070	0.50	*U*
541-73-1	1,3-Dichlorobenzene		0.040	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*
95-50-1	1,2-Dichlorobenzene		0.030	0.50	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	*U*
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	*U*
87-68-3	Hexachlorobutadiene		0.030	0.50	*U*
1330-20-7	Xylenes (total)		0.030	0.50	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	6.383	128	65 - 150	
1,2-Dichloroethane-d4	5.000	6.715	134	59 - 150	
Toluene-d8	5.000	5.239	105	61 - 145	
Bromofluorobenzene	5.000	4.867	97	63 - 143	

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ANALYSIS DATA SHEET

SW 8260B

VBLKEO

Client: GOLDER | SDG: 1506070 | Project: GSK GW-O&M ACTIVITIES JUNE 2015/073-9611502

Matrix: Water | Extraction: EPA 5030B | File ID: 5062317-BLK190.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 5062317-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 06/23/15 20:20

% Moisture: NA | Analyzed: 06/23/15 20:20

Batch: 5062317 | Sequence: 5F23010 | Calibration: 5061104 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
74-87-3	Chloromethane		0.11	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
74-83-9	Bromomethane		0.11	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-69-4	Trichlorofluoromethane		0.060	0.50	U
107-02-8	Acrolein		1.0	5.0	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
67-64-1	Acetone		0.44	2.5	U
74-88-4	Iodomethane		0.030	0.50	U
75-15-0	Carbon disulfide		0.020	0.50	U
107-05-1	3-Chloropropene		0.050	0.50	U
75-05-8	Acetonitrile		0.030	0.50	U
75-09-2	Methylene chloride		0.020	0.50	U
107-13-1	Acrylonitrile		0.36	5.0	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
108-05-4	Vinyl acetate		0.060	0.50	U
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	U
107-12-0	Propionitrile		1.4	25	U
78-93-3	2-Butanone		0.28	2.5	U
126-98-7	Methacrylonitrile		0.39	5.0	U
67-66-3	Chloroform		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
56-23-5	Carbon tetrachloride		0.030	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
78-83-1	Isobutyl alcohol		5.9	25	U
71-43-2	Benzene		0.030	0.50	U
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
123-91-1	1,4-Dioxane		5.4	25	U
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U

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ANALYSIS DATA SHEET

SW 8260B

VBLKEO

Client: GOLDER | SDG: 1506070 | Project: GSK GW-O&M ACTIVITIES JUNE 2015/073-9611502

Matrix: Water | Extraction: EPA 5030B | File ID: 5062317-BLK190.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 5062317-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 06/23/15 20:20

% Moisture: NA | Analyzed: 06/23/15 20:20

Batch: 5062317 | Sequence: 5F23010 | Calibration: 5061104 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene	0.032	0.030	0.50	J
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
106-93-4	1,2-Dibromoethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene		0.040	0.50	U
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
76-01-7	Pentachloroethane		0.070	0.50	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane		0.25	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
1330-20-7	Xylenes (total)		0.030	0.50	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.698	114	65 - 150	
1,2-Dichloroethane-d4	5.000	5.736	115	59 - 150	
Toluene-d8	5.000	4.925	98	61 - 145	
Bromofluorobenzene	5.000	4.870	97	63 - 143	

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GW-41SR SOIL SAMPLING

ANALYTICAL RESULTS

DECEMBER 8, 2015

ANALYSIS DATA SHEET

SW 8260B

GW-41SR-EX SOIL

Client: GOLDER | SDG 1512032 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1512032-0259.d | Sampled: 12/08/15 17:30

Initial/Final: 5g / 5mL | Lab ID: 1512032-02 | Received: 12/10/15 11:20

Dilution: 1 | pH: | Prepared: 12/16/15 17:25

% Moisture: 17 | Analyzed: 12/16/15 23:27

Batch: 5121619 | Sequence: 5L16010 | Calibration: 5121605 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.53	6.0	U
74-87-3	Chloromethane		0.39	6.0	U
75-01-4	Vinyl chloride		0.51	6.0	U
74-83-9	Bromomethane		0.70	6.0	U
75-00-3	Chloroethane		0.86	6.0	U
75-69-4	Trichlorofluoromethane		0.36	6.0	U
107-02-8	Acrolein		6.9	60	U
75-35-4	1,1-Dichloroethene		1.3	6.0	U
67-64-1	Acetone		6.0	15	U
74-88-4	Iodomethane		0.39	6.0	U
75-15-0	Carbon disulfide		0.17	6.0	U
107-05-1	3-Chloropropene		1.3	6.0	U
75-05-8	Acetonitrile		1.1	6.0	U
75-09-2	Methylene chloride		0.59	6.0	U
107-13-1	Acrylonitrile		4.5	60	U
156-60-5	trans-1,2-Dichloroethene		1.2	6.0	U
75-34-3	1,1-Dichloroethane		0.57	6.0	U
108-05-4	Vinyl acetate		0.25	6.0	U
156-59-2	cis-1,2-Dichloroethene		0.51	6.0	U
107-12-0	Propionitrile		12	300	U
78-93-3	2-Butanone		1.6	15	U
126-98-7	Methacrylonitrile		2.6	60	U
67-66-3	Chloroform		0.37	6.0	U
71-55-6	1,1,1-Trichloroethane		0.60	6.0	U
56-23-5	Carbon tetrachloride		0.54	6.0	U
107-06-2	1,2-Dichloroethane		0.33	6.0	U
78-83-1	Isobutyl alcohol		19	300	U
71-43-2	Benzene		0.37	6.0	U
79-01-6	Trichloroethene		0.39	6.0	U
78-87-5	1,2-Dichloropropane		0.76	6.0	U
74-95-3	Dibromomethane		1.4	6.0	U
123-91-1	1,4-Dioxane		58	300	U
80-62-6	Methyl Methacrylate		3.9	60	U
75-27-4	Bromodichloromethane		0.46	6.0	U
10061-01-5	cis-1,3-Dichloropropene		0.47	6.0	U

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ANALYSIS DATA SHEET

SW 8260B

GW-41SR-EX SOIL

Client: GOLDER | SDG 1512032 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1512032-0259.d | Sampled: 12/08/15 17:30

Initial/Final: 5g / 5mL | Lab ID: 1512032-02 | Received: 12/10/15 11:20

Dilution: 1 | pH: | Prepared: 12/16/15 17:25

% Moisture: 17 | Analyzed: 12/16/15 23:27

Batch: 5121619 | Sequence: 5L16010 | Calibration: 5121605 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		1.6	15	U
108-88-3	Toluene		0.41	6.0	U
10061-02-6	trans-1,3-Dichloropropene		0.49	6.0	U
79-00-5	1,1,2-Trichloroethane		0.87	6.0	U
97-63-2	Ethyl Methacrylate		5.4	60	U
127-18-4	Tetrachloroethene		1.9	6.0	U
591-78-6	2-Hexanone		1.2	15	U
124-48-1	Dibromochloromethane		0.67	6.0	U
106-93-4	1,2-Dibromoethane		0.26	6.0	U
108-90-7	Chlorobenzene		0.30	6.0	U
630-20-6	1,1,1,2-Tetrachloroethane		0.39	6.0	U
100-41-4	Ethylbenzene		0.70	6.0	U
100-42-5	Styrene		0.096	6.0	U
75-25-2	Bromoform		1.3	6.0	U
79-34-5	1,1,2,2-Tetrachloroethane		0.45	6.0	U
96-18-4	1,2,3-Trichloropropane		1.1	6.0	U
110-57-6	trans-1,4-Dichloro-2-butene		2.2	24	U
76-01-7	Pentachloroethane		0.67	6.0	U
541-73-1	1,3-Dichlorobenzene		0.33	6.0	U
106-46-7	1,4-Dichlorobenzene		0.25	6.0	U
95-50-1	1,2-Dichlorobenzene		0.43	6.0	U
96-12-8	1,2-Dibromo-3-chloropropane		0.78	6.0	U
120-82-1	1,2,4-Trichlorobenzene		0.42	6.0	U
87-68-3	Hexachlorobutadiene		0.87	6.0	U
1330-20-7	Xylenes (total)		0.17	6.0	U

SURROGATE RECOVERY RESULTS	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	60.23	63.87	106	71 - 141	
1,2-Dichloroethane-d4	60.23	61.21	102	70 - 139	
Toluene-d8	60.23	63.54	106	72 - 123	
Bromofluorobenzene	60.23	64.16	107	65 - 131	

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ANALYSIS DATA SHEET

SW 8260B

GW-41SR-SOIL

Client: GOLDER | SDG 1512032 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1512032-0159.d | Sampled: 12/08/15 17:00

Initial/Final: 5g / 5mL | Lab ID: 1512032-01 | Received: 12/10/15 11:20

Dilution: 1 | pH: | Prepared: 12/16/15 17:25

% Moisture: 15 | Analyzed: 12/16/15 22:55

Batch: 5121619 | Sequence: 5L16010 | Calibration: 5121605 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.52	5.9	U
74-87-3	Chloromethane		0.38	5.9	U
75-01-4	Vinyl chloride		0.49	5.9	U
74-83-9	Bromomethane		0.68	5.9	U
75-00-3	Chloroethane		0.83	5.9	U
75-69-4	Trichlorofluoromethane		0.35	5.9	U
107-02-8	Acrolein		6.7	59	U
75-35-4	1,1-Dichloroethene		1.3	5.9	U
67-64-1	Acetone		5.9	15	U
74-88-4	Iodomethane		0.38	5.9	U
75-15-0	Carbon disulfide		0.16	5.9	U
107-05-1	3-Chloropropene		1.3	5.9	U
75-05-8	Acetonitrile		1.1	5.9	U
75-09-2	Methylene chloride		0.57	5.9	U
107-13-1	Acrylonitrile		4.3	59	U
156-60-5	trans-1,2-Dichloroethene		1.2	5.9	U
75-34-3	1,1-Dichloroethane		0.55	5.9	U
108-05-4	Vinyl acetate		0.25	5.9	U
156-59-2	cis-1,2-Dichloroethene		0.49	5.9	U
107-12-0	Propionitrile		12	290	U
78-93-3	2-Butanone		1.5	15	U
126-98-7	Methacrylonitrile		2.6	59	U
67-66-3	Chloroform		0.36	5.9	U
71-55-6	1,1,1-Trichloroethane		0.59	5.9	U
56-23-5	Carbon tetrachloride		0.53	5.9	U
107-06-2	1,2-Dichloroethane		0.32	5.9	U
78-83-1	Isobutyl alcohol		19	290	U
71-43-2	Benzene		0.36	5.9	U
79-01-6	Trichloroethene		0.38	5.9	U
78-87-5	1,2-Dichloropropane		0.74	5.9	U
74-95-3	Dibromomethane		1.4	5.9	U
123-91-1	1,4-Dioxane		56	290	U
80-62-6	Methyl Methacrylate		3.8	59	U
75-27-4	Bromodichloromethane		0.45	5.9	U
10061-01-5	cis-1,3-Dichloropropene		0.46	5.9	U

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ANALYSIS DATA SHEET

SW 8260B

GW-41SR-SOIL

Client: GOLDER | SDG 1512032 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502

Matrix: Soil | Preparation: EPA 5035A | File ID: 1512032-0159.d | Sampled: 12/08/15 17:00

Initial/Final: 5g / 5mL | Lab ID: 1512032-01 | Received: 12/10/15 11:20

Dilution: 1 | pH: | Prepared: 12/16/15 17:25

% Moisture: 15 | Analyzed: 12/16/15 22:55

Batch: 5121619 | Sequence: 5L16010 | Calibration: 5121605 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/kg dry)	MDL	RL	Q
108-10-1	4-Methyl-2-pentanone		1.5	15	U
108-88-3	Toluene		0.40	5.9	U
10061-02-6	trans-1,3-Dichloropropene		0.48	5.9	U
79-00-5	1,1,2-Trichloroethane		0.84	5.9	U
97-63-2	Ethyl Methacrylate		5.3	59	U
127-18-4	Tetrachloroethene		1.9	5.9	U
591-78-6	2-Hexanone		1.2	15	U
124-48-1	Dibromochloromethane		0.66	5.9	U
106-93-4	1,2-Dibromoethane		0.26	5.9	U
108-90-7	Chlorobenzene		0.29	5.9	U
630-20-6	1,1,1,2-Tetrachloroethane		0.38	5.9	U
100-41-4	Ethylbenzene		0.68	5.9	U
100-42-5	Styrene		0.094	5.9	U
75-25-2	Bromoform		1.3	5.9	U
79-34-5	1,1,2,2-Tetrachloroethane		0.43	5.9	U
96-18-4	1,2,3-Trichloropropane		1.1	5.9	U
110-57-6	trans-1,4-Dichloro-2-butene		2.1	23	U
76-01-7	Pentachloroethane		0.66	5.9	U
541-73-1	1,3-Dichlorobenzene		0.32	5.9	U
106-46-7	1,4-Dichlorobenzene		0.25	5.9	U
95-50-1	1,2-Dichlorobenzene		0.42	5.9	U
96-12-8	1,2-Dibromo-3-chloropropane		0.76	5.9	U
120-82-1	1,2,4-Trichlorobenzene		0.41	5.9	U
87-68-3	Hexachlorobutadiene		0.84	5.9	U
1330-20-7	Xylenes (total)		0.16	5.9	U

SURROGATE RECOVERY RESULTS	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	58.60	64.55	110	71 - 141	
1,2-Dichloroethane-d4	58.60	62.80	107	70 - 139	
Toluene-d8	58.60	59.32	101	72 - 123	
Bromofluorobenzene	58.60	60.39	103	65 - 131	

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SW 8260B

VBLKAS

Client: GOLDER | SDG: 1512032 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502

Matrix: Soil | Extraction: EPA 5035A | File ID: 5121619-BLK1R59.d | QC Type: Blank

Initial/Final: 5g / 5mL | Lab ID: 5121619-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 12/16/15 17:25

% Moisture: NA | Analyzed: 12/16/15 17:57

Batch: 5121619 | Sequence: 5L16010 | Calibration: 5121605 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/kg wet)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.44	5.0	U
74-87-3	Chloromethane		0.32	5.0	U
75-01-4	Vinyl chloride		0.42	5.0	U
74-83-9	Bromomethane		0.58	5.0	U
75-00-3	Chloroethane		0.71	5.0	U
75-69-4	Trichlorofluoromethane		0.30	5.0	U
107-02-8	Acrolein		5.7	50	U
75-35-4	1,1-Dichloroethene		1.1	5.0	U
67-64-1	Acetone		5.0	13	U
74-88-4	Iodomethane		0.32	5.0	U
75-15-0	Carbon disulfide		0.14	5.0	U
107-05-1	3-Chloropropene		1.1	5.0	U
75-05-8	Acetonitrile		0.92	5.0	U
75-09-2	Methylene chloride		0.49	5.0	U
107-13-1	Acrylonitrile		3.7	50	U
156-60-5	trans-1,2-Dichloroethene		1.0	5.0	U
75-34-3	1,1-Dichloroethane		0.47	5.0	U
108-05-4	Vinyl acetate		0.21	5.0	U
156-59-2	cis-1,2-Dichloroethene		0.42	5.0	U
107-12-0	Propionitrile		10	250	U
78-93-3	2-Butanone		1.3	13	U
126-98-7	Methacrylonitrile		2.2	50	U
67-66-3	Chloroform		0.31	5.0	U
71-55-6	1,1,1-Trichloroethane		0.50	5.0	U
56-23-5	Carbon tetrachloride		0.45	5.0	U
107-06-2	1,2-Dichloroethane		0.27	5.0	U
78-83-1	Isobutyl alcohol		16	250	U
71-43-2	Benzene		0.31	5.0	U
79-01-6	Trichloroethene		0.32	5.0	U
78-87-5	1,2-Dichloropropane		0.63	5.0	U
74-95-3	Dibromomethane		1.2	5.0	U
123-91-1	1,4-Dioxane		48	250	U
80-62-6	Methyl Methacrylate		3.2	50	U
75-27-4	Bromodichloromethane		0.38	5.0	U

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ANALYSIS DATA SHEET

SW 8260B

VBLKAS

Client: GOLDER | SDG: 1512032 | Project: GSK GW-O&M ACTIVITIES SEPT.2015/073-9611502

Matrix: Soil | Extraction: EPA 5035A | File ID: 5121619-BLK1R59.d | QC Type: Blank

Initial/Final: 5g / 5mL | Lab ID: 5121619-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 12/16/15 17:25

% Moisture: NA | Analyzed: 12/16/15 17:57

Batch: 5121619 | Sequence: 5L16010 | Calibration: 5121605 | Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/kg wet)	MDL	RL	Q
10061-01-5	cis-1,3-Dichloropropene		0.39	5.0	U
108-10-1	4-Methyl-2-pentanone		1.3	13	U
108-88-3	Toluene		0.34	5.0	U
10061-02-6	trans-1,3-Dichloropropene		0.41	5.0	U
79-00-5	1,1,2-Trichloroethane		0.72	5.0	U
97-63-2	Ethyl Methacrylate		4.5	50	U
127-18-4	Tetrachloroethene		1.6	5.0	U
591-78-6	2-Hexanone		1.0	13	U
124-48-1	Dibromochloromethane		0.56	5.0	U
106-93-4	1,2-Dibromoethane		0.22	5.0	U
108-90-7	Chlorobenzene		0.25	5.0	U
630-20-6	1,1,1,2-Tetrachloroethane		0.32	5.0	U
100-41-4	Ethylbenzene		0.58	5.0	U
100-42-5	Styrene		0.080	5.0	U
75-25-2	Bromoform		1.1	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane		0.37	5.0	U
96-18-4	1,2,3-Trichloropropane		0.91	5.0	U
110-57-6	trans-1,4-Dichloro-2-butene		1.8	20	U
76-01-7	Pentachloroethane		0.56	5.0	U
541-73-1	1,3-Dichlorobenzene		0.27	5.0	U
106-46-7	1,4-Dichlorobenzene		0.21	5.0	U
95-50-1	1,2-Dichlorobenzene		0.36	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane		0.65	5.0	U
120-82-1	1,2,4-Trichlorobenzene		0.35	5.0	U
87-68-3	Hexachlorobutadiene		0.72	5.0	U
1330-20-7	Xylenes (total)		0.14	5.0	U

SURROGATE RECOVERY RESULTS	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
Dibromofluoromethane	50.00	48.74	97	71 - 141	
1,2-Dichloroethane-d4	50.00	52.08	104	70 - 139	
Toluene-d8	50.00	44.27	89	72 - 123	
Bromofluorobenzene	50.00	46.83	94	65 - 131	

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APPENDIX D

GROUNDWATER MONITORING ANALYTICAL RESULT TABLES

D-1 YEAR 2 MONITORING EVENT RESULTS

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	BNP-1 / IW-17		BNP-1 / IW-17		BNP-1 / IW-17		BNP-1 / IW-17		BNP-2		BNP-2		BNP-2	
			Sample Date	06/18/15		09/16/15		01/26/16		03/28/16		06/17/15		09/17/15		01/26/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		140		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		< 2.9	U	NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		190		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		0.044	J	NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		< 0.017	U	NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		0.044	J	NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		0.23		NS		NS		NS	
Ethane	mg/L	NAL	NAL	0.214		0.444		0.0225		0.00489		NS		NS		NS	
Ethene	mg/L	NAL	NAL	0.321		0.829		0.125		0.11		NS		NS		NS	
Methane	mg/L	NAL	NAL	0.0933		0.374		0.83		0.79		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		5.2		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		0.32		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		74	>	NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		340		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		110		76		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		**39100**		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 1300	U	< 130	U	< 17	U	< 170	U	< 420	U	< 1000	U	< 17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 1300	U	50	J	< 12	U	< 120	U	< 420	U	< 1000	U	< 12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 1300	U	**230**		**230**		< 280	U	< 420	U	< 1000	U	< 28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 1300	U	**38**	**J**	< 14	U	< 140	U	< 420	U	< 1000	U	< 14	U
1,1-Dichloroethane	ug/L	**6**	NAL	**310**	**J**	**370**		**340**		< 130	U	< 420	U	< 1000	U	**59**	**J**
1,1-Dichloroethene	ug/L	3501	NAL	700	J	1200		890		860	J	260	J	360	J	290	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 1300	U	< 130	U	< 23	U	< 230	U	< 420	U	< 1000	U	< 23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 1300	U	< 130	U	NS		NS		< 420	U	< 1000	U	NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 1300	U	< 130	U	< 48	U	< 480	U	< 420	U	< 1000	U	< 48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 1300	U	< 130	U	< 66	U	< 660	U	< 420	U	< 1000	U	< 66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 1300	U	< 130	U	< 19	U	< 190	U	< 420	U	< 1000	U	< 19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	**11000**		**13000**		**9500**		**14000**		**1900**		**2500**		**2600**	
1,2-Dichloropropane	ug/L	0.6	NAL	< 1300	U	< 130	U	< 10	U	< 100	U	< 420	U	< 1000	U	< 10	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 1300	U	< 130	U	< 15	U	< 150	U	< 420	U	< 1000	U	< 15	U
1,3-Dichloropropane	ug/L	NAL	NAL	NS		NS		< 16	U	< 160	U	NS		NS		< 16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 1300	U	< 130	U	< 19	U	< 190	U	< 420	U	< 1000	U	< 19	U
1,4-Dioxane	ug/L	**3**	NAL	< 63000	U	< 6300	U	< 2500	U	< 25000	U	< 21000	U	< 50000	U	< 2500	U
2-Butanone	ug/L	4000	NAL	< 6300	U	1000		1500		< 1300	U	< 2100	U	< 5000	U	< 130	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		NS		< 64	U	< 640	U	NS		NS		< 64	U
2-Hexanone	ug/L	NAL	40	< 6300	U	< 630	U	< 88	U	< 880	U	< 2100	U	< 5000	U	< 88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 6300	U	**350**	**J**	**270**	**J**	< 1100	U	< 2100	U	< 5000	U	< 110	U
Acetone	ug/L	6000	NAL	< 6300	U	< 1600	U	1700		< 1200	U	< 2100	U	< 5000	U	< 120	U
Acetonitrile	ug/L	NAL	NAL	< 1300	U	< 130	U	< 500	U	16000		< 420	U	< 1000	U	< 500	U
Acrolein	ug/L	NAL	4	< 13000	U	< 1300	U	< 400	U	< 4000	U	< 4200	U	< 10000	U	< 400	U
Acrylonitrile	ug/L	NAL	NAL	< 13000	U	< 1300	U	< 350	U	< 3500	U	< 4200	U	< 10000	U	< 350	U
Allyl Chloride	ug/L	NAL	NAL	< 1300	U	< 130	U	< 11	U	< 110	U	< 420	U	< 1000	U	< 11	U
Benzene	ug/L	**1**	NAL	**1400**		**1900**		**1400**		**1500**		**410**	**J**	**560**	**J**	**410**	
Bromodichloromethane	ug/L	0.6	NAL	< 1300	U	< 130	U	< 17	U	< 170	U	< 420	U	< 1000	U	< 17	U
Bromoform	ug/L	4	NAL	< 1300	U	< 130	U	< 22	U	< 220	U	< 420	U	< 1000	U	< 22	U
Bromomethane	ug/L	NAL	10	< 1300	U	< 130	U	< 14	U	< 140	U	< 420	U	< 1000	U	< 14	U
Carbon Disulfide	ug/L	700	NAL	< 1300	U	< 130	U	< 150	U	< 1500	U	< 420	U	< 1000	U	< 150	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 1300	U	**24**	**J**	**100**		< 170	U	< 420	U	< 1000	U	< 17	U
Chlorobenzene	ug/L	**50**	NAL	**110**	**J**	< 130	U	**120**		< 170	U	< 420	U	< 1000	U	< 17	U
Chloroethane	ug/L	3000	NAL	< 1300	U	< 130	U	< 23	U	< 230	U	< 420	U	< 1000	U	< 23	U
Chloroform	ug/L	**70**	NAL	**18000**		**22000**		**18000**		**18000**		**1600**		**2000**		**2500**	
Chloromethane	ug/L	3	NAL	< 1300	U	< 130	U	< 13	U	< 130	U	< 420	U	< 1000	U	< 13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**75000**		**140000**		**37000**		**54000**		**3100**		**6400**		**8100**	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 1300	U	< 130	U	< 20	U	< 200	U	< 420	U	< 1000	U	< 20	U
Dibromochloromethane	ug/L	0.4	NAL	< 1300	U	< 130	U	< 17	U	< 170	U	< 420	U	< 1000	U	< 17	U
Dibromomethane	ug/L	NAL	70	< 1300	U	< 130	U	< 27	U	< 270	U	< 420	U	< 1000	U	< 27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 1300	U	< 130	U	< 20	U	< 200	U	< 420	U	< 1000	U	< 20	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 13000	U	< 1300	U	< 38	U	< 380	U	< 4200	U	< 10000	U	< 38	U
Ethylbenzene	ug/L	600	NAL	150	J	240		140		< 130	U	< 420	U	< 1000	U	< 13	U
Hexachlorobutadiene	ug/L	0.4	NAL	< 1300	U	< 130	U	NS		NS		< 420	U	< 1000	U	NS	
Iodomethane	ug/L	NAL	NAL	< 1300	U	< 130	U	< 170	U	< 1700	U	< 420	U	< 1000	U	< 170	U
Isobutanol	ug/L	NAL	NAL	< 63000	U	< 6300	U	< 1100	U	< 11000	U	< 21000	U	< 50000	U	< 1100	U
m,p-Xylenes	ug/L	**500**	NAL	NS		NS		**630**		< 170	U	NS		NS		< 17	U
Methyl Methacrylate	ug/L	NAL	25	< 13000	U	< 1300	U	< 51	U	< 510	U	< 4200	U	< 10000	U	< 51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 13000	U	< 1300	U	< 490	U	< 4900	U	< 4200	U	< 10000	U	< 490	U
Methylene Chloride	ug/L	**5**	NAL	**2600**		**3500**		**3100**		**2800**		< 420	U	< 1000	U	< 23	U
Naphthalene	ug/L	**6**	NAL	NS		NS		< 11	U	< 110	U	NS		NS		< 11	U
o-Xylene	ug/L	500	NAL	NS		NS		< 6.5	U	< 65	U	NS		NS		< 6.5	U
Pentachloroethane	ug/L	NAL	NAL	< 1300	U	< 130	U	NS		NS		< 420	U	< 1000	U	NS	
Propionitrile	ug/L	NAL	NAL	< 63000	U	< 6300	U	< 500	U	< 5000	U	< 21000	U	< 50000	U	< 500	U
Styrene	ug/L	70	NAL	< 1300	U	< 130	U	< 11	U	< 110	U	< 420	U	< 1000	U	< 11	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 1300	U	**39**	**J**	**210**		< 170	U	**68**	**J**	< 1000	U	**74**	**J**
Toluene	ug/L	**600**	NAL	< 1300	U	**750**		**660**		590	J	< 420	U	< 1000	U	< 14	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	**150**	**J**	**200**		**220**		< 210	U	**130**	**J**	**190**	**J**	**140**	
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 1300	U	< 130	U	< 15	U	< 150	U	< 420	U	< 1000	U	< 15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 5000	U	< 500	U	< 70	U	< 700	U	< 1700	U	< 4000	U	< 70	U
Trichloroethene	ug/L	**3**	NAL	**54000**		**15000**		**71000**		**82000**		**38000**		**48000**		**34000**	
Trichlorofluoromethane	ug/L	2000	NAL	< 1300	U	76	J	< 24	U	< 240	U	< 420	U	< 1000	U	< 24	U
Vinyl Acetate	ug/L	NAL	88	< 1300	U	< 130	U	< 95	U	< 950	U	< 420	U	< 1000	U	< 95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**470**	**J**	**240**		**350**		< 320	U	**150**	**J**	**250**	**J**	**50**	**J**
Xylenes, Total	ug/L	**500**	NAL	**630**	**J**	**1200**		**630**		< 450	U	< 420	U	< 1000	U	< 45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	BNP-2		BNP-4		BNP-4		BNP-4		BNP-4		BR-1		BR-2	
			Sample Date	03/25/16		06/17/15		09/17/15		01/26/16		03/28/16		03/22/16		03/23/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	30		NS		NS		NS		120		NS		NS	
Sulfate	mg/L	250	NAL	4.5	J	NS		NS		NS		< 2.9	U	NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	180		NS		NS		NS		700	J	NS		NS	
Nitrate	mg/L	NAL	NAL	< 0.025	R	NS		NS		NS		< 0.025	R	NS		NS	
Nitrite	mg/L	NAL	NAL	< 0.017	U	NS		NS		NS		< 0.017	U	NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	< 0.041	R	NS		NS		NS		< 0.041	R	NS		NS	
Phosphorus	mg/L	NAL	NAL	0.047	J	NS		NS		NS		0.057	J	NS		NS	
Ethane	mg/L	NAL	NAL	< 0.00047	U	0.325		0.621		0.297		0.38		NS		NS	
Ethene	mg/L	NAL	NAL	0.0153		2.23		3.9		6.68		5.89		NS		NS	
Methane	mg/L	NAL	NAL	0.0193		5.69		8.94		13.1		11.5		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	2.6		NS		NS		NS		19		NS		NS	
Sulfide	mg/L	NAL	NAL	0.23		NS		NS		NS		0.03	J	NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	2.8		NS		NS		NS		77	>	NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	29		NS		NS		NS		960		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	2.6		NS		NS		440	J	340		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	210		NS		NS		NS		**16900**		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 17	U	< 0.5	U	< 180	U	< 0.17	U	< 17	U	< 0.17	U	< 0.34	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 12	U	< 0.5	U	< 180	U	< 0.12	U	< 12	U	< 0.12	U	< 0.24	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 28	U	**2.6**		< 180	U	**0.68**	**J**	< 28	U	< 0.28	U	< 0.56	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 14	U	< 0.5	U	< 180	U	< 0.14	U	< 14	U	< 0.14	U	< 0.28	U
1,1-Dichloroethane	ug/L	**6**	NAL	**41**	**J**	**59**	**J**	**68**	**J**	**66**		**91**	**J**	< 0.13	U	< 0.26	U
1,1-Dichloroethene	ug/L	3501	NAL	230		3.3		< 180	U	< 0.21	U	< 21	U	< 0.21	U	< 0.42	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 23	U	< 0.5	U	< 180	U	< 0.23	U	< 23	U	< 0.23	U	< 0.46	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		0.18	J	< 180	U	NS		NS		NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 48	U	< 0.5	U	< 180	U	< 0.48	U	< 48	U	< 0.48	U	< 0.96	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 66	U	< 0.5	U	< 180	U	< 0.66	U	< 66	U	< 0.66	U	< 1.3	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 19	U	0.88		< 180	U	1.1		< 19	U	< 0.19	U	< 0.38	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	**2100**		**25**		< 180	U	**12**		< 21	U	< 0.21	U	< 0.42	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 10	U	< 0.5	U	< 180	U	< 0.1	U	< 10	U	< 0.1	U	< 0.2	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 15	U	0.053	J	< 180	U	< 0.15	U	< 15	U	< 0.15	U	< 0.3	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 16	U	NS		NS		< 0.16	U	< 16	U	< 0.16	U	< 0.32	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 19	U	0.23	J	< 180	U	< 0.19	U	< 19	U	< 0.19	U	< 0.38	U
1,4-Dioxane	ug/L	**3**	NAL	< 2500	U	**58**		< 8900	U	**100**		< 2500	U	< 25	U	< 50	U
2-Butanone	ug/L	4000	NAL	< 130	U	91		< 890	U	180		< 130	U	120		430	
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 64	U	NS		NS		< 0.64	U	< 64	U	< 0.64	U	< 1.3	U
2-Hexanone	ug/L	NAL	40	< 88	U	3.3		< 890	U	< 0.88	U	< 88	U	< 0.88	U	< 1.8	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 110	U	45		< 890	U	77		< 110	U	< 1.1	U	< 2.2	U
Acetone	ug/L	6000	NAL	< 120	U	200		< 890	U	210		< 120	U	97		63	
Acetonitrile	ug/L	NAL	NAL	< 500	U	< 0.5	U	< 180	U	< 5	U	4400		< 5	U	< 10	U
Acrolein	ug/L	NAL	4	< 400	U	< 5	U	< 1800	U	< 4	U	< 400	U	< 4	U	< 8	U
Acrylonitrile	ug/L	NAL	NAL	< 350	U	< 5	U	< 1800	U		U	< 350	U	< 3.5	U	< 7	U
Allyl Chloride	ug/L	NAL	NAL	< 11	U	< 0.5	U	< 180	U	< 0.11	U	< 11	U	< 0.11	U	< 0.22	U
Benzene	ug/L	**1**	NAL	**250**		**330**		**390**		**550**		**660**		**8.7**		**11**	
Bromodichloromethane	ug/L	0.6	NAL	< 17	U	< 0.5	U	< 180	U	< 0.17	U	< 17	U	< 0.17	U	< 0.34	U
Bromoform	ug/L	4	NAL	< 22	U	< 0.5	U	< 180	U	< 0.22	U	< 22	U	< 0.22	U	< 0.44	U
Bromomethane	ug/L	NAL	10	< 14	U	< 0.5	U	< 180	U	< 0.14	U	< 14	U	< 0.14	U	< 0.28	U
Carbon Disulfide	ug/L	700	NAL	< 150	U	1.7		< 180	U	< 1.5	U	< 150	U	< 1.5	U	< 3	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 17	U	< 0.5	U	< 180	U	< 0.17	U	< 17	U	< 0.17	U	< 0.34	U
Chlorobenzene	ug/L	**50**	NAL	< 17	U	27		29	J	41		**50**	**J**	< 0.17	U	0.96	J
Chloroethane	ug/L	3000	NAL	< 23	U	< 0.5	U	< 180	U	< 0.23	U	< 23	U	< 0.23	U	< 0.46	U
Chloroform	ug/L	**70**	NAL	**1700**		13		< 180	U	2.3		< 18	U	< 0.18	U	< 0.36	U
Chloromethane	ug/L	3	NAL	< 13	U	< 0.5	U	< 180	U	< 0.13	U	< 13	U	< 0.13	U	< 0.26	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**6400**		**610**		**490**		19		< 15	U	8		7.7	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 20	U	< 0.5	U	< 180	U	< 0.2	U	< 20	U	< 0.2	U	< 0.4	U
Dibromochloromethane	ug/L	0.4	NAL	< 17	U	< 0.5	U	< 180	U	< 0.17	U	< 17	U	< 0.17	U	< 0.34	U
Dibromomethane	ug/L	NAL	70	< 27	U	< 0.5	U	< 180	U	< 0.27	U	< 27	U	< 0.27	U	< 0.54	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 20	U	0.28	J	< 180	U	< 0.2	U	< 20	U	< 0.2	U	< 0.4	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 38	U	< 5	U	< 1800	U	< 0.38	U	< 38	U	< 0.38	U	< 0.76	U
Ethylbenzene	ug/L	600	NAL	< 13	U	37		35	J	45		< 13	U	< 0.13	U	< 0.26	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		< 0.5	U	< 180	U	NS		NS		NS		NS	
Iodomethane	ug/L	NAL	NAL	< 170	U	< 0.5	U	< 180	U	< 1.7	U	< 170	U	< 1.7	U	< 3.4	U
Isobutanol	ug/L	NAL	NAL	< 1100	U	< 25	U	< 8900	U	< 11	U	< 1100	U	< 11	U	< 22	U
m,p-Xylenes	ug/L	**500**	NAL	< 17	U	NS		NS		140		< 17	U	< 0.17	U	< 0.34	U
Methyl Methacrylate	ug/L	NAL	25	< 51	U	< 5	U	< 1800	U	< 0.51	U	< 51	U	< 0.51	U	< 1	U
Methylacrylonitrile	ug/L	NAL	NAL	< 490	U	< 5	U	< 1800	U	< 4.9	U	< 490	U	< 4.9	U	< 9.8	U
Methylene Chloride	ug/L	**5**	NAL	< 23	U	< 0.5	U	< 180	U	< 0.23	U	< 23	U	< 0.23	U	1.3	J
Naphthalene	ug/L	**6**	NAL	< 11	U	NS		NS		**18**		< 11	U	< 0.11	U	< 0.22	U
o-Xylene	ug/L	500	NAL	< 6.5	U	NS		NS		65		51	J	< 0.065	U	1.9	J
Pentachloroethane	ug/L	NAL	NAL	NS		< 0.5	U	< 180	UJ	NS		NS		NS		NS	
Propionitrile	ug/L	NAL	NAL	< 500	U	< 25	U	< 8900	U	< 5	U	< 500	U	< 5	U	< 10	U
Styrene	ug/L	70	NAL	< 11	U	< 0.5	U	< 180	U	< 0.11	U	< 11	U	< 0.11	U	< 0.22	U
Tetrachloroethene	ug/L	**0.7**	NAL	**44**	**J**	0.15	J	< 180	U	< 0.17	U	< 17	U	< 0.17	U	< 0.34	U
Toluene	ug/L	**600**	NAL	< 14	U	< 170	U	< 180	U	160		210		2.3		5.2	
trans-1,2-Dichloroethene	ug/L	**100**	NAL	**100**		11		< 180	U	6.5		< 21	U	1.1		< 0.42	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 15	U	< 0.5	U	< 180	U	**1.7**		< 15	U	< 0.15	U	< 0.3	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 70	U	< 2	U	< 710	U	< 0.7	U	< 70	U	< 0.7	U	< 1.4	U
Trichloroethene	ug/L	**3**	NAL	**18000**		2.1		< 180	U	0.7	J	< 15	U	0.61	J	< 0.3	U
Trichlorofluoromethane	ug/L	2000	NAL	< 24	U	< 0.5	U	< 180	U	< 0.24	U	< 24	U	< 0.24	U	< 0.48	U
Vinyl Acetate	ug/L	NAL	88	< 95	U	< 0.5	U	< 180	U	< 0.95	U	< 95	U	< 0.95	U	< 1.9	U
Vinyl Chloride	ug/L	**0.03**	NAL	**45**	**J**	**11000**		**9100**		**10000**		**5500**		**21**		**11**	
Xylenes, Total	ug/L	**500**	NAL	< 45	U	140	J	150	J	210		51	J	< 0.45	U	1.9	J

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	BR-3		EW-1		EW-2		EW-3		EW-4D		EW-4D		EW-4D	
			Sample Date	03/23/16		05/26/15		05/26/15		05/26/15		06/18/15		09/17/15		01/27/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		NS		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.85	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.6	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 1.4	U	< 180	U	< 210	U	**12**	**J**	< 1.7	U	< 2.1	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.7	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 0.65	U	**56**	**J**	**71**	**J**	**41**	**J**	5.1		4.8		3.6	
1,1-Dichloroethene	ug/L	3501	NAL	< 1	U	< 180	U	< 210	U	47	J	30		4.5		5.1	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 1.2	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 2.4	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 3.3	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.95	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	**15**		< 180	U	**98**	**J**	**290**		< 1.7	U	< 2.1	U	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.5	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.75	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.8	U	NS		NS		NS		NS		NS		< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.95	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 120	U	< 8900	U	< 10000	U	< 5000	U	< 83	U	< 100	U	< 25	U
2-Butanone	ug/L	4000	NAL	220		< 890	U	< 1000	U	< 500	U	< 8.3	U	< 10	U	< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 3.2	U	NS		NS		NS		NS		NS		< 0.64	U
2-Hexanone	ug/L	NAL	40	< 4.4	U	< 890	U	< 1000	U	< 500	U	< 8.3	U	< 10	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 5.5	U	< 890	U	< 1000	U	< 500	U	< 8.3	U	< 10	U	< 1.1	U
Acetone	ug/L	6000	NAL	280		< 890	U	770	J	310	J	< 8.3	U	< 10	U	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 25	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 5	U
Acrolein	ug/L	NAL	4	< 20	U	< 1800	U	< 2100	U	< 1000	U	< 17	U	< 21	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 18	U	< 1800	U	< 2100	U	< 1000	U	< 17	U	< 21	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.55	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.11	U
Benzene	ug/L	**1**	NAL	**33**		**370**		**480**		**280**		0.41	J	0.48	J	0.53	J
Bromodichloromethane	ug/L	0.6	NAL	< 0.85	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 1.1	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.7	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 7.5	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.85	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	15		45	J	42	J	< 100	U	0.11	J	< 2.1	U	< 0.17	U
Chloroethane	ug/L	3000	NAL	< 1.2	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	< 0.9	U	< 180	U	32	J	**140**		< 1.7	U	< 2.1	U	< 0.18	U
Chloromethane	ug/L	3	NAL	< 0.65	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**73**		**72**	**J**	**1500**		**5100**		**110**		23		41	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 1	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.85	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 1.4	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 1	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 1.9	U	< 1800	U	< 2100	U	< 1000	U	< 17	U	< 21	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	12		< 180	U	38	J	22	J	< 1.7	U	< 2.1	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	NS	
Iodomethane	ug/L	NAL	NAL	< 8.5	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 55	U	< 8900	U	< 10000	U	< 5000	U	< 83	U	< 100	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	15		NS		NS		NS		NS		NS		< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 2.6	U	< 1800	U	< 2100	U	< 1000	U	< 17	U	< 21	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 24	U	< 1800	U	< 2100	U	< 1000	U	< 17	U	< 21	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	**8**		< 180	U	**41**	**J**	**74**	**J**	< 1.7	U	< 2.1	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	< 0.55	U	NS		NS		NS		NS		NS		< 0.11	U
o-Xylene	ug/L	500	NAL	9		NS		NS		NS		NS		NS		< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	NS		< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	NS	
Propionitrile	ug/L	NAL	NAL	< 25	U	< 8900	U	< 10000	U	< 5000	U	< 83	U	< 100	U	< 5	U
Styrene	ug/L	70	NAL	< 0.55	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	**5.3**		< 180	U	< 210	U	< 100	U	< 1.7	U	0.48	J	< 0.17	U
Toluene	ug/L	**600**	NAL	20		84	J	140	J	82	J	< 1.7	U	< 2.1	U	< 0.14	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	3.6	J	< 180	U	44	J	24	J	0.59	J	0.84	J	0.83	J
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.75	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 3.5	U	< 710	U	< 830	U	< 400	U	< 6.7	U	< 8.3	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	**4.8**	**J**	< 180	U	**150**	**J**	**18**	**J**	0.85	J	**6.7**		2.2	
Trichlorofluoromethane	ug/L	2000	NAL	< 1.2	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 4.8	U	< 180	U	< 210	U	< 100	U	< 1.7	U	< 2.1	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**320**		**6600**		**14000**		**5600**		**54**		**140**		**150**	
Xylenes, Total	ug/L	**500**	NAL	24		62	J	140	J	91	J	< 1.7	U	< 2.1	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	EW-4D		EW-5		EW-6		GW-12I		GW-12I		GW-12I		GW-12I	
			Sample Date	03/23/16		05/14/15		05/14/15		06/17/15		09/17/15		01/26/16		03/24/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		NS		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	4.5	J	< 4.2	U	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	4.2		**16**		2.3	J	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U
1,1-Dichloroethene	ug/L	3501	NAL	13		43		14		< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	1.3	J	< 4.2	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	NS		NS		NS		NS		< 0.16	U	< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 250	U	< 210	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 1.3	U	< 25	U	< 21	U	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	NS		NS		NS		NS		< 0.64	U	< 0.64	U
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 25	U	< 21	U	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 25	U	< 21	U	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 1.2	U	9.6	J	8.3	J	1.4	J	< 2.5	U	< 1.2	U	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 5	U	< 5	U
Acrolein	ug/L	NAL	4	< 4	U	< 50	U	< 42	U	< 5	U	< 5	U	< 4	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 50	U	< 42	U	< 5	U	< 5	U	< 3.5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U
Benzene	ug/L	**1**	NAL	0.44	J	**3.1**	**J**	0.97	J	0.1	J	0.078	J	< 0.15	U	< 0.15	U
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 5	U	< 4.2	U	0.27	J	0.77		< 1.5	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 5	U	0.28	J	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	< 0.18	U	6.3		1.6	J	< 0.5	U	< 0.5	U	< 0.18	U	< 0.18	U
Chloromethane	ug/L	3	NAL	< 0.13	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	43		**220**		**220**		0.087	J	< 0.5	U	< 0.15	U	< 0.15	U
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 50	U	< 42	U	< 5	U	< 5	U	< 0.38	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	NS		NS	
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 250	U	< 210	U	< 25	U	< 25	U	< 11	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	NS		NS		NS		NS		< 0.17	U	< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 50	U	< 42	U	< 5	U	< 5	U	< 0.51	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 50	U	< 42	U	< 5	U	< 5	U	< 4.9	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	1	J	0.75	J	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	NS		NS		NS		NS		< 0.11	U	< 0.11	U
o-Xylene	ug/L	500	NAL	< 0.065	U	NS		NS		NS		NS		< 0.065	U	< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	NS		< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	NS		NS	
Propionitrile	ug/L	NAL	NAL	< 5	U	< 250	U	< 210	U	< 25	U	< 25	U	< 5	U	< 5	U
Styrene	ug/L	70	NAL	< 0.11	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	0.62	J	**19**		**2.6**	**J**	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Toluene	ug/L	**600**	NAL	< 0.14	U	0.5	J	0.48	J	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	1.4	J	0.9	J	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 20	U	< 17	U	< 2	U	< 2	U	< 0.7	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	**17**		**310**		**230**		0.1	J	< 0.5	U	< 0.15	U	< 0.15	U
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**50**		**140**		**190**		**0.28**	**J**	< 0.5	U	< 0.32	U	< 0.32	U
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 5	U	< 4.2	U	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-12S		GW-12S		GW-12S		GW-12S		GW-14I		GW-14I		GW-14I	
			Sample Date	06/17/15		09/17/15		01/26/16		03/24/16		06/17/15		09/14/15		01/20/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		59		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		5.5		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		310		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		0.062	J	NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		< 0.017	U	NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		0.062	J	NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		< 0.025	U	NS		NS		NS	
Ethane	mg/L	NAL	NAL	< 0.00047	U	< 0.00047	U	< 0.00047	U	< 0.00047	U	NS		NS		NS	
Ethene	mg/L	NAL	NAL	< 0.00062	U	< 0.00062	U	< 0.00062	U	< 0.00062	U	NS		NS		NS	
Methane	mg/L	NAL	NAL	< 0.00044	U	0.00133		0.00714		0.0159		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		9.4		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		< 0.01	U	NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		< 2	U	NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		67		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		0.46	J	0.48	J	NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		214		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 2.5	U	< 3.1	U	< 0.17	UJ
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	< 2.5	U	< 3.1	U	< 0.12	UJ
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U	< 2.5	U	< 3.1	U	< 0.28	UJ
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 2.5	U	< 3.1	U	< 0.14	UJ
1,1-Dichloroethane	ug/L	**6**	NAL	0.61		0.69		0.84	J	0.84	J	< 2.5	U	< 3.1	U	< 0.13	UJ
1,1-Dichloroethene	ug/L	3501	NAL	7.1		7.1		12		11		< 2.5	U	< 3.1	U	< 0.21	UJ
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 2.5	U	< 3.1	U	< 0.23	UJ
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 0.5	U	< 0.5	U	NS		NS		< 2.5	U	< 3.1	U	NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U	< 2.5	U	< 3.1	U	< 0.48	UJ
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U	< 2.5	U	< 3.1	U	< 0.66	UJ
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 2.5	U	< 3.1	U	< 0.19	UJ
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 2.5	U	< 3.1	U	< 0.21	UJ
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U	< 2.5	U	< 3.1	U	< 0.1	UJ
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 2.5	U	< 3.1	U	< 0.15	UJ
1,3-Dichloropropane	ug/L	NAL	NAL	NS		NS		< 0.16	U	< 0.16	U	NS		NS		< 0.16	UJ
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 2.5	U	< 3.1	U	< 0.19	UJ
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 130	U	< 160	U	< 25	UJ
2-Butanone	ug/L	4000	NAL	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U	230		92		87	J
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		NS		< 0.64	U	< 0.64	U	NS		NS		< 0.64	UJ
2-Hexanone	ug/L	NAL	40	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U	< 13	U	< 16	U	< 0.88	UJ
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U	< 13	U	< 16	U	< 1.1	UJ
Acetone	ug/L	6000	NAL	< 2.5	U	< 2.5	U	< 1.2	U	< 1.2	U	1300		1200		810	
Acetonitrile	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	< 5	U	< 5	U	< 2.5	U	< 3.1	U	< 5	UJ
Acrolein	ug/L	NAL	4	< 5	U	< 5	U	< 4	U	< 4	U	< 25	U	< 31	U	< 4	UJ
Acrylonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 3.5	U	< 3.5	U	< 25	U	< 31	U	< 3.5	UJ
Allyl Chloride	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 2.5	U	< 3.1	U	< 0.11	UJ
Benzene	ug/L	**1**	NAL	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 2.5	U	< 3.1	U	< 0.15	UJ
Bromodichloromethane	ug/L	0.6	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 2.5	U	< 3.1	U	< 0.17	UJ
Bromoform	ug/L	4	NAL	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U	< 2.5	U	< 3.1	U	< 0.22	UJ
Bromomethane	ug/L	NAL	10	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 2.5	U	< 3.1	U	< 0.14	UJ
Carbon Disulfide	ug/L	700	NAL	< 0.5	U	< 0.5	U	< 1.5	U	< 1.5	U	0.4	J	0.37	J	< 1.5	UJ
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 2.5	U	< 3.1	U	< 0.17	UJ
Chlorobenzene	ug/L	**50**	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 2.5	U	< 3.1	U	< 0.17	UJ
Chloroethane	ug/L	3000	NAL	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 2.5	U	< 3.1	U	< 0.23	UJ
Chloroform	ug/L	**70**	NAL	< 0.5	U	< 0.5	U	< 0.18	U	< 0.18	U	< 2.5	U	< 3.1	U	< 0.18	UJ
Chloromethane	ug/L	3	NAL	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 2.5	U	< 3.1	U	< 0.13	UJ
cis-1,2-Dichloroethene	ug/L	**70**	NAL	0.42	J	0.46	J	0.62	J	0.6	J	< 2.5	U	< 3.1	U	< 0.15	UJ
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 2.5	U	< 3.1	U	< 0.2	UJ
Dibromochloromethane	ug/L	0.4	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 2.5	U	< 3.1	U	< 0.17	UJ
Dibromomethane	ug/L	NAL	70	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U	< 2.5	U	< 3.1	U	< 0.27	UJ
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 2.5	U	< 3.1	U	< 0.2	UJ
Ethyl Methacrylate	ug/L	NAL	NAL	< 5	U	< 5	U	< 0.38	U	< 0.38	U	< 25	U	< 31	U	< 0.38	UJ
Ethylbenzene	ug/L	600	NAL	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 2.5	U	< 3.1	U	< 0.13	UJ
Hexachlorobutadiene	ug/L	0.4	NAL	< 0.5	U	< 0.5	U	NS		NS		< 2.5	U	< 3.1	U	NS	
Iodomethane	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U	< 2.5	U	< 3.1	U	< 1.7	UJ
Isobutanol	ug/L	NAL	NAL	< 25	U	< 25	U	< 11	U	< 11	U	< 130	U	< 160	U	< 11	UJ
m,p-Xylenes	ug/L	**500**	NAL	NS		NS		< 0.17	U	< 0.17	U	NS		NS		< 0.17	UJ
Methyl Methacrylate	ug/L	NAL	25	< 5	U	< 5	U	< 0.51	U	< 0.51	U	< 25	U	< 31	U	< 0.51	UJ
Methylacrylonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 4.9	U	< 4.9	U	< 25	U	< 31	U	< 4.9	UJ
Methylene Chloride	ug/L	**5**	NAL	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 2.5	U	< 3.1	U	< 0.23	UJ
Naphthalene	ug/L	**6**	NAL	NS		NS		< 0.11	U	< 0.11	U	NS		NS		< 0.11	UJ
o-Xylene	ug/L	500	NAL	NS		NS		< 0.065	U	< 0.065	U	NS		NS		< 0.065	UJ
Pentachloroethane	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	NS		NS		< 2.5	U	< 3.1	U	NS	
Propionitrile	ug/L	NAL	NAL	< 25	U	< 25	U	< 5	U	< 5	U	< 130	U	< 160	U	< 5	UJ
Styrene	ug/L	70	NAL	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 2.5	U	< 3.1	U	< 0.11	UJ
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 2.5	U	< 3.1	U	< 0.17	UJ
Toluene	ug/L	**600**	NAL	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 2.5	U	< 3.1	U	< 0.14	UJ
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 2.5	U	< 3.1	U	< 0.21	UJ
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 2.5	U	< 3.1	U	< 0.15	UJ
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 2	U	< 2	U	< 0.7	U	< 0.7	U	< 10	U	< 13	U	< 0.7	UJ
Trichloroethene	ug/L	**3**	NAL	1.2		0.81		1.2		1.2		< 2.5	U	< 3.1	U	< 0.15	UJ
Trichlorofluoromethane	ug/L	2000	NAL	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U	< 2.5	U	< 3.1	U	< 0.24	UJ
Vinyl Acetate	ug/L	NAL	88	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U	< 2.5	U	< 3.1	U	< 0.95	UJ
Vinyl Chloride	ug/L	**0.03**	NAL	**0.15**	**J**	< 0.5	U	< 0.32	U	< 0.32	U	< 2.5	U	< 3.1	U	< 0.32	UJ
Xylenes, Total	ug/L	**500**	NAL	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U	< 2.5	U	< 3.1	U	< 0.45	UJ

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-14I		GW-14S		GW-14S		GW-14S		GW-14S		GW-16S		GW-16S	
			Sample Date	03/25/16		06/17/15		09/14/15		01/20/16		03/25/16		06/15/15		01/21/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		29.5		0.00148	J
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		< 0.00062	U	0.00741	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		0.313		11.2	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		890	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		NS		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 4.2	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	< 4.2	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U	< 4.2	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 4.2	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 0.13	U	0.16	J	0.22	J	0.64	J	0.95	J	2.1	J	1.1	
1,1-Dichloroethene	ug/L	3501	NAL	< 0.21	U	0.41	J	0.31	J	2.9		2.8		16		2.3	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 4.2	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		< 0.5	U	< 0.5	U	NS		NS		< 4.2	U	NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U	< 4.2	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U	< 4.2	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 4.2	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 4.2	U	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U	< 4.2	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 4.2	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	NS		NS		< 0.16	U	< 0.16	U	NS		< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 4.2	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 210	U	< 25	U
2-Butanone	ug/L	4000	NAL	27		< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U	< 21	U	370	
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	NS		NS		< 0.64	U	< 0.64	U	NS		< 0.64	U
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U	< 21	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U	< 21	U	< 1.1	U
Acetone	ug/L	6000	NAL	720		< 2.5	U	< 2.5	U	< 1.2	U	< 1.2	U	< 21	U	1000	
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 0.5	U	< 0.5	U	< 5	U	< 5	U	< 4.2	U	< 5	U
Acrolein	ug/L	NAL	4	< 4	U	< 5	U	< 5	U	< 4	U	< 4	U	< 42	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 5	U	< 5	U	< 3.5	U	< 3.5	U	< 42	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 4.2	U	< 0.11	U
Benzene	ug/L	**1**	NAL	< 0.15	U	0.1	J	0.098	J	< 0.15	U	< 0.15	U	**1.2**	**J**	**1.4**	
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 4.2	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U	< 4.2	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 4.2	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	0.092	J	0.084	J	< 1.5	U	< 1.5	U	< 4.2	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 4.2	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	0.26	J	< 0.17	U
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 4.2	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	< 0.18	U	< 0.5	U	< 0.5	U	< 0.18	U	< 0.18	U	< 4.2	U	< 0.18	U
Chloromethane	ug/L	3	NAL	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 4.2	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	< 0.15	U	0.68		0.34	J	5.5		8.4		**240**		**78**	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 4.2	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 4.2	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U	< 4.2	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 4.2	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 5	U	< 5	U	< 0.38	U	< 0.38	U	< 42	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 4.2	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		< 0.5	U	< 0.5	U	NS		NS		< 4.2	U	NS	
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U	< 4.2	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 25	U	< 25	U	< 11	U	< 11	U	< 210	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	NS		NS		< 0.17	U	< 0.17	U	NS		< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 5	U	< 5	U	< 0.51	U	< 0.51	U	< 42	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 5	U	< 5	U	< 4.9	U	< 4.9	U	< 42	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 4.2	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	NS		NS		< 0.11	U	< 0.11	U	NS		< 0.11	U
o-Xylene	ug/L	500	NAL	< 0.065	U	NS		NS		< 0.065	U	< 0.065	U	NS		< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	NS		< 0.5	U	< 0.5	U	NS		NS		< 4.2	U	NS	
Propionitrile	ug/L	NAL	NAL	< 5	U	< 25	U	< 25	U	< 5	U	< 5	U	< 210	U	< 5	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 4.2	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	**4.3**		< 0.17	U
Toluene	ug/L	**600**	NAL	< 0.14	U	< 0.5	U	< 0.5	U	0.6	J	0.64	J	< 4.2	U	150	
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	0.99	J	0.49	J
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 4.2	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 2	U	< 2	U	< 0.7	U	< 0.7	U	< 17	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	< 0.15	U	0.14	J	0.14	J	**5.1**		**4**		**210**		**3**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U	< 4.2	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U	< 4.2	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	< 0.32	U	**3**		**4.5**		**15**		**28**		**86**		**23**	
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U	< 4.2	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-16S		GW-18S		GW-18S		GW-18S		GW-18S		GW-18S		GW-1A	
			Sample Date	03/23/16		06/15/15		09/15/15		09/17/15		01/21/16		03/23/16		06/17/15	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	93		NS		NS		NS		NS		**480**		NS	
Sulfate	mg/L	250	NAL	5.8		NS		NS		NS		NS		16		NS	
Alkalinity, Total	mg/L	NAL	NAL	930		NS		NS		NS		NS		370		NS	
Nitrate	mg/L	NAL	NAL	< 0.025	U	NS		NS		NS		NS		0.17		NS	
Nitrite	mg/L	NAL	NAL	< 0.017	U	NS		NS		NS		NS		< 0.017	U	NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	< 0.041	U	NS		NS		NS		NS		0.17		NS	
Phosphorus	mg/L	NAL	NAL	1.6		NS		NS		NS		NS		< 0.025	U	NS	
Ethane	mg/L	NAL	NAL	0.000936	J	< 0.00047	U	< 0.00047	U	NS		< 0.00047	U	< 0.00047	U	NS	
Ethene	mg/L	NAL	NAL	0.00757		< 0.00062	U	< 0.00062	U	NS		< 0.00062	U	< 0.00062	U	NS	
Methane	mg/L	NAL	NAL	5.49		0.000901	J	< 0.00044	U	NS		< 0.00044	U	0.000763	J	NS	
Total Suspended Solids	mg/L	NAL	NAL	77		NS		NS		NS		NS		7.2		NS	
Sulfide	mg/L	NAL	NAL	< 0.01	U	NS		NS		NS		NS		< 0.01	U	NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	220	>	NS		NS		NS		NS		< 2	U	NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	370		NS		NS		NS		NS		52		NS	
Total Organic Carbon	mg/L	NAL	NAL	80	J	NS		NS		NS		1.6		1.7		NS	
Metals																	
Iron	ug/L	**300**	NAL	**9200**		**1200**		NS		149	J	**517**		143		**386**	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.5	U	NS		< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.5	U	NS		< 0.5	U	< 0.12	U	< 0.12	U	< 0.5	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.5	U	NS		< 0.5	U	< 0.28	U	< 0.28	U	< 0.5	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.5	U	NS		< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U
1,1-Dichloroethane	ug/L	**6**	NAL	0.85	J	0.26	J	NS		0.26	J	< 0.13	U	< 0.13	U	< 0.5	U
1,1-Dichloroethene	ug/L	3501	NAL	3.5		0.85		NS		0.89		0.84	J	1.3		< 0.5	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.5	U	NS		< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		< 0.5	U	NS		< 0.5	U	NS		NS		< 0.5	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.5	U	NS		< 0.5	U	< 0.48	U	< 0.48	U	< 0.5	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.5	U	NS		< 0.5	U	< 0.66	U	< 0.66	U	< 0.5	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.5	U	NS		< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	0.065	J	NS		< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.5	U	NS		< 0.5	U	< 0.1	U	< 0.1	U	< 0.5	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.5	U	NS		< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	NS		NS		NS		< 0.16	U	< 0.16	U	NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.5	U	NS		< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	NS		< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	170		< 2.5	U	NS		< 2.5	U	< 1.3	U	< 1.3	U	< 2.5	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	NS		NS		NS		< 0.64	U	< 0.64	U	NS	
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 2.5	U	NS		< 2.5	U	< 0.88	U	< 0.88	U	< 2.5	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 2.5	U	NS		< 2.5	U	< 1.1	U	< 1.1	U	< 2.5	U
Acetone	ug/L	6000	NAL	220		< 2.5	U	NS		< 2.5	U	< 1.2	U	< 1.2	U	< 2.5	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 0.5	U	NS		< 0.5	U	< 5	U	< 5	U	< 0.5	U
Acrolein	ug/L	NAL	4	< 4	U	< 5	U	NS		< 5	U	< 4	U	< 4	U	< 5	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 5	U	NS		< 5	U	< 3.5	U	< 3.5	U	< 5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.5	U	NS		< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U
Benzene	ug/L	**1**	NAL	**1.4**		0.036	J	NS		< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.5	U	NS		< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.5	U	NS		< 0.5	U	< 0.22	U	< 0.22	U	< 0.5	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.5	U	NS		< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	0.036	J	NS		< 0.5	U	< 1.5	U	< 1.5	U	0.098	J
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.5	U	NS		< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 0.5	U	NS		< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 0.5	U	NS		< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U
Chloroform	ug/L	**70**	NAL	< 0.18	U	2.2		NS		2.2		2.3		2.2		< 0.5	U
Chloromethane	ug/L	3	NAL	< 0.13	U	< 0.5	U	NS		< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**82**		5		NS		4.6		4.4		4.7		< 0.5	U
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.5	U	NS		< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.5	U	NS		< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.5	U	NS		< 0.5	U	< 0.27	U	< 0.27	U	< 0.5	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.5	U	NS		< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 5	U	NS		< 5	U	< 0.38	U	< 0.38	U	< 5	U
Ethylbenzene	ug/L	600	NAL	1.3		< 0.5	U	NS		< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		< 0.5	U	NS		< 0.5	U	NS		NS		< 0.5	U
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 0.5	U	NS		< 0.5	U	< 1.7	U	< 1.7	U	< 0.5	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 25	U	NS		< 25	U	< 11	U	< 11	U	< 25	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	NS		NS		NS		< 0.17	U	< 0.17	U	NS	
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 5	U	NS		< 5	U	< 0.51	U	< 0.51	U	< 5	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 5	U	NS		< 5	U	< 4.9	U	< 4.9	U	< 5	U
Methylene Chloride	ug/L	**5**	NAL	0.47	J	< 0.5	U	NS		< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	NS		NS		NS		< 0.11	U	< 0.11	U	NS	
o-Xylene	ug/L	500	NAL	< 0.065	U	NS		NS		NS		< 0.065	U	< 0.065	U	NS	
Pentachloroethane	ug/L	NAL	NAL	NS		< 0.5	U	NS		< 0.5	U	NS		NS		< 0.5	U
Propionitrile	ug/L	NAL	NAL	< 5	U	< 25	U	NS		< 25	U	< 5	U	< 5	U	< 25	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.5	U	NS		< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.17	U	0.58		NS		0.63		**0.73**	**J**	**0.91**	**J**	< 0.5	U
Toluene	ug/L	**600**	NAL	**6400**		< 0.5	U	NS		< 0.5	U	< 0.14	U	0.63	J	< 0.5	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	0.99	J	< 0.5	U	NS		< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.5	U	NS		< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 2	U	NS		< 2	U	< 0.7	U	< 0.7	U	< 2	U
Trichloroethene	ug/L	**3**	NAL	**12**		**20**		NS		**22**		**21**		**21**		< 0.5	U
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.5	U	NS		< 0.5	U	< 0.24	U	< 0.24	U	< 0.5	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.5	U	NS		< 0.5	U	< 0.95	U	< 0.95	U	< 0.5	U
Vinyl Chloride	ug/L	**0.03**	NAL	**180**		< 0.5	U	NS		< 0.5	U	< 0.32	U	< 0.32	U	< 0.5	U
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.5	U	NS		< 0.5	U	< 0.45	U	< 0.45	U	< 0.5	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-1A		GW-1A		GW-1A		GW-1A-D		GW-1A-D		GW-1A-D		GW-1A-D	
			Sample Date	09/17/15		01/25/16		03/22/16		06/17/15		09/17/15		01/25/16		03/22/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	78	J	288		**384**		**1590**		**470**		**2240**		227	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.5	U	< 0.12	U	< 0.12	U	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.5	U	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 0.5	U	< 0.13	U	< 0.13	U	0.36	J	0.37	J	< 0.13	U	0.41	J
1,1-Dichloroethene	ug/L	3501	NAL	< 0.5	U	< 0.21	U	< 0.21	U	3.4		2.9		1.8		3	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 0.5	U	NS		NS		< 0.5	U	< 0.5	U	NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.5	U	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.5	U	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.5	U	< 0.21	U	< 0.21	U	0.13	J	0.16	J	< 0.21	U	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.5	U	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	NS		< 0.16	U	< 0.16	U	NS		NS		< 0.16	U	< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 2.5	U	< 1.3	U	< 1.3	U	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		< 0.64	U	< 0.64	U	NS		NS		< 0.64	U	< 0.64	U
2-Hexanone	ug/L	NAL	40	< 2.5	U	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 2.5	U	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 2.5	U	< 1.2	U	< 1.2	U	< 2.5	U	< 2.5	U	< 1.2	U	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 0.5	U	< 5	U	< 5	U	< 0.5	U	< 0.5	U	< 5	U	< 5	U
Acrolein	ug/L	NAL	4	< 5	U	< 4	U	< 4	U	< 5	U	< 5	U	< 4	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 5	U	< 3.5	U	< 3.5	U	< 5	U	< 5	U	< 3.5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U
Benzene	ug/L	**1**	NAL	< 0.5	U	< 0.15	U	< 0.15	U	0.073	J	0.064	J	< 0.15	U	< 0.15	U
Bromodichloromethane	ug/L	0.6	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.5	U	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 0.5	U	< 1.5	U	< 1.5	U	0.1	J	0.073	J	< 1.5	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Chloroethane	ug/L	3000	NAL	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	< 0.5	U	< 0.18	U	< 0.18	U	0.07	J	0.08	J	< 0.18	U	< 0.18	U
Chloromethane	ug/L	3	NAL	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	< 0.5	U	1		< 0.15	U	2.3		2.4		2.6		2.1	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.5	U	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 5	U	< 0.38	U	< 0.38	U	< 5	U	< 5	U	< 0.38	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	< 0.5	U	NS		NS		< 0.5	U	< 0.5	U	NS		NS	
Iodomethane	ug/L	NAL	NAL	< 0.5	U	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 25	U	< 11	U	< 11	U	< 25	U	< 25	U	< 11	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	NS		< 0.17	U	< 0.17	U	NS		NS		< 0.17	U	< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 5	U	< 0.51	U	< 0.51	U	< 5	U	< 5	U	< 0.51	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 5	U	< 4.9	U	< 4.9	U	< 5	U	< 5	U	< 4.9	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	NS		< 0.11	U	< 0.11	U	NS		NS		< 0.11	U	< 0.11	U
o-Xylene	ug/L	500	NAL	NS		< 0.065	U	< 0.065	U	NS		NS		< 0.065	U	< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	< 0.5	U	NS		NS		< 0.5	U	< 0.5	U	NS		NS	
Propionitrile	ug/L	NAL	NAL	< 25	U	< 5	U	< 5	U	< 25	U	< 25	U	< 5	U	< 5	U
Styrene	ug/L	70	NAL	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Toluene	ug/L	**600**	NAL	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 2	U	< 0.7	U	< 0.7	U	< 2	U	< 2	U	< 0.7	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	< 0.5	U	2.2		< 0.15	U	2.5		2.5		**3**		2.2	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.5	U	< 0.24	U	< 0.24	U	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.5	U	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	< 0.5	U	< 0.32	U	< 0.32	U	**1.2**		**1.2**		**1.4**		**3.3**	
Xylenes, Total	ug/L	**500**	NAL	< 0.5	U	< 0.45	U	< 0.45	U	0.047	J	0.051	J	< 0.45	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-20S		GW-20S		GW-20S		GW-20S		GW-22S		GW-22S		GW-22S	
			Sample Date	06/17/15		09/17/15		01/26/16		03/24/16		06/16/15		06/16/15		09/17/15	
			N=Normal, FD=Field Duplicate	N		N		N		N		FD		N		FD	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		28		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		< 2.9	U	NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		250		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		< 0.025	R	NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		< 0.017	U	NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		< 0.041	UJ	NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		0.029	J	NS		NS		NS	
Ethane	mg/L	NAL	NAL	< 0.00047	U	< 0.00047	U	< 0.00047	U	< 0.00047	U	0.161		0.142		0.156	
Ethene	mg/L	NAL	NAL	0.362		0.263		0.28		0.256		1.73		1.46		2.16	
Methane	mg/L	NAL	NAL	0.59		0.278		1.3		0.437		NS		2.6		2.52	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		8.7		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		< 0.01	U	NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		< 2	U	NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		20		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		1.3		1.5		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	**473**		**430**		**627**		**1710**		**3760**		**3880**		**3050**	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 100	U	< 83	U	< 0.17	U	< 8.5	U	< 180	U	< 13	U	< 160	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 100	U	< 83	U	< 0.12	U	< 6	U	< 180	U	< 13	U	< 160	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 100	U	< 83	U	< 0.28	U	< 14	U	< 180	U	< 13	U	< 160	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 100	U	< 83	U	< 0.14	U	< 7	U	< 180	U	< 13	U	< 160	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 100	U	**7.1**	**J**	**9.4**		< 6.5	U	**31**	**J**	**30**	**J**	**32**	**J**
1,1-Dichloroethene	ug/L	3501	NAL	43	J	35	J	42		28	J	< 180	U	< 13	U	< 160	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 100	U	< 83	U	< 0.23	U	< 12	U	< 180	U	< 13	U	< 160	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 100	U	< 83	U	NS		NS		< 180	U	< 13	U	< 160	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 100	U	< 83	U	< 0.48	U	< 24	U	< 180	U	< 13	U	< 160	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 100	U	< 83	U	< 0.66	U	< 33	U	< 180	U	< 13	U	< 160	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 100	U	< 83	U	< 0.19	U	< 9.5	U	< 180	U	< 13	U	< 160	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	**43**	**J**	**28**	**J**	**30**	**J**	< 10	U	< 180	U	**16**		< 160	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 100	U	< 83	U	< 0.1	U	< 5	U	< 180	U	< 13	U	< 160	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 100	U	< 83	U	< 0.15	U	< 7.5	U	< 180	U	< 13	U	< 160	U
1,3-Dichloropropane	ug/L	NAL	NAL	NS		NS		< 0.16	U	< 8	U	NS		NS		NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 100	U	< 83	U	< 0.19	U	< 9.5	U	< 180	U	< 13	U	< 160	U
1,4-Dioxane	ug/L	**3**	NAL	< 5000	U	< 4200	U	< 25	U	< 1200	U	< 8900	U	< 630	U	< 7800	U
2-Butanone	ug/L	4000	NAL	< 500	U	< 420	U	< 1.3	U	< 65	U	< 890	U	26	J	< 780	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		NS		< 0.64	U	< 32	U	NS		NS		NS	
2-Hexanone	ug/L	NAL	40	< 500	U	< 420	U	< 0.88	U	< 44	U	< 890	U	< 63	U	< 780	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 500	U	< 420	U	< 1.1	U	< 55	U	< 890	U	< 63	U	< 780	U
Acetone	ug/L	6000	NAL	< 500	U	< 420	U	< 1.2	U	< 60	U	< 890	U	53	J	< 780	U
Acetonitrile	ug/L	NAL	NAL	< 100	U	< 83	U	< 5	U	< 250	U	< 180	U	< 13	U	< 160	U
Acrolein	ug/L	NAL	4	< 1000	U	< 830	U	< 4	U	< 200	U	< 1800	U	< 130	U	< 1600	U
Acrylonitrile	ug/L	NAL	NAL	< 1000	U	< 830	U	< 3.5	U	< 180	U	< 1800	U	< 130	U	< 1600	U
Allyl Chloride	ug/L	NAL	NAL	< 100	U	< 83	U	< 0.11	U	< 5.5	U	< 180	U	< 13	U	< 160	U
Benzene	ug/L	**1**	NAL	**61**	**J**	**51**	**J**	**52**		**56**		**240**	**J**	**260**	**J**	**250**	
Bromodichloromethane	ug/L	0.6	NAL	< 100	U	< 83	U	< 0.17	U	< 8.5	U	< 180	U	< 13	U	< 160	U
Bromoform	ug/L	4	NAL	< 100	U	< 83	U	< 0.22	U	< 11	U	< 180	U	< 13	U	< 160	U
Bromomethane	ug/L	NAL	10	< 100	U	< 83	U	< 0.14	U	< 7	U	< 180	U	< 13	U	< 160	U
Carbon Disulfide	ug/L	700	NAL	< 100	U	< 83	U	< 1.5	U	< 75	U	< 180	U	1.3	J	< 160	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 100	U	< 83	U	< 0.17	U	< 8.5	U	< 180	U	< 13	U	< 160	U
Chlorobenzene	ug/L	**50**	NAL	< 100	U	< 83	U	< 0.17	U	< 8.5	U	< 180	U	9.2	J	< 160	U
Chloroethane	ug/L	3000	NAL	< 100	U	< 83	U	< 0.23	U	< 12	U	< 180	U	< 13	U	< 160	U
Chloroform	ug/L	**70**	NAL	< 100	U	< 83	U	< 0.18	U	< 9	U	< 180	U	< 13	U	< 160	U
Chloromethane	ug/L	3	NAL	< 100	U	< 83	U	< 0.13	U	< 6.5	U	< 180	U	< 13	U	< 160	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**4900**		**3700**		**4900**		**4400**		18	J	22	J	**240**	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 100	U	< 83	U	< 0.2	U	< 10	U	< 180	U	< 13	U	< 160	U
Dibromochloromethane	ug/L	0.4	NAL	< 100	U	< 83	U	< 0.17	U	< 8.5	U	< 180	U	< 13	U	< 160	U
Dibromomethane	ug/L	NAL	70	< 100	U	< 83	U	< 0.27	U	< 14	U	< 180	U	< 13	U	< 160	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 100	U	< 83	U	< 0.2	U	< 10	U	< 180	U	< 13	U	< 160	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 1000	U	< 830	U	< 0.38	U	< 19	U	< 1800	U	< 130	U	< 1600	U
Ethylbenzene	ug/L	600	NAL	< 100	U	< 83	U	0.96	J	< 6.5	U	< 180	U	7.8	J	15	J
Hexachlorobutadiene	ug/L	0.4	NAL	< 100	U	< 83	U	NS		NS		< 180	U	< 13	U	< 160	U
Iodomethane	ug/L	NAL	NAL	< 100	U	< 83	U	< 1.7	U	< 85	U	< 180	U	< 13	U	< 160	U
Isobutanol	ug/L	NAL	NAL	< 5000	U	< 4200	U	< 11	U	< 550	U	< 8900	U	< 630	U	< 7800	U
m,p-Xylenes	ug/L	**500**	NAL	NS		NS		2.3		< 8.5	U	NS		NS		NS	
Methyl Methacrylate	ug/L	NAL	25	< 1000	U	< 830	U	< 0.51	U	< 26	U	< 1800	U	< 130	U	< 1600	U
Methylacrylonitrile	ug/L	NAL	NAL	< 1000	U	< 830	U	< 4.9	U	< 240	U	< 1800	U	< 130	U	< 1600	U
Methylene Chloride	ug/L	**5**	NAL	< 100	U	< 83	U	< 0.23	U	< 12	U	< 180	U	< 13	U	< 160	U
Naphthalene	ug/L	**6**	NAL	NS		NS		< 0.11	U	< 5.5	U	NS		NS		NS	
o-Xylene	ug/L	500	NAL	NS		NS		< 0.065	U	< 3.2	U	NS		NS		NS	
Pentachloroethane	ug/L	NAL	NAL	< 100	U	< 83	U	NS		NS		< 180	U	< 13	U	< 160	U
Propionitrile	ug/L	NAL	NAL	< 5000	U	< 4200	U	< 5	U	< 250	U	< 8900	U	< 630	U	< 7800	U
Styrene	ug/L	70	NAL	< 100	U	< 83	U	< 0.11	U	< 5.5	U	< 180	U	< 13	U	< 160	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 100	U	< 83	U	< 0.17	U	< 8.5	U	< 180	U	< 13	U	< 160	U
Toluene	ug/L	**600**	NAL	< 100	U	< 83	U	8.8		< 7	U	< 180	U	40	J	< 160	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 100	U	< 83	U	20		< 10	U	22	J	18	J	23	J
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 100	U	< 83	U	< 0.15	U	< 7.5	U	< 180	U	< 13	U	< 160	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 400	U	< 330	U	< 0.7	U	< 35	U	< 710	U	< 50	U	< 630	U
Trichloroethene	ug/L	**3**	NAL	< 100	U	**25**	**J**	< 7.5	U	< 7.5	U	< 180	U	2.1	J	< 160	U
Trichlorofluoromethane	ug/L	2000	NAL	< 100	U	< 83	U	< 0.24	U	< 12	U	< 180	U	< 13	U	< 160	U
Vinyl Acetate	ug/L	NAL	88	< 100	U	< 83	U	< 0.95	U	< 48	U	< 180	U	< 13	U	< 160	U
Vinyl Chloride	ug/L	**0.03**	NAL	**1400**		**1100**		**1600**		**2000**		**9500**		**9300**		**5800**	
Xylenes, Total	ug/L	**500**	NAL	< 100	U	< 83	U	2.3	J	< 22	U	12	J	30	J	13	J

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-22S		GW-22S		GW-22S		GW-22S		GW-22S		GW-27S		GW-28S	
			Sample Date	09/17/15		01/21/16		01/21/16		03/24/16		03/24/16		03/25/16		03/25/16	
			N=Normal, FD=Field Duplicate	N		FD		N		FD		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		66		68		78		29	
Sulfate	mg/L	250	NAL	NS		NS		NS		< 2.9	U	< 2.9	U	16		< 2.9	U
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		400		390		460		330	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		< 0.025	R	< 0.025	R	< 0.025	R	< 0.025	R
Nitrite	mg/L	NAL	NAL	NS		NS		NS		< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		< 0.041	UJ	< 0.041	UJ	< 0.041	R	< 0.041	R
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		< 0.025	U	< 0.025	U	< 0.025	U	0.037	J
Ethane	mg/L	NAL	NAL	0.141		0.138		0.131		0.0948		0.0801		< 0.00047	U	< 0.00047	U
Ethene	mg/L	NAL	NAL	2.3		5.03		4.36		3.25		3.44		< 0.00062	U	0.00406	
Methane	mg/L	NAL	NAL	3.07		7.86		6.44		3.94		4.47		0.0093		0.00164	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		7.5		7.7		4.7		6.5	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		0.018	J	< 0.01	U	< 0.01	U	< 0.01	U
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		73	>	73	>	< 2	U	< 2	U
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		240		260		10		< 10	U
Total Organic Carbon	mg/L	NAL	NAL	NS		90		96		81		85		2.2		1.4	
Metals																	
Iron	ug/L	**300**	NAL	**2740**		**3760**		**3690**		**3350**		**3260**		257		**1400**	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 160	U	< 0.17	U	< 0.17	U	< 3.4	U	< 3.4	U	< 0.17	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 160	U	< 0.12	U	< 0.12	U	< 2.4	U	< 2.4	U	< 0.12	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 160	U	< 0.28	U	< 0.28	U	< 5.6	U	< 5.6	U	< 0.28	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 160	U	< 0.14	U	< 0.14	U	< 2.8	U	< 2.8	U	< 0.14	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	**32**	**J**	**27**		**27**		**26**		**26**		< 0.13	U	**9.3**	
1,1-Dichloroethene	ug/L	3501	NAL	< 160	U	< 0.21	U	< 0.21	U	< 4.2	U	< 4.2	U	1		67	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 160	U	< 0.23	U	< 0.23	U	< 4.6	U	< 4.6	U	< 0.23	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 160	U	NS		NS		NS		NS		NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 160	U	< 0.48	U	< 0.48	U	< 9.6	U	< 9.6	U	< 0.48	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 160	U	< 0.66	U	< 0.66	U	< 13	U	< 13	U	< 0.66	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 160	U	< 0.19	U	< 0.19	U	< 3.8	U	< 3.8	U	< 0.19	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 160	U	**5**		**5.6**		< 4.2	U	< 4.2	U	**5.8**		**420**	
1,2-Dichloropropane	ug/L	0.6	NAL	< 160	U	< 0.1	U	< 0.1	U	< 2	U	< 2	U	< 0.1	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 160	U	< 0.15	U	< 0.15	U	< 3	U	< 3	U	< 0.15	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	NS		< 0.16	U	< 0.16	U	< 3.2	U	< 3.2	U	< 0.16	U	< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 160	U	< 0.19	U	< 0.19	U	< 3.8	U	< 3.8	U	< 0.19	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 7800	U	< 25	U	< 25	U	< 500	U	< 500	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 780	U	26		25		< 26	U	< 26	U	< 1.3	U	< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		< 0.64	U	< 0.64	U	< 13	U	< 13	U	< 0.64	U	< 0.64	U
2-Hexanone	ug/L	NAL	40	< 780	U	< 0.88	U	< 0.88	U	< 18	U	< 18	U	< 0.88	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 780	U	8.5		8.8		< 22	U	< 22	U	< 1.1	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 780	U	66		64		< 24	U	< 24	U	< 1.2	U	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 160	U	< 5	U	< 5	U	490		460		< 5	U	< 5	U
Acrolein	ug/L	NAL	4	< 1600	U	< 4	U	< 4	U	< 80	U	< 80	U	< 4	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 1600	U	< 3.5	U	< 3.5	U	< 70	U	< 70	U	< 3.5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 160	U	< 0.11	U	< 0.11	U	< 2.2	U	< 2.2	U	< 0.11	U	< 0.11	U
Benzene	ug/L	**1**	NAL	**250**		**240**	**J**	**290**		**210**		**210**		< 0.15	U	**31**	
Bromodichloromethane	ug/L	0.6	NAL	< 160	U	< 0.17	U	< 0.17	U	< 3.4	U	< 3.4	U	< 0.17	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 160	U	< 0.22	U	< 0.22	U	< 4.4	U	< 4.4	U	< 0.22	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 160	U	< 0.14	U	< 0.14	U	< 2.8	U	< 2.8	U	< 0.14	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 160	U	< 1.5	U	< 1.5	U	< 30	U	< 30	U	< 1.5	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 160	U	< 0.17	U	< 0.17	U	< 3.4	U	< 3.4	U	< 0.17	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 160	U	9.4		8.9		< 3.4	U	< 3.4	U	< 0.17	U	< 0.17	U
Chloroethane	ug/L	3000	NAL	< 160	U	< 0.23	U	< 0.23	U	< 4.6	U	< 4.6	U	< 0.23	U	1.8	
Chloroform	ug/L	**70**	NAL	< 160	U	0.65	J	0.56	J	< 3.6	U	< 3.6	U	< 0.18	U	< 0.18	U
Chloromethane	ug/L	3	NAL	< 160	U	< 0.13	U	< 0.13	U	< 2.6	U	< 2.6	U	< 0.13	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**320**		16		13		29		25		47		**3200**	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 160	U	< 0.2	U	< 0.2	U	< 4	U	< 4	U	< 0.2	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 160	U	< 0.17	U	< 0.17	U	< 3.4	U	< 3.4	U	< 0.17	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 160	U	< 0.27	U	< 0.27	U	< 5.4	U	< 5.4	U	< 0.27	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 160	U	< 0.2	U	< 0.2	U	< 4	U	< 4	U	< 0.2	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 1600	U	< 0.38	U	< 0.38	U	< 7.6	U	< 7.6	U	< 0.38	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 160	U	7.6		7.6		< 2.6	U	< 2.6	U	< 0.13	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	< 160	U	NS		NS		NS		NS		NS		NS	
Iodomethane	ug/L	NAL	NAL	< 160	U	< 1.7	U	< 1.7	U	< 34	U	< 34	U	< 1.7	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 7800	U	< 11	U	< 11	U	< 220	U	< 220	U	< 11	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	NS		25		25		< 3.4	U	< 3.4	U	< 0.17	U	< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 1600	U	< 0.51	U	< 0.51	U	< 10	U	< 10	U	< 0.51	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 1600	U	< 4.9	U	< 4.9	U	< 98	U	< 98	U	< 4.9	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 160	U	< 0.23	U	< 0.23	U	< 4.6	U	< 4.6	U	< 0.23	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	NS		< 0.11	U	4.2		< 2.2	U	< 2.2	U	< 0.11	U	< 0.11	U
o-Xylene	ug/L	500	NAL	NS		11		12		8.8	J	< 1.3	U	< 0.065	U	< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	< 160	U	NS		NS		NS		NS		NS		NS	
Propionitrile	ug/L	NAL	NAL	< 7800	U	< 5	U	< 5	U	< 100	U	< 100	U	< 5	U	< 5	U
Styrene	ug/L	70	NAL	< 160	U	< 0.11	U	< 0.11	U	< 2.2	U	< 2.2	U	< 0.11	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 160	U	< 0.17	U	< 0.17	U	< 3.4	U	< 3.4	U	< 0.17	U	< 0.17	U
Toluene	ug/L	**600**	NAL	< 160	U	42		42		29		27		< 0.14	U	0.8	J
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 160	U	0.45	J	< 0.21	U	< 4.2	U	< 4.2	U	< 0.21	U	49	
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 160	U	< 0.15	U	< 0.15	U	< 3	U	< 3	U	< 0.15	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 630	U	< 0.7	U	< 0.7	U	< 14	U	< 14	U	< 0.7	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	< 160	U	< 0.15	U	< 0.15	U	< 3	U	< 3	U	**3.5**		**280**	
Trichlorofluoromethane	ug/L	2000	NAL	< 160	U	< 0.24	U	< 0.24	U	< 4.8	U	< 4.8	U	< 0.24	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 160	U	< 0.95	U	< 0.95	U	< 19	U	< 19	U	< 0.95	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**5700**		**3700**	**J**	**4800**		**1400**		**1400**		**4.6**		**3.6**	
Xylenes, Total	ug/L	**500**	NAL	13	J	36		37		< 9	U	< 9	U	< 0.45	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-3		GW-3		GW-3		GW-3		GW-3		GW-30I		GW-30I	
			Sample Date	06/17/15		09/17/15		01/26/16		03/24/16		03/24/16		06/16/15		09/17/15	
			N=Normal, FD=Field Duplicate	N		N		N		N		FD		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		< 0.00047	U	< 0.00047	U
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		< 0.00062	U	0.00178	J
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		0.0136		0.0525	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		NS		NS		240		128	J
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
1,1,1-Trichloroethane	ug/L	200	NAL	0.87		0.45	J	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5	U	< 0.5	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
1,1-Dichloroethane	ug/L	**6**	NAL	3.8		3		2.6		2.8		3		0.67		0.64	
1,1-Dichloroethene	ug/L	3501	NAL	35		28		21		32		34		3.4		2.7	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 0.5	U	< 0.5	U	NS		NS		NS		< 0.5	U	< 0.5	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U
1,2-Dichlorobenzene	ug/L	20	NAL	0.051	J	< 0.5	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	**1.6**		**2.3**		**1.2**		**1.4**		< 0.21	U	0.31	J	0.33	J
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U
1,3-Dichloropropane	ug/L	NAL	NAL	NS		NS		< 0.16	U	< 0.16	U	< 0.16	U	NS		NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U	< 1.3	U	< 2.5	U	< 2.5	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		NS		< 0.64	U	< 0.64	U	< 0.64	U	NS		NS	
2-Hexanone	ug/L	NAL	40	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U
Acetone	ug/L	6000	NAL	< 2.5	U	< 2.5	U	< 1.2	U	< 1.2	U	< 1.2	U	< 2.5	U	< 2.5	U
Acetonitrile	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	< 5	U	< 5	U	< 5	U	< 0.5	U	< 0.5	U
Acrolein	ug/L	NAL	4	< 5	U	< 5	U	< 4	U	< 4	U	< 4	U	< 5	U	< 5	U
Acrylonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 5	U	< 5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U
Benzene	ug/L	**1**	NAL	0.056	J	0.052	J	< 0.15	U	< 0.15	U	< 0.15	U	0.076	J	0.057	J
Bromodichloromethane	ug/L	0.6	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Bromoform	ug/L	4	NAL	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U
Bromomethane	ug/L	NAL	10	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
Carbon Disulfide	ug/L	700	NAL	< 0.5	U	< 0.5	U	< 1.5	U	< 1.5	U	< 1.5	U	0.12	J	0.092	J
Carbon Tetrachloride	ug/L	**0.3**	NAL	0.13	J	0.042	J	< 0.17	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Chlorobenzene	ug/L	**50**	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Chloroethane	ug/L	3000	NAL	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U
Chloroform	ug/L	**70**	NAL	2.6		0.95		1.6		1.6		1.6		< 0.5	U	< 0.5	U
Chloromethane	ug/L	3	NAL	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	21		23		14		16		16		4.4		4	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Dibromomethane	ug/L	NAL	70	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 5	U	< 5	U	< 0.38	U	< 0.38	U	< 0.38	U	< 5	U	< 5	U
Ethylbenzene	ug/L	600	NAL	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U
Hexachlorobutadiene	ug/L	0.4	NAL	< 0.5	U	< 0.5	U	NS		NS		NS		< 0.5	U	< 0.5	U
Iodomethane	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U
Isobutanol	ug/L	NAL	NAL	< 25	U	< 25	U	< 11	U	< 11	U	< 11	U	< 25	U	< 25	U
m,p-Xylenes	ug/L	**500**	NAL	NS		NS		< 0.17	U	< 0.17	U	< 0.17	U	NS		NS	
Methyl Methacrylate	ug/L	NAL	25	< 5	U	< 5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 5	U	< 5	U
Methylacrylonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 4.9	U	< 4.9	U	< 4.9	U	< 5	U	< 5	U
Methylene Chloride	ug/L	**5**	NAL	< 0.5	U	0.029	J	< 0.23	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U
Naphthalene	ug/L	**6**	NAL	NS		NS		< 0.11	U	< 0.11	U	< 0.11	U	NS		NS	
o-Xylene	ug/L	500	NAL	NS		NS		< 0.065	U	< 0.065	U	< 0.065	U	NS		NS	
Pentachloroethane	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	NS		NS		NS		< 0.5	U	< 0.5	U
Propionitrile	ug/L	NAL	NAL	< 25	U	< 25	U	< 5	U	< 5	U	< 5	U	< 25	U	< 25	U
Styrene	ug/L	70	NAL	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U
Tetrachloroethene	ug/L	**0.7**	NAL	**2.4**		**0.74**		**1.4**		**1.7**		**1.6**		< 0.5	U	< 0.5	U
Toluene	ug/L	**600**	NAL	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	0.14	J	0.11	J	< 0.21	U	< 0.21	U	< 0.21	U	< 0.5	U	0.078	J
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 2	U	< 2	U	< 0.7	U	< 0.7	U	< 0.7	U	< 2	U	< 2	U
Trichloroethene	ug/L	**3**	NAL	**39**		**33**		**22**		**29**		**29**		0.71		0.94	
Trichlorofluoromethane	ug/L	2000	NAL	0.083	J	< 0.5	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.5	U	< 0.5	U
Vinyl Acetate	ug/L	NAL	88	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U
Vinyl Chloride	ug/L	**0.03**	NAL	**2.7**		**1.1**		**2.2**		**2.1**		**2.3**		**1.6**		**1.6**	
Xylenes, Total	ug/L	**500**	NAL	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-30I		GW-30I		GW-30S		GW-30S		GW-30S		GW-30S		GW-32S	
			Sample Date	01/21/16		03/24/16		06/16/15		09/17/15		01/21/16		03/24/16		06/15/15	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		47		NS		NS		NS		13		NS	
Sulfate	mg/L	250	NAL	NS		9.4		NS		NS		NS		6.7		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		400		NS		NS		NS		280		NS	
Nitrate	mg/L	NAL	NAL	NS		< 0.025	R	NS		NS		NS		< 0.025	R	NS	
Nitrite	mg/L	NAL	NAL	NS		< 0.017	U	NS		NS		NS		< 0.017	U	NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		< 0.041	UJ	NS		NS		NS		< 0.041	UJ	NS	
Phosphorus	mg/L	NAL	NAL	NS		0.068	J	NS		NS		NS		< 0.025	U	NS	
Ethane	mg/L	NAL	NAL	< 0.00047	U	< 0.00047	U	< 0.00047	U	< 0.00047	U	< 0.00047	U	< 0.00047	U	< 0.00047	U
Ethene	mg/L	NAL	NAL	0.00744		0.00281	J	0.0144		< 0.00062	U	< 0.00062	U	< 0.00062	U	< 0.00062	U
Methane	mg/L	NAL	NAL	0.146		0.0508		0.00186		0.00966		0.0272		0.00998		0.0237	
Total Suspended Solids	mg/L	NAL	NAL	NS		13		NS		NS		NS		< 2.5	U	NS	
Sulfide	mg/L	NAL	NAL	NS		< 0.01	U	NS		NS		NS		< 0.01	U	NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		< 2	U	NS		NS		NS		< 2	U	NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		16		NS		NS		NS		< 10	U	NS	
Total Organic Carbon	mg/L	NAL	NAL	3.8		3.8		NS		NS		< 0.34	U	< 0.34	U	NS	
Metals																	
Iron	ug/L	**300**	NAL	**3600**		**695**		277		< 200	U	156		63.3		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.12	U	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	0.13	J
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U	< 0.5	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U
1,1-Dichloroethane	ug/L	**6**	NAL	3.6		1.2		< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	0.35	J
1,1-Dichloroethene	ug/L	3501	NAL	1.2		0.61	J	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	3.5	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U	< 0.5	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U	< 0.5	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	**1.1**		< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U	< 0.5	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	< 0.16	U	NS		NS		< 0.16	U	< 0.16	U	NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 1.3	U	< 1.3	U	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U	< 2.5	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	< 0.64	U	NS		NS		< 0.64	U	< 0.64	U	NS	
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U	< 2.5	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U	< 2.5	U
Acetone	ug/L	6000	NAL	< 1.2	U	< 1.2	U	< 2.5	U	< 2.5	U	< 1.2	U	< 1.2	U	< 2.5	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 0.5	U	< 0.5	U	< 5	U	< 5	U	< 0.5	U
Acrolein	ug/L	NAL	4	< 4	U	< 4	U	< 5	U	< 5	U	< 4	U	< 4	U	< 5	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 3.5	U	< 5	U	< 5	U	< 3.5	U	< 3.5	U	< 5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U
Benzene	ug/L	**1**	NAL	0.42	J	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U	< 0.5	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 1.5	U	< 0.5	U	< 0.5	U	< 1.5	U	< 1.5	U	< 0.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U
Chloroform	ug/L	**70**	NAL	< 0.18	U	< 0.18	U	< 0.5	U	< 0.5	U	< 0.18	U	< 0.18	U	0.4	J
Chloromethane	ug/L	3	NAL	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	2.5		1.1		0.12	J	0.14	J	< 0.15	U	< 0.15	U	1.2	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U	< 0.5	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 0.38	U	< 5	U	< 5	U	< 0.38	U	< 0.38	U	< 5	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U	< 0.5	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 11	U	< 25	U	< 25	U	< 11	U	< 11	U	< 25	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	< 0.17	U	NS		NS		< 0.17	U	< 0.17	U	NS	
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 0.51	U	< 5	U	< 5	U	< 0.51	U	< 0.51	U	< 5	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 4.9	U	< 5	U	< 5	U	< 4.9	U	< 4.9	U	< 5	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	< 0.11	U	NS		NS		< 0.11	U	< 0.11	U	NS	
o-Xylene	ug/L	500	NAL	< 0.065	U	< 0.065	U	NS		NS		< 0.065	U	< 0.065	U	NS	
Pentachloroethane	ug/L	NAL	NAL	NS		NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U
Propionitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 25	U	< 25	U	< 5	U	< 5	U	< 25	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	**1.2**	
Toluene	ug/L	**600**	NAL	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 0.7	U	< 2	U	< 2	U	< 0.7	U	< 0.7	U	< 2	U
Trichloroethene	ug/L	**3**	NAL	1.8		0.46	J	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	**7**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.24	U	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U	< 0.5	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U	< 0.5	U
Vinyl Chloride	ug/L	**0.03**	NAL	**63**		**17**		**0.31**	**J**	< 0.5	U	< 0.32	U	< 0.32	U	< 0.5	U
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U	< 0.5	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-32S		GW-32S		GW-32S		GW-36S		GW-36S		GW-36S		GW-36S	
			Sample Date	09/15/15		01/19/16		03/21/16		06/15/15		06/15/15		09/15/15		09/15/15	
			N=Normal, FD=Field Duplicate	N		N		N		FD		N		FD		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		190		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		21		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		540		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		< 0.025	U	NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		< 0.017	U	NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		< 0.041	U	NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		0.096	J	NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	< 0.00047	U	0.000589	J	< 0.00047	U	< 0.00047	U	< 0.00047	U	< 0.00047	U	< 0.00047	U
Ethene	mg/L	NAL	NAL	< 0.00062	U	< 0.00062	U	< 0.00062	U	< 0.00062	U	< 0.00062	U	< 0.00062	U	< 0.00062	U
Methane	mg/L	NAL	NAL	0.104		0.38		0.209		0.0435	J	0.103	J	0.114	J	0.18	J
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		5.9		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		0.55		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		49		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		86		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		660		27		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		**556**		NS		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
1,1,1-Trichloroethane	ug/L	200	NAL	0.64		0.46	J	< 0.12	U	0.093	J	0.087	J	0.39	J	0.37	J
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.5	U	< 0.28	U	< 0.28	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
1,1-Dichloroethane	ug/L	**6**	NAL	1.9		1.7		1.6		0.29	J	0.31	J	1.1		1.1	
1,1-Dichloroethene	ug/L	3501	NAL	17		6.5		16		2.8	J	2.9	J	10		9.6	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 0.5	U	NS		NS		< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.5	U	< 0.48	U	< 0.48	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.5	U	< 0.66	U	< 0.66	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	UJ	< 0.5	UJ	0.058	J	0.055	J
1,2-Dichloroethane	ug/L	**0.4**	NAL	0.17	J	< 0.21	U	< 0.21	U	< 0.5	UJ	< 0.5	UJ	0.1	J	0.11	J
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.5	U	< 0.1	U	< 0.1	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
1,3-Dichloropropane	ug/L	NAL	NAL	NS		< 0.16	U	< 0.16	U	NS		NS		NS		NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
1,4-Dioxane	ug/L	**3**	NAL	**6.8**	**J**	< 25	U	< 25	U	< 25	UJ	< 25	UJ	< 25	UJ	< 25	UJ
2-Butanone	ug/L	4000	NAL	< 2.5	U	49		14		< 2.5	UJ	< 2.5	UJ	< 2.5	UJ	< 2.5	UJ
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		< 0.64	U	< 0.64	U	NS		NS		NS		NS	
2-Hexanone	ug/L	NAL	40	< 2.5	U	< 0.88	U	< 0.88	U	< 2.5	UJ	< 2.5	UJ	< 2.5	UJ	< 2.5	UJ
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 2.5	U	< 1.1	U	< 1.1	U	< 2.5	UJ	< 2.5	UJ	< 2.5	UJ	< 2.5	UJ
Acetone	ug/L	6000	NAL	< 2.5	U	55		7.5		< 2.5	UJ	< 2.5	UJ	< 2.5	UJ	< 2.5	UJ
Acetonitrile	ug/L	NAL	NAL	< 0.5	U	< 5	U	< 5	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Acrolein	ug/L	NAL	4	< 5	U	< 4	U	< 4	U	< 5	UJ	< 5	UJ	< 5	UJ	< 5	UJ
Acrylonitrile	ug/L	NAL	NAL	< 5	U	< 3.5	U	< 3.5	U	< 5	UJ	< 5	UJ	< 5	UJ	< 5	UJ
Allyl Chloride	ug/L	NAL	NAL	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Benzene	ug/L	**1**	NAL	0.16	J	< 0.15	U	< 0.15	U	0.041	J	0.044	J	0.097	J	0.094	J
Bromodichloromethane	ug/L	0.6	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Bromoform	ug/L	4	NAL	< 0.5	U	< 0.22	U	< 0.22	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Bromomethane	ug/L	NAL	10	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Carbon Disulfide	ug/L	700	NAL	< 0.5	U	2	J	< 1.5	U	0.061	J	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Chlorobenzene	ug/L	**50**	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	UJ	< 0.5	UJ	0.039	J	< 0.5	UJ
Chloroethane	ug/L	3000	NAL	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Chloroform	ug/L	**70**	NAL	1.2		1.5		1.1		0.28	J	0.28	J	0.77		0.74	
Chloromethane	ug/L	3	NAL	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
cis-1,2-Dichloroethene	ug/L	**70**	NAL	6.8		7.4		12		0.42	J	0.39	J	5.1		4.8	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Dibromochloromethane	ug/L	0.4	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Dibromomethane	ug/L	NAL	70	< 0.5	U	< 0.27	U	< 0.27	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Ethyl Methacrylate	ug/L	NAL	NAL	< 5	U	< 0.38	U	< 0.38	U	< 5	UJ	< 5	UJ	< 5	UJ	< 5	UJ
Ethylbenzene	ug/L	600	NAL	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Hexachlorobutadiene	ug/L	0.4	NAL	< 0.5	U	NS		NS		< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Iodomethane	ug/L	NAL	NAL	< 0.5	U	< 1.7	U	< 1.7	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Isobutanol	ug/L	NAL	NAL	< 25	U	< 11	U	< 11	U	< 25	UJ	< 25	UJ	< 25	UJ	< 25	UJ
m,p-Xylenes	ug/L	**500**	NAL	NS		< 0.17	U	< 0.17	U	NS		NS		NS		NS	
Methyl Methacrylate	ug/L	NAL	25	< 5	U	< 0.51	U	< 0.51	U	< 5	UJ	< 5	UJ	< 5	UJ	< 5	UJ
Methylacrylonitrile	ug/L	NAL	NAL	< 5	U	< 4.9	U	< 4.9	U	< 5	UJ	< 5	UJ	< 5	UJ	< 5	UJ
Methylene Chloride	ug/L	**5**	NAL	< 0.5	U	< 0.23	U	0.9	J	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Naphthalene	ug/L	**6**	NAL	NS		< 0.11	U	< 0.11	U	NS		NS		NS		NS	
o-Xylene	ug/L	500	NAL	NS		< 0.065	U	< 0.065	U	NS		NS		NS		NS	
Pentachloroethane	ug/L	NAL	NAL	< 0.5	U	NS		NS		< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Propionitrile	ug/L	NAL	NAL	< 25	U	< 5	U	< 5	U	< 25	UJ	< 25	UJ	< 25	UJ	< 25	UJ
Styrene	ug/L	70	NAL	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Tetrachloroethene	ug/L	**0.7**	NAL	**2.2**		**2.6**		**1.3**		0.29	J	0.28	J	**2.4**		**2.3**	
Toluene	ug/L	**600**	NAL	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 2	U	< 0.7	U	< 0.7	U	< 2	UJ	< 2	UJ	< 2	UJ	< 2	UJ
Trichloroethene	ug/L	**3**	NAL	**19**		**16**		**5.7**		1.3	J	1.2	J	**14**		**13**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.5	U	< 0.24	U	< 0.24	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Vinyl Acetate	ug/L	NAL	88	< 0.5	U	< 0.95	U	< 0.95	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ
Vinyl Chloride	ug/L	**0.03**	NAL	**1.6**		**1.5**		< 0.32	U	**0.29**	**J**	**0.3**	**J**	**1.2**		**1.1**	
Xylenes, Total	ug/L	**500**	NAL	< 0.5	U	< 0.45	U	< 0.45	U	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ	< 0.5	UJ

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-36S		GW-36S		GW-36S		GW-36S		GW-4		GW-4		GW-4	
			Sample Date	01/20/16		01/20/16		03/21/16		03/21/16		06/17/15		01/26/16		03/28/16	
			N=Normal, FD=Field Duplicate	FD		N		N		FD		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		170		170		NS		NS		21	
Sulfate	mg/L	250	NAL	NS		NS		15		15		NS		NS		7	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		550		570		NS		NS		220	
Nitrate	mg/L	NAL	NAL	NS		NS		< 0.025	U	< 0.025	U	NS		NS		< 0.025	R
Nitrite	mg/L	NAL	NAL	NS		NS		< 0.017	U	< 0.017	U	NS		NS		< 0.017	U
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		< 0.041	U	< 0.041	U	NS		NS		< 0.041	R
Phosphorus	mg/L	NAL	NAL	NS		NS		0.035	J	< 0.025	U	NS		NS		< 0.025	U
Ethane	mg/L	NAL	NAL	< 0.00047	U	< 0.00047	U	< 0.00047	U	< 0.00047	U	0.00279		0.000655	J	< 0.00047	U
Ethene	mg/L	NAL	NAL	< 0.00062	U	< 0.00062	U	< 0.00062	U	< 0.00062	U	0.0691		0.00669		0.0186	
Methane	mg/L	NAL	NAL	0.417		0.447		0.117	J	0.167	J	0.12		0.0318		0.09	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		7.9	J	4.2	J	NS		NS		5.9	
Sulfide	mg/L	NAL	NAL	NS		NS		< 0.01	UJ	< 0.01	U	NS		NS		0.27	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		< 2	U	< 2	U	NS		NS		61	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		18	J	25	J	NS		NS		44	
Total Organic Carbon	mg/L	NAL	NAL	2.8		2.8	J	3.6	J	4.4	J	NS		26		8.8	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		**830**		**720**		NS		NS		**2440**	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	UJ	< 0.17	UJ	< 0.17	U	< 0.17	U	< 250	U	< 0.17	U	< 170	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	UJ	< 0.12	UJ	< 0.12	U	< 0.12	U	47	J	42		< 120	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	UJ	< 0.28	UJ	< 0.28	U	< 0.28	U	< 250	U	**3.5**		< 280	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	UJ	< 0.14	UJ	< 0.14	U	< 0.14	U	< 250	U	**4.2**		< 140	U
1,1-Dichloroethane	ug/L	**6**	NAL	2.4	J	2.3	J	1.4		1.6		< 250	U	**13**		< 130	U
1,1-Dichloroethene	ug/L	3501	NAL	17	J	20	J	16		16		210	J	140		< 210	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	UJ	< 0.23	UJ	< 0.23	U	< 0.23	U	< 250	U	< 0.23	U	< 230	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		NS		NS		NS		< 250	U	NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	UJ	< 0.48	UJ	< 0.48	U	< 0.48	U	< 250	U	< 0.48	U	< 480	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	UJ	< 0.66	UJ	< 0.66	U	< 0.66	U	< 250	U	< 0.66	U	< 660	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	UJ	< 0.19	UJ	< 0.19	U	< 0.19	U	< 250	U	2.2		< 190	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	UJ	< 0.21	UJ	< 0.21	U	< 0.21	U	**1400**		**1200**		**1200**	
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	UJ	< 0.1	UJ	< 0.1	U	< 0.1	U	< 250	U	< 0.1	U	< 100	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	UJ	< 0.15	UJ	< 0.15	U	< 0.15	U	< 250	U	< 0.15	U	< 150	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	UJ	< 0.16	UJ	< 0.16	U	< 0.16	U	NS		< 0.16	U	< 160	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	UJ	< 0.19	UJ	< 0.19	U	< 0.19	U	< 250	U	< 0.19	U	< 190	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	UJ	< 25	UJ	< 25	U	< 25	U	< 13000	U	< 25	U	< 25000	U
2-Butanone	ug/L	4000	NAL	< 1.3	UJ	< 1.3	UJ	< 1.3	U	< 1.3	U	< 1300	U	< 1.3	U	< 1300	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	UJ	< 0.64	UJ	< 0.64	U	< 0.64	U	NS		< 0.64	U	< 640	U
2-Hexanone	ug/L	NAL	40	< 0.88	UJ	< 0.88	UJ	< 0.88	U	< 0.88	U	< 1300	U	< 0.88	U	< 880	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	UJ	< 1.1	UJ	< 1.1	U	< 1.1	U	< 1300	U	22		< 1100	U
Acetone	ug/L	6000	NAL	< 1.2	UJ	< 1.2	UJ	< 1.2	U	< 1.2	U	< 1300	U	< 1.2	U	< 1200	U
Acetonitrile	ug/L	NAL	NAL	< 5	UJ	< 5	UJ	< 5	U	< 5	U	< 250	U	< 5	U	16000	
Acrolein	ug/L	NAL	4	< 4	UJ	< 4	UJ	< 4	U	< 4	U	< 2500	U	< 4	U	< 4000	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	UJ	< 3.5	UJ	< 3.5	U	< 3.5	U	< 2500	U	< 3.5	U	< 3500	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	UJ	< 0.11	UJ	< 0.11	U	< 0.11	U	< 250	U	< 0.11	U	< 110	U
Benzene	ug/L	**1**	NAL	< 0.15	UJ	< 0.15	UJ	< 0.15	U	< 0.15	U	**620**		**480**	**J**	**550**	**J**
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	UJ	< 0.17	UJ	< 0.17	U	< 0.17	U	< 250	U	< 0.17	U	< 170	U
Bromoform	ug/L	4	NAL	< 0.22	UJ	< 0.22	UJ	< 0.22	U	< 0.22	U	< 250	U	< 0.22	U	< 220	U
Bromomethane	ug/L	NAL	10	< 0.14	UJ	< 0.14	UJ	< 0.14	U	< 0.14	U	< 250	U	< 0.14	U	< 140	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	UJ	< 1.5	UJ	< 1.5	U	< 1.5	U	< 250	U	3.6	J	< 1500	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	UJ	< 0.17	UJ	< 0.17	U	< 0.17	U	**210**	**J**	**210**		< 170	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	UJ	< 0.17	UJ	< 0.17	U	< 0.17	U	< 250	U	3.7		< 170	U
Chloroethane	ug/L	3000	NAL	< 0.23	UJ	< 0.23	UJ	< 0.23	U	< 0.23	U	< 250	U	< 0.23	U	< 230	U
Chloroform	ug/L	**70**	NAL	1.2	J	1.1	J	1.1		1.2		**1600**		**1700**		**1900**	
Chloromethane	ug/L	3	NAL	< 0.13	UJ	< 0.13	UJ	< 0.13	U	< 0.13	U	< 250	U	< 0.13	U	< 130	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	11	J	10	J	6		6		**2400**		**2000**		**4400**	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	UJ	< 0.2	UJ	< 0.2	U	< 0.2	U	< 250	U	< 0.2	U	< 200	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	UJ	< 0.17	UJ	< 0.17	U	< 0.17	U	< 250	U	< 0.17	U	< 170	U
Dibromomethane	ug/L	NAL	70	< 0.27	UJ	< 0.27	UJ	< 0.27	U	< 0.27	U	< 250	U	< 0.27	U	< 270	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	UJ	< 0.2	UJ	< 0.2	U	< 0.2	U	< 250	U	< 0.2	U	< 200	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	UJ	< 0.38	UJ	< 0.38	U	< 0.38	U	< 2500	U	< 0.38	U	< 380	U
Ethylbenzene	ug/L	600	NAL	< 0.13	UJ	< 0.13	UJ	< 0.13	U	< 0.13	U	60	J	88		< 130	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		NS		NS		NS		< 250	U	NS		NS	
Iodomethane	ug/L	NAL	NAL	< 1.7	UJ	< 1.7	UJ	< 1.7	U	< 1.7	U	< 250	U	< 1.7	U	< 1700	U
Isobutanol	ug/L	NAL	NAL	< 11	UJ	< 11	UJ	< 11	U	< 11	U	< 13000	U	< 11	U	< 11000	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	UJ	< 0.17	UJ	< 0.17	U	< 0.17	U	NS		220		< 170	U
Methyl Methacrylate	ug/L	NAL	25	< 0.51	UJ	< 0.51	UJ	< 0.51	U	< 0.51	U	< 2500	U	< 0.51	U	< 510	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	UJ	< 4.9	UJ	< 4.9	U	< 4.9	U	< 2500	U	< 4.9	U	< 4900	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	UJ	< 0.23	UJ	< 0.23	U	< 0.23	U	< 250	U	**99**		< 230	U
Naphthalene	ug/L	**6**	NAL	< 0.11	UJ	< 0.11	UJ	< 0.11	U	< 0.11	U	NS		**16**		< 110	U
o-Xylene	ug/L	500	NAL	< 0.065	UJ	< 0.065	UJ	< 0.065	U	< 0.065	U	NS		120		< 65	U
Pentachloroethane	ug/L	NAL	NAL	NS		NS		NS		NS		< 250	U	NS		NS	
Propionitrile	ug/L	NAL	NAL	< 5	UJ	< 5	UJ	< 5	U	< 5	U	< 13000	U	< 5	U	< 5000	U
Styrene	ug/L	70	NAL	< 0.11	UJ	< 0.11	UJ	< 0.11	U	< 0.11	U	< 250	U	0.9	J	< 110	U
Tetrachloroethene	ug/L	**0.7**	NAL	**2**	**J**	**2.1**	**J**	**2.2**		**2.6**		**110**	**J**	**120**		< 170	U
Toluene	ug/L	**600**	NAL	< 0.14	UJ	< 0.14	UJ	< 0.14	U	< 0.14	U	< 250	U	110		< 140	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	UJ	< 0.21	UJ	< 0.21	U	< 0.21	U	**120**	**J**	**100**		< 210	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	UJ	< 0.15	UJ	< 0.15	U	< 0.15	U	< 250	U	< 0.15	U	< 150	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	UJ	< 0.7	UJ	< 0.7	U	< 0.7	U	< 1000	U	< 0.7	U	< 700	U
Trichloroethene	ug/L	**3**	NAL	**9.1**	**J**	**9.9**	**J**	**14**		**15**		**55000**		**41000**		**49000**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	UJ	< 0.24	UJ	< 0.24	U	< 0.24	U	< 250	U	2.9		< 240	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	UJ	< 0.95	UJ	< 0.95	U	< 0.95	U	< 250	U	< 0.95	U	< 950	U
Vinyl Chloride	ug/L	**0.03**	NAL	**3.6**	**J**	**3.7**	**J**	**2**		**1.9**		< 250	U	**8.6**		< 320	U
Xylenes, Total	ug/L	**500**	NAL	< 0.45	UJ	< 0.45	UJ	< 0.45	U	< 0.45	U	220	J	340		< 450	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-40I		GW-40I		GW-40I		GW-40I		GW-41SR		GW-41SR		GW-41SR	
			Sample Date	06/16/15		09/16/15		01/27/16		03/24/16		06/15/15		09/15/15		01/21/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		0.0329		0.0392		0.0295	
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		0.0113		0.00907		0.00368	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		0.836		1.79		4.26	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		6	
Metals																	
Iron	ug/L	**300**	NAL	**1100**		**2000**		**1800**		**1260**		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 3.1	U	< 2.5	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	13		14		1.4	
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U	< 3.1	U	< 2.5	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 3.1	U	< 2.5	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 0.5	U	0.11	J	< 0.13	U	< 0.13	U	**24**		**24**		**6.1**	
1,1-Dichloroethene	ug/L	3501	NAL	0.25	J	1.1		1.3		1.2		110		120		17	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 3.1	U	< 2.5	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 0.5	U	< 0.5	U	NS		NS		< 3.1	U	< 2.5	U	NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U	< 3.1	U	< 2.5	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U	< 3.1	U	< 2.5	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	2	J	< 2.5	U	2.7	
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	**1.4**	**J**	**1.4**	**J**	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U	< 3.1	U	< 2.5	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	0.54	J	< 2.5	U	1.1	
1,3-Dichloropropane	ug/L	NAL	NAL	NS		NS		< 0.16	U	< 0.16	U	NS		NS		< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	0.68	J	< 2.5	U	1.3	
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 160	U	< 130	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U	< 16	U	< 13	U	< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		NS		< 0.64	U	< 0.64	U	NS		NS		< 0.64	U
2-Hexanone	ug/L	NAL	40	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U	< 16	U	< 13	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U	< 16	U	< 13	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 2.5	U	< 2.5	U	< 1.2	U	< 1.2	U	< 16	U	< 13	U	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	< 5	U	< 5	U	< 3.1	U	< 2.5	U	< 5	U
Acrolein	ug/L	NAL	4	< 5	U	< 5	U	< 4	U	< 4	U	< 31	U	< 25	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 3.5	U	< 3.5	U	< 31	U	< 25	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 3.1	U	< 2.5	U	< 0.11	U
Benzene	ug/L	**1**	NAL	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	**2.5**	**J**	**2.6**		**3.1**	
Bromodichloromethane	ug/L	0.6	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 3.1	U	< 2.5	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U	< 3.1	U	< 2.5	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 3.1	U	< 2.5	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 0.5	U	0.06	J	< 1.5	U	< 1.5	U	< 3.1	U	< 2.5	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 3.1	U	< 2.5	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	1	J	< 2.5	U	1.3	
Chloroethane	ug/L	3000	NAL	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 3.1	U	3.9		14	
Chloroform	ug/L	**70**	NAL	0.037	J	< 0.5	U	< 0.18	U	< 0.18	U	3.2		4.2		1.3	
Chloromethane	ug/L	3	NAL	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 3.1	U	< 2.5	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	3.3		15		18		16		**190**		**140**		**330**	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 3.1	U	< 2.5	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 3.1	U	< 2.5	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U	< 3.1	U	< 2.5	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 3.1	U	< 2.5	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 5	U	< 5	U	< 0.38	U	< 0.38	U	< 31	U	< 25	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 3.1	U	< 2.5	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	< 0.5	U	< 0.5	U	NS		NS		< 3.1	U	< 2.5	U	NS	
Iodomethane	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U	< 3.1	U	< 2.5	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 25	U	< 25	U	< 11	U	< 11	U	< 160	U	< 130	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	NS		NS		< 0.17	U	< 0.17	U	NS		NS		< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 5	U	< 5	U	< 0.51	U	< 0.51	U	< 31	U	< 25	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 4.9	U	< 4.9	U	< 31	U	< 25	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 3.1	U	0.2	J	< 0.23	U
Naphthalene	ug/L	**6**	NAL	NS		NS		< 0.11	U	< 0.11	U	NS		NS		< 0.11	U
o-Xylene	ug/L	500	NAL	NS		NS		< 0.065	U	< 0.065	U	NS		NS		< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	< 0.5	U	< 0.5	U	NS		NS		< 3.1	U	< 2.5	U	NS	
Propionitrile	ug/L	NAL	NAL	< 25	U	< 25	U	< 5	U	< 5	U	< 160	U	< 130	U	< 5	U
Styrene	ug/L	70	NAL	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 3.1	U	< 2.5	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	**14**		**15**		0.5	J
Toluene	ug/L	**600**	NAL	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 3.1	U	< 2.5	U	3.3	
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	1.2	J	0.95	J	1.9	
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 3.1	U	< 2.5	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 2	U	< 2	U	< 0.7	U	< 0.7	U	< 13	U	< 10	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	< 0.5	U	0.15	J	< 0.15	U	< 0.15	U	**140**		**150**		**17**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U	< 3.1	U	< 2.5	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U	< 3.1	U	< 2.5	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	< 0.5	U	< 0.5	U	**2.3**		**4.7**		**110**		**90**		**300**	
Xylenes, Total	ug/L	**500**	NAL	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U	< 3.1	U	< 2.5	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-41SR		GW-44S		GW-44S		GW-44S		GW-44S		GW-48S		GW-48S	
			Sample Date	03/25/16		06/16/15		09/17/15		01/27/16		03/24/16		06/16/15		09/16/15	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	120		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	20		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	390		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	< 0.025	R	NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	< 0.017	U	NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	< 0.041	R	NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	0.028	J	NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	0.0166		NS		NS		NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	0.0036		NS		NS		NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	3.15		NS		NS		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	31		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	< 0.01	U	NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	< 2	U	NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	20		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	3.1		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	**1320**		NS		NS		NS		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.85	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
1,1,1-Trichloroethane	ug/L	200	NAL	6.8		< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	0.063	J	0.068	J
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 1.4	U	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.7	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
1,1-Dichloroethane	ug/L	**6**	NAL	**14**		< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	0.84		0.83	
1,1-Dichloroethene	ug/L	3501	NAL	43		< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	19		17	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 1.2	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U	< 0.5	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 2.4	U	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 3.3	U	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U
1,2-Dichlorobenzene	ug/L	20	NAL	2.2	J	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 1	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.5	U	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.75	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.8	U	NS		NS		< 0.16	U	< 0.16	U	NS		NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.95	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U
1,4-Dioxane	ug/L	**3**	NAL	< 120	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 6.5	U	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U	< 2.5	U	< 2.5	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 3.2	U	NS		NS		< 0.64	U	< 0.64	U	NS		NS	
2-Hexanone	ug/L	NAL	40	< 4.4	U	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 5.5	U	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U
Acetone	ug/L	6000	NAL	< 6	U	< 2.5	U	< 2.5	U	< 1.2	U	< 1.2	U	< 2.5	U	< 2.5	U
Acetonitrile	ug/L	NAL	NAL	< 50	U	< 0.5	U	< 0.5	U	< 5	U	< 5	U	< 0.5	U	< 0.5	U
Acrolein	ug/L	NAL	4	< 20	U	< 5	U	< 5	U	< 4	U	< 4	U	< 5	U	< 5	U
Acrylonitrile	ug/L	NAL	NAL	< 18	U	< 5	U	< 5	U	< 3.5	U	< 3.5	U	< 5	U	< 5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.55	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U
Benzene	ug/L	**1**	NAL	**3.1**	**J**	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U	0.035	J
Bromodichloromethane	ug/L	0.6	NAL	< 0.85	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Bromoform	ug/L	4	NAL	< 1.1	U	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U
Bromomethane	ug/L	NAL	10	< 0.7	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
Carbon Disulfide	ug/L	700	NAL	< 7.5	U	< 0.5	U	< 0.5	U	< 1.5	U	< 1.5	U	< 0.5	U	< 0.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.85	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Chlorobenzene	ug/L	**50**	NAL	< 0.85	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Chloroethane	ug/L	3000	NAL	< 1.2	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U
Chloroform	ug/L	**70**	NAL	3.2	J	0.066	J	0.063	J	< 0.18	U	< 0.18	U	1.4		1.1	
Chloromethane	ug/L	3	NAL	< 0.65	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**130**		< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	2.7		2.6	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 1	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.85	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Dibromomethane	ug/L	NAL	70	< 1.4	U	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 1	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 1.9	U	< 5	U	< 5	U	< 0.38	U	< 0.38	U	< 5	U	< 5	U
Ethylbenzene	ug/L	600	NAL	< 0.65	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U	< 0.5	U
Iodomethane	ug/L	NAL	NAL	< 8.5	U	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U
Isobutanol	ug/L	NAL	NAL	< 55	U	< 25	U	< 25	U	< 11	U	< 11	U	< 25	U	< 25	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.85	U	NS		NS		< 0.17	U	< 0.17	U	NS		NS	
Methyl Methacrylate	ug/L	NAL	25	< 2.6	U	< 5	U	< 5	U	< 0.51	U	< 0.51	U	< 5	U	< 5	U
Methylacrylonitrile	ug/L	NAL	NAL	< 24	U	< 5	U	< 5	U	< 4.9	U	< 4.9	U	< 5	U	< 5	U
Methylene Chloride	ug/L	**5**	NAL	2.3	J	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U	0.045	J
Naphthalene	ug/L	**6**	NAL	< 0.55	U	NS		NS		< 0.11	U	< 0.11	U	NS		NS	
o-Xylene	ug/L	500	NAL	< 0.32	U	NS		NS		< 0.065	U	< 0.065	U	NS		NS	
Pentachloroethane	ug/L	NAL	NAL	NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U	< 0.5	U
Propionitrile	ug/L	NAL	NAL	< 25	U	< 25	U	< 25	U	< 5	U	< 5	U	< 25	U	< 25	U
Styrene	ug/L	70	NAL	< 0.55	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U
Tetrachloroethene	ug/L	**0.7**	NAL	**3.7**	**J**	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	**0.73**		0.49	J
Toluene	ug/L	**600**	NAL	150		< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 1	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.75	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 3.5	U	< 2	U	< 2	U	< 0.7	U	< 0.7	U	< 2	U	< 2	U
Trichloroethene	ug/L	**3**	NAL	**27**		0.21	J	< 0.5	U	0.89	J	< 0.15	U	**17**		**15**	
Trichlorofluoromethane	ug/L	2000	NAL	< 1.2	U	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U	0.12	J	0.12	J
Vinyl Acetate	ug/L	NAL	88	< 4.8	U	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U
Vinyl Chloride	ug/L	**0.03**	NAL	**290**		< 0.5	U	< 0.5	U	< 0.32	U	< 0.32	U	< 0.5	U	< 0.5	U
Xylenes, Total	ug/L	**500**	NAL	< 2.2	U	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-48S		GW-48S		GW-49I		GW-49I		GW-49I		GW-49I		GW-4I	
			Sample Date	01/25/16		03/23/16		06/16/15		09/16/15		01/27/16		03/24/16		06/17/15	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		< 0.00047	U
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		0.00854	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		4.46	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		267		**665**		**731**		**336**		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.12	U	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.5	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U	< 0.5	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U
1,1-Dichloroethane	ug/L	**6**	NAL	0.76	J	0.74	J	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	0.29	J
1,1-Dichloroethene	ug/L	3501	NAL	21		17		< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U	< 0.5	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U	< 0.5	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	**0.88**	
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U	< 0.5	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	< 0.16	U	NS		NS		< 0.16	U	< 0.16	U	NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 1.3	U	< 1.3	U	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U	< 2.5	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	< 0.64	U	NS		NS		< 0.64	U	< 0.64	U	NS	
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U	< 2.5	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U	< 2.5	U
Acetone	ug/L	6000	NAL	< 1.2	U	< 1.2	U	< 2.5	U	2.2	J	< 1.2	U	< 1.2	U	< 2.5	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 0.5	U	< 0.5	U	< 5	U	< 5	U	< 0.5	U
Acrolein	ug/L	NAL	4	< 4	U	< 4	U	< 5	U	< 5	U	< 4	U	< 4	U	< 5	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 3.5	U	< 5	U	< 5	U	< 3.5	U	< 3.5	U	< 5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U
Benzene	ug/L	**1**	NAL	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	0.45	J
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U	< 0.5	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 1.5	U	< 0.5	U	< 0.5	U	< 1.5	U	< 1.5	U	< 0.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	0.062	J
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	1.3	
Chloroform	ug/L	**70**	NAL	0.73	J	0.73	J	< 0.5	U	< 0.5	U	< 0.18	U	< 0.18	U	< 0.5	U
Chloromethane	ug/L	3	NAL	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	2.4		2.3		< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	0.73	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U	< 0.5	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 0.38	U	< 5	U	< 5	U	< 0.38	U	< 0.38	U	< 5	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U	< 0.5	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 11	U	< 25	U	< 25	U	< 11	U	< 11	U	< 25	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	< 0.17	U	NS		NS		< 0.17	U	< 0.17	U	NS	
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 0.51	U	< 5	U	< 5	U	< 0.51	U	< 0.51	U	< 5	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 4.9	U	< 5	U	< 5	U	< 4.9	U	< 4.9	U	< 5	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	< 0.11	U	NS		NS		< 0.11	U	< 0.11	U	NS	
o-Xylene	ug/L	500	NAL	< 0.065	U	< 0.065	U	NS		NS		< 0.065	U	< 0.065	U	NS	
Pentachloroethane	ug/L	NAL	NAL	NS		NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U
Propionitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 25	U	< 25	U	< 5	U	< 5	U	< 25	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U
Tetrachloroethene	ug/L	**0.7**	NAL	**0.91**	**J**	0.68	J	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Toluene	ug/L	**600**	NAL	0.42	J	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	0.19	J
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 0.7	U	< 2	U	< 2	U	< 0.7	U	< 0.7	U	< 2	U
Trichloroethene	ug/L	**3**	NAL	**17**		**13**		< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	0.79	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.24	U	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U	< 0.5	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U	< 0.5	U
Vinyl Chloride	ug/L	**0.03**	NAL	< 0.32	U	< 0.32	U	< 0.5	U	< 0.5	U	< 0.32	U	< 0.32	U	**100**	
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U	< 0.5	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-4I		GW-4I		GW-53S		GW-53S		GW-53S		GW-53S		GW-6	
			Sample Date	01/26/16		03/28/16		06/16/15		09/16/15		01/25/16		03/22/16		06/15/15	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		95		NS		NS		NS		13		NS	
Sulfate	mg/L	250	NAL	NS		< 2.9	U	NS		NS		NS		18		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		510		NS		NS		NS		200		NS	
Nitrate	mg/L	NAL	NAL	NS		< 0.025	R	NS		NS		NS		0.041	J	NS	
Nitrite	mg/L	NAL	NAL	NS		< 0.017	U	NS		NS		NS		< 0.017	U	NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		< 0.041	R	NS		NS		NS		0.041	J	NS	
Phosphorus	mg/L	NAL	NAL	NS		0.029	J	NS		NS		NS		< 0.025	U	NS	
Ethane	mg/L	NAL	NAL	< 0.00047	U	< 0.00047	U	NS		NS		NS		< 0.00047	U	< 0.00047	U
Ethene	mg/L	NAL	NAL	0.0104		0.0111		NS		NS		NS		< 0.00062	U	< 0.00062	U
Methane	mg/L	NAL	NAL	18		8.91		NS		NS		NS		0.334		0.144	
Total Suspended Solids	mg/L	NAL	NAL	NS		9.5		NS		NS		NS		29		NS	
Sulfide	mg/L	NAL	NAL	NS		0.01	J	NS		NS		NS		< 0.01	U	NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		3.2		NS		NS		NS		2		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		29		NS		NS		NS		59		NS	
Total Organic Carbon	mg/L	NAL	NAL	4		1.9		NS		NS		NS		17		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		**3770**		NS		NS		NS		**13200**		**303**	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.12	U	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	0.12	J
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U	< 0.5	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U
1,1-Dichloroethane	ug/L	**6**	NAL	0.7	J	2.1		< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	1.2	
1,1-Dichloroethene	ug/L	3501	NAL	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	10	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		NS		0.11	J	< 0.5	U	NS		NS		< 0.5	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U	< 0.5	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U	< 0.5	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.19	U	0.15	J	< 0.5	U	< 0.19	U	< 0.19	U	0.062	J
1,2-Dichloroethane	ug/L	**0.4**	NAL	**1.3**		**1.2**		< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U	< 0.5	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.15	U	0.048	J	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	< 0.16	U	NS		NS		< 0.16	U	< 0.16	U	NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.19	U	0.29	J	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	2.2	J	< 1.3	U	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U	< 2.5	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	< 0.64	U	NS		NS		< 0.64	U	< 0.64	U	NS	
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U	< 2.5	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U	< 2.5	U
Acetone	ug/L	6000	NAL	< 1.2	U	< 1.2	U	< 2.5	U	3.2		< 1.2	U	< 1.2	U	< 2.5	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 0.5	U	< 0.5	U	< 5	U	< 5	U	< 0.5	U
Acrolein	ug/L	NAL	4	< 4	U	< 4	U	< 5	U	< 5	U	< 4	U	< 4	U	< 5	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 3.5	U	< 5	U	< 5	U	< 3.5	U	< 3.5	U	< 5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U
Benzene	ug/L	**1**	NAL	**4.5**		**2.3**		**1.9**		0.41	J	< 0.15	U	**3.6**		0.26	J
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U	< 0.5	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 1.5	U	0.12	J	0.2	J	< 1.5	U	< 1.5	U	0.053	J
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 0.17	U	8.9		3.2		< 0.17	U	11		0.042	J
Chloroethane	ug/L	3000	NAL	1.1		< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U
Chloroform	ug/L	**70**	NAL	< 0.18	U	< 0.18	U	< 0.5	U	< 0.5	U	< 0.18	U	< 0.18	U	0.39	J
Chloromethane	ug/L	3	NAL	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	< 0.15	U	4.6		0.081	J	< 0.5	U	< 0.15	U	< 0.15	U	9.8	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U	< 0.5	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 0.38	U	< 5	U	< 5	U	< 0.38	U	< 0.38	U	< 5	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 0.13	U	0.29	J	0.075	J	< 0.13	U	< 0.13	U	0.06	J
Hexachlorobutadiene	ug/L	0.4	NAL	NS		NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U	< 0.5	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 11	U	< 25	U	< 25	U	< 11	U	< 11	U	< 25	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	< 0.17	U	NS		NS		< 0.17	U	< 0.17	U	NS	
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 0.51	U	< 5	U	< 5	U	< 0.51	U	< 0.51	U	< 5	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 4.9	U	< 5	U	< 5	U	< 4.9	U	< 4.9	U	< 5	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	< 0.11	U	NS		NS		< 0.11	U	< 0.11	U	NS	
o-Xylene	ug/L	500	NAL	< 0.065	U	< 0.065	U	NS		NS		< 0.065	U	< 0.065	U	NS	
Pentachloroethane	ug/L	NAL	NAL	NS		NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U
Propionitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 25	U	< 25	U	< 5	U	< 5	U	< 25	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	**1.9**	
Toluene	ug/L	**600**	NAL	< 0.14	U	< 0.14	U	< 0.5	U	0.57		< 0.14	U	< 0.14	U	< 0.5	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	0.072	J
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 0.7	U	< 2	U	< 2	U	< 0.7	U	< 0.7	U	< 2	U
Trichloroethene	ug/L	**3**	NAL	**26**		0.4	J	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	**13**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.24	U	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U	< 0.5	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U	< 0.5	U
Vinyl Chloride	ug/L	**0.03**	NAL	**12**		**36**		< 0.5	U	< 0.5	U	< 0.32	U	< 0.32	U	**2.1**	
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U	0.054	J

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-6		GW-6		GW-6		GW-6I		GW-6I		GW-6I		GW-6I	
			Sample Date	09/15/15		01/19/16		03/21/16		06/15/15		06/15/15		09/14/15		09/14/15	
			N=Normal, FD=Field Duplicate	N		N		N		FD		N		FD		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		130		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		14		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		480		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		< 0.025	U	NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		< 0.017	U	NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		< 0.041	U	NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		< 0.025	U	NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	< 0.00047	U	0.000542	J	< 0.00047	U	NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	< 0.00062	U	< 0.00062	UJ	< 0.00062	U	NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	0.071		5.06	J	2.12		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		10		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		< 0.01	U	NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		< 2	U	NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		16		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		6		2.5		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	**1550**		**3150**		**1840**		NS		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,1,1-Trichloroethane	ug/L	200	NAL	0.14	J	< 0.12	U	< 0.12	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.5	U	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,1-Dichloroethane	ug/L	**6**	NAL	0.96		0.96	J	0.56	J	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,1-Dichloroethene	ug/L	3501	NAL	4.5		13		3.9		< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 0.5	U	NS		NS		< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.5	U	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.5	U	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	0.14	J	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.5	U	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,3-Dichloropropane	ug/L	NAL	NAL	NS		< 0.16	U	< 0.16	U	NS		NS		NS		NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 2.5	U	9.6		< 1.3	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		< 0.64	U	< 0.64	U	NS		NS		NS		NS	
2-Hexanone	ug/L	NAL	40	< 2.5	U	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 2.5	U	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U
Acetone	ug/L	6000	NAL	< 2.5	U	< 1.2	U	< 1.2	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U
Acetonitrile	ug/L	NAL	NAL	< 0.5	U	< 5	U	< 5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Acrolein	ug/L	NAL	4	< 5	U	< 4	U	< 4	U	< 5	U	< 5	U	< 5	U	< 5	U
Acrylonitrile	ug/L	NAL	NAL	< 5	U	< 3.5	U	< 3.5	U	< 5	U	< 5	U	< 5	U	< 5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Benzene	ug/L	**1**	NAL	0.089	J	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Bromodichloromethane	ug/L	0.6	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Bromoform	ug/L	4	NAL	< 0.5	U	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Bromomethane	ug/L	NAL	10	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Carbon Disulfide	ug/L	700	NAL	0.034	J	< 1.5	U	< 1.5	U	< 0.5	U	< 0.5	U	0.044	J	0.053	J
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Chlorobenzene	ug/L	**50**	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Chloroethane	ug/L	3000	NAL	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Chloroform	ug/L	**70**	NAL	0.33	J	< 0.18	U	< 0.18	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Chloromethane	ug/L	3	NAL	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	5.5		29		12		< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Dibromomethane	ug/L	NAL	70	< 0.5	U	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 5	U	< 0.38	U	< 0.38	U	< 5	U	< 5	U	< 5	U	< 5	U
Ethylbenzene	ug/L	600	NAL	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Hexachlorobutadiene	ug/L	0.4	NAL	< 0.5	U	NS		NS		< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Iodomethane	ug/L	NAL	NAL	< 0.5	U	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Isobutanol	ug/L	NAL	NAL	< 25	U	< 11	U	< 11	U	< 25	U	< 25	U	< 25	U	< 25	U
m,p-Xylenes	ug/L	**500**	NAL	NS		< 0.17	U	< 0.17	U	NS		NS		NS		NS	
Methyl Methacrylate	ug/L	NAL	25	< 5	U	< 0.51	U	< 0.51	U	< 5	U	< 5	U	< 5	U	< 5	U
Methylacrylonitrile	ug/L	NAL	NAL	< 5	U	< 4.9	U	< 4.9	U	< 5	U	< 5	U	< 5	U	< 5	U
Methylene Chloride	ug/L	**5**	NAL	0.054	J	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Naphthalene	ug/L	**6**	NAL	NS		< 0.11	U	< 0.11	U	NS		NS		NS		NS	
o-Xylene	ug/L	500	NAL	NS		< 0.065	U	< 0.065	U	NS		NS		NS		NS	
Pentachloroethane	ug/L	NAL	NAL	< 0.5	U	NS		NS		< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Propionitrile	ug/L	NAL	NAL	< 25	U	< 5	U	< 5	U	< 25	U	< 25	U	< 25	U	< 25	U
Styrene	ug/L	70	NAL	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Tetrachloroethene	ug/L	**0.7**	NAL	0.57		< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Toluene	ug/L	**600**	NAL	< 0.5	U	< 0.14	U	2.1		< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 2	U	< 0.7	U	< 0.7	U	< 2	U	< 2	U	< 2	U	< 2	U
Trichloroethene	ug/L	**3**	NAL	**8.7**		1.7		0.94	J	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Trichlorofluoromethane	ug/L	2000	NAL	< 0.5	U	< 0.24	U	< 0.24	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Vinyl Acetate	ug/L	NAL	88	< 0.5	U	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Vinyl Chloride	ug/L	**0.03**	NAL	**1.6**		**17**		**23**		< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Xylenes, Total	ug/L	**500**	NAL	< 0.5	U	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-6I		GW-6I		GW-6I		GW-6I		GW-7		GW-7		GW-7	
			Sample Date	01/19/16		01/19/16		03/21/16		03/21/16		06/16/15		09/17/15		01/21/16	
			N=Normal, FD=Field Duplicate	FD		N		N		FD		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		NS		**872**		**1540**		**1670**	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5	U	< 0.5	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U
1,1-Dichloroethene	ug/L	3501	NAL	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U	0.21	J	0.43	J	< 0.21	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		NS		NS		NS		< 0.5	U	< 0.5	U	NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U	NS		NS		< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 1.3	U	< 1.3	U	< 1.3	U	< 1.3	U	< 2.5	U	< 2.5	U	< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U	NS		NS		< 0.64	U
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 0.88	U	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 1.2	U	< 1.2	U	< 1.2	U	< 1.2	U	< 2.5	U	< 2.5	U	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 5	U	< 5	U	< 0.5	U	< 0.5	U	< 5	U
Acrolein	ug/L	NAL	4	< 4	U	< 4	U	< 4	U	< 4	U	< 5	U	< 5	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 5	U	< 5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U
Benzene	ug/L	**1**	NAL	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U	< 0.5	U	< 0.5	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	< 0.18	U	< 0.18	U	< 0.18	U	< 0.18	U	< 0.5	U	< 0.5	U	< 0.18	U
Chloromethane	ug/L	3	NAL	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	0.24	J	0.35	J	< 0.15	U
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U	< 5	U	< 5	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		NS		NS		NS		< 0.5	U	< 0.5	U	NS	
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 11	U	< 11	U	< 11	U	< 25	U	< 25	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	NS		NS		< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 5	U	< 5	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U	< 5	U	< 5	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	NS		NS		< 0.11	U
o-Xylene	ug/L	500	NAL	< 0.065	U	< 0.065	U	< 0.065	U	< 0.065	U	NS		NS		< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	NS		NS		NS		NS		< 0.5	U	< 0.5	U	NS	
Propionitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 5	U	< 5	U	< 25	U	< 25	U	< 5	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.5	U	0.06	J	< 0.17	U
Toluene	ug/L	**600**	NAL	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U	< 2	U	< 2	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	0.62		0.82		0.88	J
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.5	U	< 0.5	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	< 0.32	U	< 0.32	U	< 0.32	U	< 0.32	U	< 0.5	U	< 0.5	U	< 0.32	U
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.45	U	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-7		GW-8		GW-8		GW-8		GW-8		IW-01		IW-01	
			Sample Date	03/24/16		06/15/15		09/14/15		01/19/16		03/21/16		01/27/16		03/25/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	**1060**		**656**		**348**		**2060**		**370**		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 0.13	U	0.085	J	< 0.5	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U
1,1-Dichloroethene	ug/L	3501	NAL	< 0.21	U	0.37	J	0.31	J	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		< 0.5	U	< 0.5	U	NS		NS		NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	2.6		2.6	
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	2.6		2.6	
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	NS		NS		< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	**20**		**20**	
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 1.3	U	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U	< 1.3	U	< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	NS		NS		< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U	< 0.88	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 1.2	U	< 2.5	U	< 2.5	U	< 1.2	U	< 1.2	U	2.7	J	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 0.5	U	< 0.5	U	< 5	U	< 5	U	< 5	U	< 5	U
Acrolein	ug/L	NAL	4	< 4	U	< 5	U	< 5	U	< 4	U	< 4	U	< 4	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 5	U	< 5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
Benzene	ug/L	**1**	NAL	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	**2.7**		**2.2**	
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 0.5	U	< 0.5	U	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	1.1		1.6	
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	< 0.18	U	0.035	J	0.033	J	< 0.18	U	< 0.18	U	< 0.18	U	< 0.18	U
Chloromethane	ug/L	3	NAL	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	< 0.15	U	0.17	J	0.15	J	< 0.15	U	< 0.15	U	6.4		12	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 5	U	< 5	U	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	0.63	J	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		< 0.5	U	< 0.5	U	NS		NS		NS		NS	
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 25	U	< 25	U	< 11	U	< 11	U	< 11	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	NS		NS		< 0.17	U	< 0.17	U	0.66	J	< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 5	U	< 5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 5	U	< 5	U	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	NS		NS		< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
o-Xylene	ug/L	500	NAL	< 0.065	U	NS		NS		< 0.065	U	< 0.065	U	< 0.065	U	< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	NS		< 0.5	U	< 0.5	U	NS		NS		NS		NS	
Propionitrile	ug/L	NAL	NAL	< 5	U	< 25	U	< 25	U	< 5	U	< 5	U	< 5	U	< 5	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Toluene	ug/L	**600**	NAL	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	2.2		1.4	
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 2	U	< 2	U	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	0.7	J	0.48	J	0.43	J	< 0.15	U	0.52	J	< 1.2	U	1.4	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	< 0.32	U	< 0.5	U	< 0.5	U	< 0.32	U	< 0.32	U	**3.7**		**2.8**	
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U	0.66	J	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	IW-02		IW-02		IW-02		IW-03		IW-03		IW-03D		IW-05	
			Sample Date	10/23/15		01/27/16		03/28/16		01/27/16		03/28/16		03/23/16		03/22/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		31		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		< 2.9	U	NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		1000		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		< 0.025	R	NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		< 0.017	U	NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		< 0.041	R	NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		0.35		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		0.00513		< 0.00047	U	NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	NS		0.273		0.197		NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	NS		16.2		16.9		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		50		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		0.17		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		750	>	NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		1800		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		1000		660		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		**23800**		NS		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.5	U	< 1.7	U	< 3.4	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.34	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.5	U	< 1.2	U	< 2.4	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.24	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.5	U	< 2.8	U	< 5.6	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.56	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.5	U	< 1.4	U	< 2.8	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.28	U
1,1-Dichloroethane	ug/L	**6**	NAL	5		< 1.3	U	< 2.6	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.26	U
1,1-Dichloroethene	ug/L	3501	NAL	4.9		< 2.1	U	< 4.2	U	< 0.21	U	< 0.21	U	< 0.21	U	1.9	J
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.5	U	< 2.3	U	< 4.6	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.46	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 0.5	U	NS		NS		NS		NS		NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.5	U	< 4.8	U	< 9.6	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.96	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.5	U	< 6.6	U	< 13	U	< 0.66	U	< 0.66	U	< 0.66	U	< 1.3	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.5	U	< 1.9	U	< 3.8	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.38	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.5	U	**8.8**	**J**	< 4.2	U	< 0.21	U	< 0.21	U	< 0.21	U	**33**	
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.5	U	< 1	U	< 2	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.2	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.5	U	< 1.5	U	< 3	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.3	U
1,3-Dichloropropane	ug/L	NAL	NAL	NS		< 1.6	U	< 3.2	U	< 0.16	U	< 0.16	U	< 0.16	U	< 0.32	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.5	U	< 1.9	U	< 3.8	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.38	U
1,4-Dioxane	ug/L	**3**	NAL	**43**		< 250	U	< 500	U	< 25	U	< 25	U	< 25	U	< 50	U
2-Butanone	ug/L	4000	NAL	< 2.5	U	480		840		< 1.3	U	< 1.3	U	< 1.3	U	72	
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		< 6.4	U	< 13	U	< 0.64	U	< 0.64	U	< 0.64	U	< 1.3	U
2-Hexanone	ug/L	NAL	40	< 2.5	U	< 8.8	U	< 18	U	< 0.88	U	< 0.88	U	2.3	J	< 1.8	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	1.3	J	< 11	U	< 22	U	< 1.1	U	< 1.1	U	< 1.1	U	< 2.2	U
Acetone	ug/L	6000	NAL	18		< 12	U	150		9.1		< 1.2	U	< 1.2	U	20	
Acetonitrile	ug/L	NAL	NAL	< 0.5	U	< 50	U	< 100	U	< 5	U	< 5	U	< 5	U	< 10	U
Acrolein	ug/L	NAL	4	< 5	U	< 40	U	< 80	U	< 4	U	< 4	U	< 4	U	< 8	U
Acrylonitrile	ug/L	NAL	NAL	< 5	U	< 35	U	< 70	U	< 3.5	U	< 3.5	U	< 3.5	U	< 7	U
Allyl Chloride	ug/L	NAL	NAL	< 0.5	U	< 1.1	U	< 2.2	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.22	U
Benzene	ug/L	**1**	NAL	**100**		**53**		**50**		**1.7**		0.99	J	0.63	J	**1.6**	**J**
Bromodichloromethane	ug/L	0.6	NAL	< 0.5	U	< 1.7	U	< 3.4	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.34	U
Bromoform	ug/L	4	NAL	< 0.5	U	< 2.2	U	< 4.4	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.44	U
Bromomethane	ug/L	NAL	10	< 0.5	U	< 1.4	U	< 2.8	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.28	U
Carbon Disulfide	ug/L	700	NAL	0.21	J	< 15	U	< 30	U	< 1.5	U	< 1.5	U	< 1.5	U	< 3	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.5	U	< 1.7	U	< 3.4	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.34	U
Chlorobenzene	ug/L	**50**	NAL	3.7		< 1.7	U	< 3.4	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.34	U
Chloroethane	ug/L	3000	NAL	< 0.5	U	< 2.3	U	< 4.6	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.46	U
Chloroform	ug/L	**70**	NAL	1.6		< 1.8	U	< 3.6	U	< 0.18	U	< 0.18	U	< 0.18	U	< 0.36	U
Chloromethane	ug/L	3	NAL	< 0.5	U	< 1.3	U	< 2.6	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.26	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**520**		**220**		**120**		0.52	J	1.3		< 0.15	U	**260**	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.5	U	< 2	U	< 4	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.4	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.5	U	< 1.7	U	< 3.4	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.34	U
Dibromomethane	ug/L	NAL	70	< 0.5	U	< 2.7	U	< 5.4	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.54	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.5	U	< 2	U	< 4	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.4	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 5	U	< 3.8	U	< 7.6	U	< 0.38	U	< 0.38	U	< 0.38	U	< 0.76	U
Ethylbenzene	ug/L	600	NAL	4		< 1.3	U	< 2.6	U	0.65	J	< 0.13	U	< 0.13	U	< 0.26	U
Hexachlorobutadiene	ug/L	0.4	NAL	< 0.5	U	NS		NS		NS		NS		NS		NS	
Iodomethane	ug/L	NAL	NAL	< 0.5	U	< 17	U	< 34	U	< 1.7	U	< 1.7	U	< 1.7	U	< 3.4	U
Isobutanol	ug/L	NAL	NAL	< 25	U	< 110	U	< 220	U	< 11	U	< 11	U	< 11	U	< 22	U
m,p-Xylenes	ug/L	**500**	NAL	NS		< 1.7	U	< 3.4	U	0.66	J	< 0.17	U	< 0.17	U	< 0.34	U
Methyl Methacrylate	ug/L	NAL	25	< 5	U	< 5.1	U	< 10	U	< 0.51	U	< 0.51	U	< 0.51	U	< 1	U
Methylacrylonitrile	ug/L	NAL	NAL	< 5	U	< 49	U	< 98	U	< 4.9	U	< 4.9	U	< 4.9	U	< 9.8	U
Methylene Chloride	ug/L	**5**	NAL	0.31	J	< 2.3	U	< 4.6	U	< 0.23	U	1.1		< 0.23	U	**9.7**	
Naphthalene	ug/L	**6**	NAL	NS		< 1.1	U	< 2.2	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.22	U
o-Xylene	ug/L	500	NAL	NS		< 0.65	U	< 1.3	U	< 0.065	U	< 0.065	U	< 0.065	U	< 0.13	U
Pentachloroethane	ug/L	NAL	NAL	< 0.5	U	NS		NS		NS		NS		NS		NS	
Propionitrile	ug/L	NAL	NAL	< 25	U	< 50	U	< 100	U	< 5	U	< 5	U	< 5	U	< 10	U
Styrene	ug/L	70	NAL	< 0.5	U	< 1.1	U	< 2.2	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.22	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.5	U	< 1.7	U	< 3.4	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.34	U
Toluene	ug/L	**600**	NAL	28		17		14	J	1.9		1.3		< 3.4	U	14	
trans-1,2-Dichloroethene	ug/L	**100**	NAL	9.6		< 2.1	U	< 4.2	U	< 0.21	U	< 0.21	U	< 0.21	U	< 0.42	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.5	U	< 1.5	U	< 3	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.3	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 2	U	< 7	U	< 14	U	< 0.7	U	< 0.7	U	< 0.7	U	< 1.4	U
Trichloroethene	ug/L	**3**	NAL	0.61		**4.7**	**J**	< 3	U	< 0.15	U	1.4		< 0.15	U	**22**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.5	U	< 2.4	U	< 4.8	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.48	U
Vinyl Acetate	ug/L	NAL	88	0.65		< 9.5	U	< 19	U	< 0.95	U	< 0.95	U	< 0.95	U	< 1.9	U
Vinyl Chloride	ug/L	**0.03**	NAL	**3800**		**1700**		**1400**		< 0.32	U	< 0.32	U	**0.79**	**J**	**0.86**	**J**
Xylenes, Total	ug/L	**500**	NAL	16		< 4.5	U	< 9	U	0.66	J	< 0.45	U	< 0.45	U	< 0.9	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	IW-06		IW-06D		IW-08		IW-08D		IW-10		IW-10D		IW-11	
			Sample Date	03/22/16		03/22/16		03/22/16		03/22/16		03/22/16		03/22/16		03/22/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		NS		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 0.13	U	< 0.13	U	0.92	J	1.5		< 0.13	U	< 0.13	U	< 0.13	U
1,1-Dichloroethene	ug/L	3501	NAL	0.72	J	< 0.21	U	5.4		2.9		0.8	J	< 0.21	U	< 0.21	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		NS		NS		NS		NS		NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	**42**		< 0.21	U	**17**		**0.91**	**J**	**4**		< 0.21	U	**2.1**	
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	98		< 1.3	U	< 1.3	U	38		12		36		24	
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 0.88	U	< 0.88	U	< 0.88	U	< 0.88	U	< 0.88	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U
Acetone	ug/L	6000	NAL	23		< 1.2	U	11		< 1.2	U	26		32		11	
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U
Acrolein	ug/L	NAL	4	< 4	U	< 4	U	< 4	U	< 4	U	< 4	U	< 4	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
Benzene	ug/L	**1**	NAL	**2.5**		0.97	J	**2.9**		0.61	J	**3.4**		**1.8**		**7.8**	
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	0.63	J	< 0.17	U	0.57	J	< 0.17	U	0.5	J	< 0.17	U	0.69	J
Chloroethane	ug/L	3000	NAL	5.2		< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	0.68	J	< 0.18	U	3		< 0.18	U	< 0.18	U	< 0.18	U	< 0.18	U
Chloromethane	ug/L	3	NAL	2.4		< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	51		1.8		**480**		3.6		36		0.65	J	12	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		NS		NS		NS		NS		NS		NS	
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 11	U	< 11	U	< 11	U	< 11	U	< 11	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	**13**		< 0.23	U	0.43	J	< 0.23	U	2		< 0.23	U	0.79	J
Naphthalene	ug/L	**6**	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
o-Xylene	ug/L	500	NAL	< 0.065	U	< 0.065	U	< 0.065	U	< 0.065	U	< 0.065	U	< 0.065	U	< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Propionitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Toluene	ug/L	**600**	NAL	1.5		5.3		< 0.14	U	2.6		2.5		2.6		1.8	
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	< 0.21	U	5.2		< 0.21	U	0.97	J	< 0.21	U	< 0.21	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	**41**		0.43	J	**19**		0.83	J	2.5		< 0.15	U	0.68	J
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**5.1**		< 0.32	U	**130**		**29**		**67**		**2.9**		**36**	
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.45	U	< 0.45	U	< 0.45	U	< 0.45	U	< 0.45	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	IW-12		IW-12		IW-12		IW-12		IW-12D		IW-12D		IW-12D	
			Sample Date	06/18/15		09/16/15		01/25/16		03/28/16		06/18/15		09/16/15		01/27/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		28		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		3.1	J	NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		660		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		< 0.025	R	NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		< 0.017	U	NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		< 0.041	R	NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		0.097	J	NS		NS		NS	
Ethane	mg/L	NAL	NAL	0.136		0.172		0.0194		0.0114		0.0358		0.0362		0.0308	
Ethene	mg/L	NAL	NAL	0.2		0.218		0.0639		0.0519		0.123		0.152		0.0582	
Methane	mg/L	NAL	NAL	3.77		6.47		9.06		11.3		11.7		13.8		13.6	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		35		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		0.17		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		740	>	NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		1200		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		1400		400		NS		NS		1400	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		**4340**		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 130	U	< 130	U	< 0.17	U	< 3.4	U	< 2.8	U	< 6.3	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 130	U	< 130	U	< 0.12	U	< 2.4	U	< 2.8	U	< 6.3	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 130	U	< 130	U	< 0.28	U	< 5.6	U	< 2.8	U	< 6.3	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 130	U	< 130	U	< 0.14	U	< 2.8	U	< 2.8	U	< 6.3	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 130	U	**14**	**J**	4.2		**12**	**J**	0.62	J	0.84	J	0.55	J
1,1-Dichloroethene	ug/L	3501	NAL	150		150		31		100		0.64	J	2.4	J	2.1	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 130	U	< 130	U	< 0.23	U	< 4.6	U	< 2.8	U	< 6.3	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 130	U	< 130	U	NS		NS		< 2.8	U	< 6.3	U	NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 130	U	< 130	U	< 0.48	U	< 9.6	U	< 2.8	U	< 6.3	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 130	U	< 130	U	< 0.66	U	< 13	U	< 2.8	U	< 6.3	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 130	U	15	J	0.91	J	< 3.8	U	< 2.8	U	< 6.3	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	**1800**		**1400**		**380**		**1500**		**38**		**23**		**78**	
1,2-Dichloropropane	ug/L	0.6	NAL	< 130	U	< 130	U	< 0.1	U	< 2	U	< 2.8	U	< 6.3	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 130	U	< 130	U	< 0.15	U	< 3	U	< 2.8	U	< 6.3	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	NS		NS		< 0.16	U	< 3.2	U	NS		NS		< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 130	U	< 130	U	< 0.19	U	< 3.8	U	< 2.8	U	< 6.3	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 6300	U	< 6300	U	< 25	U	< 500	U	< 140	U	< 310	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 630	U	< 630	U	460		< 26	U	< 14	U	< 31	U	1100	
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		NS		< 0.64	U	< 13	U	NS		NS		< 0.64	U
2-Hexanone	ug/L	NAL	40	< 630	U	< 630	U	< 0.88	U	< 18	U	< 14	U	< 31	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 630	U	< 630	U	5		< 22	U	< 14	U	< 31	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 630	U	< 630	U	60		< 24	U	14	J	< 31	U	23	
Acetonitrile	ug/L	NAL	NAL	< 130	U	< 130	U	< 5	U	< 100	U	< 2.8	U	< 6.3	U	< 5	U
Acrolein	ug/L	NAL	4	< 1300	U	< 1300	U	< 4	U	< 80	U	< 28	U	< 63	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 1300	U	< 1300	U	< 3.5	U	< 70	U	< 28	U	< 63	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 130	U	< 130	U	< 0.11	U	< 2.2	U	< 2.8	U	< 6.3	U	< 0.11	U
Benzene	ug/L	**1**	NAL	**300**		**250**		**88**		**190**		**14**		**19**		**17**	
Bromodichloromethane	ug/L	0.6	NAL	< 130	U	< 130	U	< 0.17	U	< 3.4	U	< 2.8	U	< 6.3	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 130	U	< 130	U	< 0.22	U	< 4.4	U	< 2.8	U	< 6.3	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 130	U	< 130	U	< 0.14	U	< 2.8	U	< 2.8	U	< 6.3	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 130	U	< 130	U	< 1.5	U	< 30	U	0.53	J	0.6	J	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 130	U	< 130	U	< 0.17	U	< 3.4	U	< 2.8	U	< 6.3	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	**150**		**110**	**J**	**55**		**94**		1.8	J	< 6.3	U	1.4	
Chloroethane	ug/L	3000	NAL	< 130	U	< 130	U	< 0.23	U	< 4.6	U	< 2.8	U	< 6.3	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	**1000**		**630**		21		**430**		1.3	J	1.1	J	< 0.18	U
Chloromethane	ug/L	3	NAL	< 130	U	< 130	U	< 0.13	U	< 2.6	U	< 2.8	U	< 6.3	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**5100**		**4300**		**2900**		**8800**		**110**		**190**		**390**	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 130	U	< 130	U	< 0.2	U	< 4	U	< 2.8	U	< 6.3	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 130	U	< 130	U	< 0.17	U	< 3.4	U	< 2.8	U	< 6.3	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 130	U	< 130	U	< 0.27	U	< 5.4	U	< 2.8	U	< 6.3	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 130	U	< 130	U	< 0.2	U	< 4	U	< 2.8	U	< 6.3	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 1300	U	< 1300	U	< 0.38	U	< 7.6	U	< 28	U	< 63	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	30	J	23	J	12		8.8	J	0.59	J	0.5	J	0.81	J
Hexachlorobutadiene	ug/L	0.4	NAL	< 130	U	< 130	U	NS		NS		< 2.8	U	< 6.3	U	NS	
Iodomethane	ug/L	NAL	NAL	< 130	U	< 130	U	< 1.7	U	< 34	U	< 2.8	U	< 6.3	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 6300	U	< 6300	U	< 11	U	< 220	U	< 140	U	< 310	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	NS		NS		18		< 3.4	U	NS		NS		1.5	J
Methyl Methacrylate	ug/L	NAL	25	< 1300	U	< 1300	U	< 0.51	U	< 10	U	< 28	U	< 63	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 1300	U	< 1300	U	< 4.9	U	< 98	U	< 28	U	< 63	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	**200**		**150**		**95**		**76**		**5.3**		< 6.3	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	NS		NS		4.2		< 2.2	U	NS		NS		< 0.11	U
o-Xylene	ug/L	500	NAL	NS		NS		14		20		NS		NS		< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	< 130	U	< 130	U	NS		NS		< 2.8	U	< 6.3	U	NS	
Propionitrile	ug/L	NAL	NAL	< 6300	U	< 6300	U	< 5	U	< 100	U	< 140	U	< 310	U	< 5	U
Styrene	ug/L	70	NAL	< 130	U	< 130	U	< 0.11	U	< 2.2	U	< 2.8	U	< 6.3	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	**370**		**200**		**11**		**92**		< 2.8	U	< 6.3	U	< 0.17	U
Toluene	ug/L	**600**	NAL	< 130	U	< 130	U	25		41		22		< 6.3	U	12	
trans-1,2-Dichloroethene	ug/L	**100**	NAL	85	J	90	J	31		92		2.8		5.9	J	5	
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 130	U	< 130	U	< 0.15	U	< 3	U	< 2.8	U	< 6.3	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 500	U	< 500	U	< 0.7	U	< 14	U	< 11	U	< 25	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	**9500**		**7300**		**66**		**1900**		**3.4**		**24**		**12**	
Trichlorofluoromethane	ug/L	2000	NAL	< 130	U	< 130	U	< 0.24	U	< 4.8	U	< 2.8	U	< 6.3	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 130	U	< 130	U	< 0.95	U	< 19	U	< 2.8	U	< 6.3	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**71**	**J**	**78**	**J**	**120**		**200**		**220**		**260**		**120**	
Xylenes, Total	ug/L	**500**	NAL	85	J	63	J	32		20	J	1.7	J	0.63	J	1.5	J

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	IW-12D		IW-14		IW-14		IW-14		IW-14		IW-14D		IW-16	
			Sample Date	03/28/16		06/18/15		09/16/15		01/25/16		03/25/16		03/23/16		06/18/15	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	73		NS		NS		NS		52		NS		NS	
Sulfate	mg/L	250	NAL	< 2.9	U	NS		NS		NS		< 2.9	U	NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	1500		NS		NS		NS		1900		NS		NS	
Nitrate	mg/L	NAL	NAL	0.099	J	NS		NS		NS		< 0.025	R	NS		NS	
Nitrite	mg/L	NAL	NAL	< 0.017	U	NS		NS		NS		< 0.017	U	NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	0.099	J	NS		NS		NS		< 0.041	R	NS		NS	
Phosphorus	mg/L	NAL	NAL	1.1		NS		NS		NS		0.55		NS		NS	
Ethane	mg/L	NAL	NAL	0.00428		0.0488		0.052		< 0.00047	U	< 0.00047	U	NS		0.0386	
Ethene	mg/L	NAL	NAL	0.0212		0.263		0.122		< 0.00062	U	0.014		NS		0.796	
Methane	mg/L	NAL	NAL	15		6.63		9.64		15.9		9.7		NS		2.74	
Total Suspended Solids	mg/L	NAL	NAL	150		NS		NS		NS		210		NS		NS	
Sulfide	mg/L	NAL	NAL	0.084	J	NS		NS		NS		0.18		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	740		NS		NS		NS		70	>	NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	1400		NS		NS		NS		3800		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	460		NS		NS		2000		1100		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	**60900**		NS		NS		NS		**108000**		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 1.7	U	< 42	U	< 1	U	< 0.17	U	< 0.85	U	< 1.7	U	< 830	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 1.2	U	< 42	U	< 1	U	< 0.12	U	< 0.6	U	< 1.2	U	< 830	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 2.8	U	< 42	U	< 1	U	< 0.28	U	< 1.4	U	< 2.8	U	< 830	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 1.4	U	< 42	U	< 1	U	< 0.14	U	< 0.7	U	< 1.4	U	< 830	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 1.3	U	< 42	U	0.074	J	0.74	J	< 0.65	U	< 1.3	U	**160**	**J**
1,1-Dichloroethene	ug/L	3501	NAL	< 2.1	U	38	J	0.44	J	3.1		< 1	U	< 2.1	U	440	J
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 2.3	U	< 42	U	< 1	U	< 0.23	U	< 1.2	U	< 2.3	U	< 830	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		< 42	U	< 1	U	NS		NS		NS		< 830	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 4.8	U	< 42	U	< 1	U	< 0.48	U	< 2.4	U	< 4.8	U	< 830	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 6.6	U	< 42	U	< 1	U	< 0.66	U	< 3.3	U	< 6.6	U	< 830	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 1.9	U	< 42	U	< 1	U	< 0.19	U	< 0.95	U	< 1.9	U	< 830	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 2.1	U	**100**		**1.7**		**52**		**10**		< 2.1	U	**4800**	
1,2-Dichloropropane	ug/L	0.6	NAL	< 1	U	< 42	U	< 1	U	< 0.1	U	< 0.5	U	< 1	U	< 830	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 1.5	U	< 42	U	< 1	U	< 0.15	U	< 0.75	U	< 1.5	U	< 830	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 1.6	U	NS		NS		< 0.16	U	< 0.8	U	< 1.6	U	NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 1.9	U	< 42	U	< 1	U	< 0.19	U	< 0.95	U	< 1.9	U	< 830	U
1,4-Dioxane	ug/L	**3**	NAL	< 250	U	< 2100	U	< 52	U	< 25	U	< 120	U	< 250	U	< 42000	U
2-Butanone	ug/L	4000	NAL	1300		< 210	U	< 5.2	U	190		320		1200		< 4200	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 6.4	U	NS		NS		< 0.64	U	< 3.2	U	< 6.4	U	NS	
2-Hexanone	ug/L	NAL	40	< 8.8	U	< 210	U	< 5.2	U	< 0.88	U	< 4.4	U	< 8.8	U	< 4200	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 11	U	< 210	U	< 5.2	U	< 1.1	U	< 5.5	U	< 11	U	< 4200	U
Acetone	ug/L	6000	NAL	41	J	< 210	U	< 5.2	U	15		64		< 12	U	< 4200	U
Acetonitrile	ug/L	NAL	NAL	150		< 42	U	< 1	U	< 5	U	< 50	U	< 50	U	< 830	U
Acrolein	ug/L	NAL	4	< 40	U	< 420	U	< 10	U	< 4	U	< 20	U	< 40	U	< 8300	U
Acrylonitrile	ug/L	NAL	NAL	< 35	U	< 420	U	< 10	U	< 3.5	U	< 18	U	< 35	U	< 8300	U
Allyl Chloride	ug/L	NAL	NAL	< 1.1	U	< 42	U	< 1	U	< 0.11	U	< 0.55	U	< 1.1	U	< 830	U
Benzene	ug/L	**1**	NAL	**41**		**41**	**J**	**1.4**		**13**		**7.6**		< 1.5	U	**750**	**J**
Bromodichloromethane	ug/L	0.6	NAL	< 1.7	U	< 42	U	< 1	U	< 0.17	U	< 0.85	U	< 1.7	U	< 830	U
Bromoform	ug/L	4	NAL	< 2.2	U	< 42	U	< 1	U	< 0.22	U	< 1.1	U	< 2.2	U	< 830	U
Bromomethane	ug/L	NAL	10	< 1.4	U	< 42	U	< 1	U	< 0.14	U	< 0.7	U	< 1.4	U	< 830	U
Carbon Disulfide	ug/L	700	NAL	< 15	U	< 42	U	< 1	U	< 1.5	U	< 7.5	U	< 15	U	< 830	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 1.7	U	< 42	U	< 1	U	< 0.17	U	< 0.85	U	< 1.7	U	< 830	U
Chlorobenzene	ug/L	**50**	NAL	< 1.7	U	< 42	U	< 1	U	< 0.17	U	< 0.85	U	< 1.7	U	< 830	U
Chloroethane	ug/L	3000	NAL	< 2.3	U	< 42	U	< 1	U	< 0.23	U	< 1.2	U	< 2.3	U	< 830	U
Chloroform	ug/L	**70**	NAL	< 1.8	U	22	J	0.11	J	< 0.18	U	< 0.9	U	< 1.8	U	**4500**	
Chloromethane	ug/L	3	NAL	< 1.3	U	< 42	U	< 1	U	< 0.13	U	< 0.65	U	< 1.3	U	< 830	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**120**		**2800**		51		**310**		**150**		4.6	J	**23000**	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 2	U	< 42	U	< 1	U	< 0.2	U	< 1	U	< 2	U	< 830	U
Dibromochloromethane	ug/L	0.4	NAL	< 1.7	U	< 42	U	< 1	U	< 0.17	U	< 0.85	U	< 1.7	U	< 830	U
Dibromomethane	ug/L	NAL	70	< 2.7	U	< 42	U	< 1	U	< 0.27	U	< 1.4	U	< 2.7	U	< 830	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 2	U	< 42	U	< 1	U	< 0.2	U	< 1	U	< 2	U	< 830	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 3.8	U	< 420	U	< 10	U	< 0.38	U	< 1.9	U	< 3.8	U	< 8300	U
Ethylbenzene	ug/L	600	NAL	< 1.3	U	< 42	U	< 1	U	0.61	J	< 0.65	U	< 1.3	U	67	J
Hexachlorobutadiene	ug/L	0.4	NAL	NS		< 42	U	< 1	U	NS		NS		NS		< 830	U
Iodomethane	ug/L	NAL	NAL	< 17	U	< 42	U	< 1	U	< 1.7	U	< 8.5	U	< 17	U	< 830	U
Isobutanol	ug/L	NAL	NAL	< 110	U	< 2100	U	< 52	U	< 11	U	< 55	U	< 110	U	< 42000	U
m,p-Xylenes	ug/L	**500**	NAL	< 1.7	U	NS		NS		1.2	J	< 0.85	U	< 1.7	U	NS	
Methyl Methacrylate	ug/L	NAL	25	< 5.1	U	< 420	U	< 10	U	< 0.51	U	< 2.6	U	< 5.1	U	< 8300	U
Methylacrylonitrile	ug/L	NAL	NAL	< 49	U	< 420	U	< 10	U	< 4.9	U	< 24	U	< 49	U	< 8300	U
Methylene Chloride	ug/L	**5**	NAL	< 2.3	U	< 42	U	< 1	U	< 0.23	U	2.6	J	< 2.3	U	< 830	U
Naphthalene	ug/L	**6**	NAL	< 1.1	U	NS		NS		< 0.11	U	< 0.55	U	< 1.1	U	NS	
o-Xylene	ug/L	500	NAL	< 0.65	U	NS		NS		< 0.065	U	< 0.32	U	< 0.65	U	NS	
Pentachloroethane	ug/L	NAL	NAL	NS		< 42	U	< 1	U	NS		NS		NS		< 830	U
Propionitrile	ug/L	NAL	NAL	< 50	U	< 2100	U	< 52	U	< 5	U	< 25	U	< 50	U	< 42000	U
Styrene	ug/L	70	NAL	< 1.1	U	< 42	U	< 1	U	< 0.11	U	< 0.55	U	< 1.1	U	< 830	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 1.7	U	< 42	U	< 1	U	< 0.17	U	< 0.85	U	< 1.7	U	< 830	U
Toluene	ug/L	**600**	NAL	16		< 42	U	< 1	U	7.8		3.4	J	8	J	< 830	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	14		23	J	0.54	J	4.6		5.4		< 2.1	U	**180**	**J**
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 1.5	U	< 42	U	< 1	U	< 0.15	U	< 0.75	U	< 1.5	U	< 830	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 7	U	< 170	U	< 4.2	U	< 0.7	U	< 3.5	U	< 7	U	< 3300	U
Trichloroethene	ug/L	**3**	NAL	**4.5**	**J**	**86**		0.74	J	**10**		**3.9**	**J**	< 1.5	U	**39000**	
Trichlorofluoromethane	ug/L	2000	NAL	< 2.4	U	< 42	U	< 1	U	< 0.24	U	< 1.2	U	< 2.4	U	< 830	U
Vinyl Acetate	ug/L	NAL	88	< 9.5	U	< 42	U	< 1	U	< 0.95	U	< 4.8	U	< 9.5	U	< 830	U
Vinyl Chloride	ug/L	**0.03**	NAL	**890**		**620**		**23**		**200**		**290**		< 3.2	U	**4400**	
Xylenes, Total	ug/L	**500**	NAL	< 4.5	U	< 42	U	0.069	J	1.2	J	< 2.2	U	< 4.5	U	57	J

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	IW-16		IW-16		IW-16		IW-18		IW-18		IW-18		IW-18	
			Sample Date	09/16/15		01/26/16		03/28/16		06/17/15		09/16/15		01/27/16		03/28/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		120		NS		NS		NS		75	
Sulfate	mg/L	250	NAL	NS		NS		< 2.9	U	NS		NS		NS		< 2.9	U
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		480		NS		NS		NS		880	
Nitrate	mg/L	NAL	NAL	NS		NS		< 0.025	R	NS		NS		NS		0.066	J
Nitrite	mg/L	NAL	NAL	NS		NS		< 0.017	U	NS		NS		NS		< 0.017	U
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		< 0.041	R	NS		NS		NS		0.066	J
Phosphorus	mg/L	NAL	NAL	NS		NS		0.26		NS		NS		NS		0.27	
Ethane	mg/L	NAL	NAL	0.0609		0.0409		0.0206		0.189		0.829		0.165		0.0915	
Ethene	mg/L	NAL	NAL	0.825		1.05		0.537		1.91		2.04		1.39		0.43	
Methane	mg/L	NAL	NAL	2.46		2.95		5.62		2.92		6.18		15.3		20.3	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		21		NS		NS		NS		89	
Sulfide	mg/L	NAL	NAL	NS		NS		0.06	J	NS		NS		NS		0.011	J
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		300		NS		NS		NS		730	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		420		NS		NS		NS		1300	
Total Organic Carbon	mg/L	NAL	NAL	NS		410		120		NS		NS		650		410	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		**18100**		NS		NS		NS		**34800**	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 130	U	< 17	U	< 170	U	< 42	U	< 13	U	< 1.7	U	< 0.85	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 130	U	< 12	U	< 120	U	< 42	U	< 13	U	< 1.2	U	< 0.6	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	**21**	**J**	< 28	U	< 280	U	< 42	U	< 13	U	< 2.8	U	< 1.4	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 130	U	< 14	U	< 140	U	< 42	U	< 13	U	< 1.4	U	< 0.7	U
1,1-Dichloroethane	ug/L	**6**	NAL	**140**		**230**		< 130	U	**61**		**60**		**32**		**12**	
1,1-Dichloroethene	ug/L	3501	NAL	390		700		570	J	< 42	U	< 13	U	5.1	J	2.2	J
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 130	U	< 23	U	< 230	U	< 42	U	< 13	U	< 2.3	U	< 1.2	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 130	U	NS		NS		< 42	U	< 13	U	NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 130	U	< 48	U	< 480	U	< 42	U	< 13	U	< 4.8	U	< 2.4	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 130	U	< 66	U	< 660	U	< 42	U	< 13	U	< 6.6	U	< 3.3	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 130	U	< 19	U	< 190	U	< 42	U	< 13	U	< 1.9	U	< 0.95	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	**4000**		**7800**		**8000**		**17**	**J**	**17**		**60**		**23**	
1,2-Dichloropropane	ug/L	0.6	NAL	< 130	U	< 10	U	< 100	U	< 42	U	< 13	U	< 1	U	< 0.5	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 130	U	< 15	U	< 150	U	< 42	U	< 13	U	< 1.5	U	< 0.75	U
1,3-Dichloropropane	ug/L	NAL	NAL	NS		< 16	U	< 160	U	NS		NS		< 1.6	U	< 0.8	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 130	U	< 19	U	< 190	U	< 42	U	< 13	U	< 1.9	U	< 0.95	U
1,4-Dioxane	ug/L	**3**	NAL	< 6300	U	< 2500	U	< 25000	U	< 2100	U	**280**	**J**	< 250	U	< 120	U
2-Butanone	ug/L	4000	NAL	< 630	U	< 130	U	< 1300	U	< 210	U	< 63	U	170		140	
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		< 64	U	< 640	U	NS		NS		< 6.4	U	< 3.2	U
2-Hexanone	ug/L	NAL	40	< 630	U	< 88	U	< 880	U	< 210	U	< 63	U	< 8.8	U	< 4.4	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 630	U	< 110	U	< 1100	U	< 210	U	< 63	U	< 11	U	< 5.5	U
Acetone	ug/L	6000	NAL	< 630	U	< 120	U	< 1200	U	< 210	U	< 63	U	110		49	
Acetonitrile	ug/L	NAL	NAL	< 130	U	< 500	U	< 5000	U	< 42	U	< 13	U	< 50	U	< 25	U
Acrolein	ug/L	NAL	4	< 1300	U	< 400	U	< 4000	U	< 420	U	< 130	U	< 40	U	< 20	U
Acrylonitrile	ug/L	NAL	NAL	< 1300	U	< 350	U	< 3500	U	< 420	U	< 130	U	< 35	U	< 18	U
Allyl Chloride	ug/L	NAL	NAL	< 130	U	< 11	U	< 110	U	< 42	U	< 13	U	< 1.1	U	< 0.55	U
Benzene	ug/L	**1**	NAL	**780**		**1200**		**1100**		**270**		**220**		**190**		**130**	
Bromodichloromethane	ug/L	0.6	NAL	< 130	U	< 17	U	< 170	U	< 42	U	< 13	U	< 1.7	U	< 0.85	U
Bromoform	ug/L	4	NAL	< 130	U	< 22	U	< 220	U	< 42	U	< 13	U	< 2.2	U	< 1.1	U
Bromomethane	ug/L	NAL	10	< 130	U	< 14	U	< 140	U	< 42	U	< 13	U	< 1.4	U	< 0.7	U
Carbon Disulfide	ug/L	700	NAL	< 130	U	< 150	U	< 1500	U	< 42	U	< 13	U	< 15	U	< 7.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 130	U	< 17	U	< 170	U	< 42	U	< 13	U	< 1.7	U	< 0.85	U
Chlorobenzene	ug/L	**50**	NAL	22	J	< 17	U	< 170	U	**64**		**52**		28		26	
Chloroethane	ug/L	3000	NAL	< 130	U	< 23	U	< 230	U	< 42	U	< 13	U	< 2.3	U	21	
Chloroform	ug/L	**70**	NAL	**3300**		**4000**		**5500**		< 42	U	< 13	U	10		< 0.9	U
Chloromethane	ug/L	3	NAL	< 130	U	< 13	U	< 130	U	< 42	U	< 13	U	< 1.3	U	< 0.65	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**23000**		**71000**		**71000**		7.5	J	17		**400**		61	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 130	U	< 20	U	< 200	U	< 42	U	< 13	U	< 2	U	< 1	U
Dibromochloromethane	ug/L	0.4	NAL	< 130	U	< 17	U	< 170	U	< 42	U	< 13	U	< 1.7	U	< 0.85	U
Dibromomethane	ug/L	NAL	70	< 130	U	< 27	U	< 270	U	< 42	U	< 13	U	< 2.7	U	< 1.4	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 130	U	< 20	U	< 200	U	< 42	U	< 13	U	< 2	U	< 1	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 1300	U	< 38	U	< 380	U	< 420	U	< 130	U	< 3.8	U	< 1.9	U
Ethylbenzene	ug/L	600	NAL	51	J	47	J	< 130	U	3.6	J	1.1	J	< 1.3	U	< 0.65	U
Hexachlorobutadiene	ug/L	0.4	NAL	< 130	U	NS		NS		< 42	U	< 13	U	NS		NS	
Iodomethane	ug/L	NAL	NAL	< 130	U	< 170	U	< 1700	U	< 42	U	< 13	U	< 17	U	< 8.5	U
Isobutanol	ug/L	NAL	NAL	< 6300	U	< 1100	U	< 11000	U	< 2100	U	< 630	U	< 110	U	< 55	U
m,p-Xylenes	ug/L	**500**	NAL	NS		83	J	< 170	U	NS		NS		5.2	J	< 0.85	U
Methyl Methacrylate	ug/L	NAL	25	< 1300	U	< 51	U	< 510	U	< 420	U	< 130	U	< 5.1	U	< 2.6	U
Methylacrylonitrile	ug/L	NAL	NAL	< 1300	U	< 490	U	< 4900	U	< 420	U	< 130	U	< 49	U	< 24	U
Methylene Chloride	ug/L	**5**	NAL	< 130	U	**1100**		**1100**		< 42	U	< 13	U	< 2.3	U	**11**	
Naphthalene	ug/L	**6**	NAL	NS		< 11	U	< 110	U	NS		NS		< 1.1	U	< 0.55	U
o-Xylene	ug/L	500	NAL	NS		< 6.5	U	< 65	U	NS		NS		< 0.65	U	5.6	
Pentachloroethane	ug/L	NAL	NAL	< 130	U	NS		NS		< 42	U	< 13	U	NS		NS	
Propionitrile	ug/L	NAL	NAL	< 6300	U	< 500	U	< 5000	U	< 2100	U	< 630	U	< 50	U	< 25	U
Styrene	ug/L	70	NAL	< 130	U	< 11	U	< 110	U	< 42	U	< 13	U	< 1.1	U	< 0.55	U
Tetrachloroethene	ug/L	**0.7**	NAL	**39**	**J**	< 17	U	< 170	U	< 42	U	< 13	U	< 1.7	U	< 0.85	U
Toluene	ug/L	**600**	NAL	< 130	U	160		< 140	U	< 42	U	< 13	U	18		13	
trans-1,2-Dichloroethene	ug/L	**100**	NAL	**190**		**190**		< 210	U	< 42	U	< 13	U	4.8	J	< 1	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 130	U	< 15	U	< 150	U	< 42	U	< 13	U	< 1.5	U	< 0.75	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 500	U	< 70	U	< 700	U	< 170	U	< 50	U	< 7	U	< 3.5	U
Trichloroethene	ug/L	**3**	NAL	**26000**		**530**		**3100**		< 42	U	**4.2**	**J**	**5.1**	**J**	**11**	
Trichlorofluoromethane	ug/L	2000	NAL	< 130	U	< 24	U	< 240	U	< 42	U	< 13	U	< 2.4	U	< 1.2	U
Vinyl Acetate	ug/L	NAL	88	< 130	U	< 95	U	< 950	U	< 42	U	< 13	U	< 9.5	U	< 4.8	U
Vinyl Chloride	ug/L	**0.03**	NAL	**6900**		**3500**		**4900**		**2800**		**600**		**2100**		**300**	
Xylenes, Total	ug/L	**500**	NAL	150		83	J	< 450	U	19	J	13		5.2	J	5.6	J

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	IW-22		IW-23		IW-23		IW-25		IW-26		IW-27		IW-28	
			Sample Date	03/21/16		01/25/16		03/23/16		03/22/16		03/21/16		03/22/16		03/21/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		NS		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	7.5	
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	2.5		**9.6**		**8.2**		1.4		2.4		< 0.13	U	**20**	
1,1-Dichloroethene	ug/L	3501	NAL	1.8		< 0.21	U	< 0.21	U	7.8		11		< 0.21	U	82	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		NS		NS		NS		NS		NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	1		< 0.19	U	2.1	
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	**1**		< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	13		< 1.3	U	< 1.3	U	< 1.3	U	43		< 1.3	U	7.8	
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 0.88	U	< 0.88	U	< 0.88	U	< 0.88	U	< 0.88	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U
Acetone	ug/L	6000	NAL	12		< 1.2	U	< 1.2	U	< 1.2	U	< 1.2	U	< 1.2	U	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U
Acrolein	ug/L	NAL	4	< 4	U	< 4	U	< 4	U	< 4	U	< 4	U	< 4	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
Benzene	ug/L	**1**	NAL	**1.8**		**2.1**		**1.4**		**1.5**		**1.8**		< 0.15	U	**3.2**	
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	1.9		0.6	J	< 0.17	U	0.84	J
Chloroethane	ug/L	3000	NAL	3.3		6		7.2		< 0.23	U	20		< 0.23	U	3.1	
Chloroform	ug/L	**70**	NAL	< 0.18	U	< 0.18	U	< 0.18	U	12		< 0.18	U	< 0.18	U	2.6	
Chloromethane	ug/L	3	NAL	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	< 0.15	U	0.89	J	0.4	J	**540**		9.4		< 0.15	U	35	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		NS		NS		NS		NS		NS		NS	
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 11	U	< 11	U	< 11	U	< 11	U	< 11	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 0.23	U	0.58	J	0.82	J	0.95	J	< 0.23	U	2.8	
Naphthalene	ug/L	**6**	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
o-Xylene	ug/L	500	NAL	< 0.065	U	< 0.065	U	< 0.065	U	< 0.065	U	0.56	J	< 0.065	U	< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Propionitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	**12**		**0.94**	**J**	< 0.17	U	**7.8**	
Toluene	ug/L	**600**	NAL	3.4		2.6		8.7		0.84	J	520		< 0.14	U	93	
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	< 0.21	U	< 0.21	U	2.6		< 0.21	U	< 0.21	U	< 0.21	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	< 0.15	U	1.1		< 0.15	U	**130**		0.8	J	< 0.15	U	**5.2**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**1.8**		**25**		**22**		**150**		**64**		< 0.32	U	**51**	
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.45	U	< 0.45	U	< 0.45	U	0.56	J	< 0.45	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	IW-29		IW-30		IW-31		IW-32		IW-33		IW-34		IW-35	
			Sample Date	03/22/16		03/21/16		03/21/16		03/21/16		03/21/16		03/21/16		01/19/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		0.00144	J
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		0.00137	J
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		0.902	J
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		1.8	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		NS		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	1.9		< 0.13	U	0.57	J	< 0.13	U	0.65	J	< 0.13	U	< 0.13	U
1,1-Dichloroethene	ug/L	3501	NAL	7.6		0.76	J	4.1		< 0.21	U	6.7		4.9		< 0.21	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		NS		NS		NS		NS		NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U	< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 1.3	U	26		< 1.3	U	16		2000		820		< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U	< 0.64	U
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 0.88	U	< 0.88	U	< 0.88	U	2.7	J	4	J	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 1.2	U	18		< 1.2	U	< 1.2	U	1500		180		< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U
Acrolein	ug/L	NAL	4	< 4	U	< 4	U	< 4	U	< 4	U	< 4	U	< 4	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
Benzene	ug/L	**1**	NAL	**1.2**		< 0.15	U	< 0.15	U	0.68	J	< 0.15	U	0.93	J	< 0.15	U
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	0.57	J	< 0.18	U	< 0.18	U	< 0.18	U	< 0.18	U	< 0.18	U	< 0.18	U
Chloromethane	ug/L	3	NAL	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**180**		2.6		4.4		< 0.15	U	16		13		< 0.15	U
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		NS		NS		NS		NS		NS		NS	
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 11	U	< 11	U	< 11	U	< 11	U	< 11	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 0.23	U	< 0.23	U	< 0.23	U	1.4		< 0.23	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
o-Xylene	ug/L	500	NAL	< 0.065	U	< 0.065	U	< 0.065	U	< 0.065	U	< 0.065	U	1.4		< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Propionitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U	< 0.17	U
Toluene	ug/L	**600**	NAL	< 1.6	U	7.7		0.46	J	470		5		510		< 0.14	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	1.2		< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U	< 0.21	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	**13**		< 0.15	U	0.68	J	< 0.15	U	0.98	J	< 0.15	U	< 0.15	U
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**200**		**3.4**		**0.86**	**J**	< 0.32	U	**2.8**		**4.7**		< 0.32	U
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.45	U	< 0.45	U	< 0.45	U	< 0.45	U	1.4	J	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	IW-35		IW-36		IW-36		IW-36		IW-36		MW-1		MW-1	
			Sample Date	03/21/16		06/17/15		09/15/15		01/21/16		03/23/16		06/15/15		09/15/15	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		**380**		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		11		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		530		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		< 0.025	U	NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		< 0.017	U	NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		< 0.041	U	NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		< 0.025	U	NS		NS	
Ethane	mg/L	NAL	NAL	NS		0.00218		0.00332		0.00163	J	0.00209		NS		NS	
Ethene	mg/L	NAL	NAL	NS		0.0105		0.000647	J	0.00157	J	0.00226	J	NS		NS	
Methane	mg/L	NAL	NAL	NS		0.22		0.47		1.23		1.88		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		12		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		0.12		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		< 2	U	NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		31		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		3.6		2.2		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		NS		**5380**		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 1.6	U	< 1.3	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 1.6	U	< 1.3	U	< 0.12	U	< 0.12	U	< 0.5	U	< 0.5	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 1.6	U	< 1.3	U	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 1.6	U	< 1.3	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 0.13	U	0.81	J	0.75	J	0.79	J	0.8	J	0.42	J	0.41	J
1,1-Dichloroethene	ug/L	3501	NAL	< 0.21	U	10		8.1		8.7		10		10		9	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 1.6	U	< 1.3	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		< 1.6	U	< 1.3	U	NS		NS		< 0.5	U	< 0.5	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 1.6	U	< 1.3	U	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 1.6	U	< 1.3	U	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 1.6	U	< 1.3	U	< 0.19	U	< 0.19	U	0.052	J	< 0.5	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	< 1.6	U	< 1.3	U	< 0.21	U	< 0.21	U	0.23	J	0.23	J
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 1.6	U	< 1.3	U	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 1.6	U	< 1.3	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	NS		NS		< 0.16	U	< 0.16	U	NS		NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 1.6	U	< 1.3	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 78	U	< 63	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 1.3	U	< 7.8	U	< 6.3	U	< 1.3	U	< 1.3	U	< 2.5	U	< 2.5	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	NS		NS		< 0.64	U	< 0.64	U	NS		NS	
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 7.8	U	< 6.3	U	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 7.8	U	< 6.3	U	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U
Acetone	ug/L	6000	NAL	< 1.2	U	< 7.8	U	< 6.3	U	< 1.2	U	< 1.2	U	< 2.5	U	< 2.5	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 1.6	U	< 1.3	U	< 5	U	< 5	U	< 0.5	U	< 0.5	U
Acrolein	ug/L	NAL	4	< 4	U	< 16	U	< 13	U	< 4	U	< 4	U	< 5	U	< 5	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 16	U	< 13	U	< 3.5	U	< 3.5	U	< 5	U	< 5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 1.6	U	< 1.3	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U
Benzene	ug/L	**1**	NAL	< 0.15	U	< 1.6	U	< 1.3	U	< 0.15	UJ	< 0.15	U	0.081	J	0.08	J
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 1.6	U	< 1.3	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 1.6	U	< 1.3	U	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 1.6	U	< 1.3	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	0.44	J	0.24	J	< 1.5	U	< 1.5	U	< 0.5	U	< 0.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 1.6	U	< 1.3	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 1.6	U	< 1.3	U	< 0.17	U	< 0.17	U	0.073	J	< 0.5	U
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 1.6	U	< 1.3	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U
Chloroform	ug/L	**70**	NAL	< 0.18	U	2.9		2.2		1.7		1.8		0.19	J	0.17	J
Chloromethane	ug/L	3	NAL	< 0.13	U	< 1.6	U	< 1.3	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	< 0.15	U	59		62		**130**		**120**		2.9		2.8	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 1.6	U	< 1.3	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 1.6	U	< 1.3	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 1.6	U	< 1.3	U	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 1.6	U	< 1.3	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 16	U	< 13	U	< 0.38	U	< 0.38	U	< 5	U	< 5	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 1.6	U	< 1.3	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		< 1.6	U	< 1.3	U	NS		NS		< 0.5	U	< 0.5	U
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 1.6	U	< 1.3	U	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 78	U	< 63	U	< 11	U	< 11	U	< 25	U	< 25	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	NS		NS		< 0.17	U	< 0.17	U	NS		NS	
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 16	U	< 13	U	< 0.51	U	< 0.51	U	< 5	U	< 5	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 16	U	< 13	U	< 4.9	U	< 4.9	U	< 5	U	< 5	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 1.6	U	0.15	J	< 0.23	U	0.71	J	0.062	J	0.16	J
Naphthalene	ug/L	**6**	NAL	< 0.11	U	NS		NS		3.8		< 0.11	U	NS		NS	
o-Xylene	ug/L	500	NAL	< 0.065	U	NS		NS		< 0.065	U	< 0.065	U	NS		NS	
Pentachloroethane	ug/L	NAL	NAL	NS		< 1.6	U	< 1.3	U	NS		NS		< 0.5	U	< 0.5	U
Propionitrile	ug/L	NAL	NAL	< 5	U	< 78	U	< 63	U	< 5	U	< 5	U	< 25	U	< 25	U
Styrene	ug/L	70	NAL	< 0.11	U	< 1.6	U	< 1.3	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.17	U	**4**		**2.1**		0.54	J	0.57	J	0.45	J	0.26	J
Toluene	ug/L	**600**	NAL	< 0.14	U	< 1.6	U	< 1.3	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	0.28	J	0.29	J	0.68	J	< 0.21	U	0.063	J	0.067	J
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 1.6	U	< 1.3	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 6.2	U	< 5	U	< 0.7	U	< 0.7	U	< 2	U	< 2	U
Trichloroethene	ug/L	**3**	NAL	< 0.15	U	**94**		**66**		**9**		**7.7**		**3.9**		**3**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 1.6	U	< 1.3	U	< 0.24	U	< 0.24	U	< 0.5	U	< 0.5	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 1.6	U	< 1.3	U	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U
Vinyl Chloride	ug/L	**0.03**	NAL	**0.63**	**J**	< 1.6	U	< 1.3	U	**0.85**	**J**	**1.7**		**0.65**		**0.78**	
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 1.6	U	< 1.3	U	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	MW-1		MW-1		MW-10		MW-10		MW-10		MW-10		MW-11	
			Sample Date	01/20/16		03/23/16		06/15/15		09/14/15		01/20/16		03/22/16		06/15/15	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		< 0.00047	U
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		< 0.00062	U
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		0.000639	J
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		102	J	< 200	U	**587**		114		**4210**	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	UJ	< 0.17	U	< 0.5	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.12	U	< 0.5	U	< 0.5	U	< 0.12	UJ	< 0.12	U	0.38	J
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U	< 0.28	UJ	< 0.28	U	< 0.5	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	UJ	< 0.14	U	< 0.5	U
1,1-Dichloroethane	ug/L	**6**	NAL	0.67	J	0.65	J	0.098	J	0.11	J	< 0.13	UJ	< 0.13	U	1.7	
1,1-Dichloroethene	ug/L	3501	NAL	7.9		9.2		4		4.5		3.7	J	3.9		28	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	UJ	< 0.23	U	< 0.5	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U	< 0.48	UJ	< 0.48	U	< 0.5	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U	< 0.66	UJ	< 0.66	U	< 0.5	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	UJ	< 0.19	U	< 0.5	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	UJ	< 0.21	U	0.19	J
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U	< 0.1	UJ	< 0.1	U	< 0.5	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	UJ	< 0.15	U	< 0.5	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	< 0.16	U	NS		NS		< 0.16	UJ	< 0.16	U	NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	UJ	< 0.19	U	< 0.5	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	UJ	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 1.3	U	1.7	J	< 2.5	U	< 2.5	U	< 1.3	UJ	< 1.3	U	< 2.5	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	< 0.64	U	NS		NS		< 0.64	UJ	< 0.64	U	NS	
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U	< 0.88	UJ	< 0.88	U	< 2.5	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U	< 1.1	UJ	< 1.1	U	< 2.5	U
Acetone	ug/L	6000	NAL	< 1.2	U	< 1.2	U	< 2.5	U	< 2.5	U	< 1.2	UJ	< 1.2	U	< 2.5	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 0.5	U	< 0.5	U	< 5	UJ	< 5	U	< 0.5	U
Acrolein	ug/L	NAL	4	< 4	U	< 4	U	< 5	U	< 5	U	< 4	UJ	< 4	U	< 5	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 3.5	U	< 5	U	< 5	U	< 3.5	UJ	< 3.5	U	< 5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	UJ	< 0.11	U	< 0.5	U
Benzene	ug/L	**1**	NAL	< 0.15	U	< 0.15	U	0.045	J	< 0.5	U	< 0.15	UJ	< 0.15	U	0.28	J
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	UJ	< 0.17	U	< 0.5	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U	< 0.22	UJ	< 0.22	U	< 0.5	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	UJ	< 0.14	U	< 0.5	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 1.5	U	< 0.5	U	< 0.5	U	< 1.5	UJ	< 1.5	U	< 0.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	UJ	< 0.17	U	< 0.5	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	UJ	< 0.17	U	0.053	J
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	UJ	< 0.23	U	< 0.5	U
Chloroform	ug/L	**70**	NAL	< 0.18	U	< 0.18	U	0.035	J	< 0.5	U	< 0.18	UJ	< 0.18	U	1.4	
Chloromethane	ug/L	3	NAL	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	UJ	< 0.13	U	< 0.5	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	3		2.4		0.37	J	0.39	J	< 0.15	UJ	0.51	J	9	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	UJ	< 0.2	U	< 0.5	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	UJ	< 0.17	U	< 0.5	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U	< 0.27	UJ	< 0.27	U	< 0.5	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	UJ	< 0.2	U	< 0.5	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 0.38	U	< 5	U	< 5	U	< 0.38	UJ	< 0.38	U	< 5	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	UJ	< 0.13	U	< 0.5	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U	< 1.7	UJ	< 1.7	U	< 0.5	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 11	U	< 25	U	< 25	U	< 11	UJ	< 11	U	< 25	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	< 0.17	U	NS		NS		< 0.17	UJ	< 0.17	U	NS	
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 0.51	U	< 5	U	< 5	U	< 0.51	UJ	< 0.51	U	< 5	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 4.9	U	< 5	U	< 5	U	< 4.9	UJ	< 4.9	U	< 5	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	UJ	< 0.23	U	< 0.5	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	< 0.11	U	NS		NS		< 0.11	UJ	< 0.11	U	NS	
o-Xylene	ug/L	500	NAL	< 0.065	U	< 0.065	U	NS		NS		< 0.065	UJ	< 0.065	U	NS	
Pentachloroethane	ug/L	NAL	NAL	NS		NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U
Propionitrile	ug/L	NAL	NAL	< 5	U	< 5	U	< 25	U	< 25	U	< 5	UJ	< 5	U	< 25	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	UJ	< 0.11	U	< 0.5	U
Tetrachloroethene	ug/L	**0.7**	NAL	0.57	J	0.62	J	< 0.5	U	< 0.5	U	< 0.17	UJ	< 0.17	U	**3.8**	
Toluene	ug/L	**600**	NAL	280		18		< 0.5	U	< 0.5	U	< 0.14	UJ	< 0.14	U	< 0.5	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	< 0.21	U	0.055	J	< 0.5	U	< 0.21	UJ	< 0.21	U	0.12	J
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	UJ	< 0.15	U	< 0.5	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 0.7	U	< 2	U	< 2	U	< 0.7	UJ	< 0.7	U	< 2	U
Trichloroethene	ug/L	**3**	NAL	1.8		2.5		1.5		1.5		2.1	J	1.7		**40**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.24	U	< 0.5	U	< 0.5	U	< 0.24	UJ	< 0.24	U	0.11	J
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U	< 0.95	UJ	< 0.95	U	< 0.5	U
Vinyl Chloride	ug/L	**0.03**	NAL	**2.3**		**1.6**		< 0.5	U	< 0.5	U	< 0.32	UJ	< 0.32	U	**0.93**	
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U	< 0.45	UJ	< 0.45	U	< 0.5	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	MW-11		MW-11		MW-11		MW-12		MW-12		MW-12		MW-12	
			Sample Date	09/15/15		01/19/16		03/21/16		06/17/15		09/17/15		01/26/16		03/24/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		160		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		24		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		460		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		< 0.025	U	NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		< 0.017	U	NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		< 0.041	U	NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		< 0.025	U	NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	< 0.00047	U	0.00078	J	< 0.00047	U	NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	< 0.00062	U	< 0.00062	U	< 0.00062	U	NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	0.075		0.0753		0.0622		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		20		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		< 0.01	U	NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		< 2	U	NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		12		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		1.9		2.3		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	**331**		**1050**		**2720**		**3740**		**1610**		**7450**		**2830**	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.88	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	0.47	J	< 0.12	U	0.53	J	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.88	U	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.88	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	2.4		2.3		2.1		< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U
1,1-Dichloroethene	ug/L	3501	NAL	36		37		34		< 0.5	U	0.062	J	< 0.21	U	< 0.21	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.88	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 0.88	U	NS		NS		< 0.5	U	< 0.5	U	NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.88	U	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.88	U	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.88	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.88	U	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.88	U	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.88	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	NS		< 0.16	U	< 0.16	U	NS		NS		< 0.16	U	< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.88	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 44	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 4.4	U	< 1.3	U	< 1.3	U	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		< 0.64	U	< 0.64	U	NS		NS		< 0.64	U	< 0.64	U
2-Hexanone	ug/L	NAL	40	< 4.4	U	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 4.4	U	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 4.4	U	< 1.2	U	< 1.2	U	< 2.5	U	< 2.5	U	< 1.2	U	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 0.88	U	< 5	U	< 5	U	< 0.5	U	< 0.5	U	< 5	U	< 5	U
Acrolein	ug/L	NAL	4	< 8.8	U	< 4	U	< 4	U	< 5	U	< 5	U	< 4	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 8.8	U	< 3.5	U	< 3.5	U	< 5	U	< 5	U	< 3.5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.88	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U
Benzene	ug/L	**1**	NAL	0.3	J	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U
Bromodichloromethane	ug/L	0.6	NAL	< 0.88	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.88	U	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.88	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 0.88	U	< 1.5	U	< 1.5	U	< 0.5	U	0.062	J	< 1.5	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.88	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 0.88	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Chloroethane	ug/L	3000	NAL	< 0.88	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	2		1.6		1.8		0.097	J	0.054	J	< 0.18	U	< 0.18	U
Chloromethane	ug/L	3	NAL	< 0.88	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	12		11		15		0.14	J	0.21	J	< 0.15	U	< 0.15	U
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.88	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.88	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.88	U	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.88	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 8.8	U	< 0.38	U	< 0.38	U	< 5	U	< 5	U	< 0.38	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.88	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	< 0.88	U	NS		NS		< 0.5	U	< 0.5	U	NS		NS	
Iodomethane	ug/L	NAL	NAL	< 0.88	U	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 44	U	< 11	U	< 11	U	< 25	U	< 25	U	< 11	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	NS		< 0.17	U	< 0.17	U	NS		NS		< 0.17	U	< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 8.8	U	< 0.51	U	< 0.51	U	< 5	U	< 5	U	< 0.51	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 8.8	U	< 4.9	U	< 4.9	U	< 5	U	< 5	U	< 4.9	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	0.17	J	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	NS		< 0.11	U	< 0.11	U	NS		NS		< 0.11	U	< 0.11	U
o-Xylene	ug/L	500	NAL	NS		< 0.065	U	< 0.065	U	NS		NS		< 0.065	U	< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	< 0.88	U	NS		NS		< 0.5	U	< 0.5	U	NS		NS	
Propionitrile	ug/L	NAL	NAL	< 44	U	< 5	U	< 5	U	< 25	U	< 25	U	< 5	U	< 5	U
Styrene	ug/L	70	NAL	< 0.88	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	**4**		**4.6**		**3.6**		< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U
Toluene	ug/L	**600**	NAL	< 0.88	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	0.11	J	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.88	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 3.5	U	< 0.7	U	< 0.7	U	< 2	U	< 2	U	< 0.7	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	**51**		**46**		**37**		0.33	J	0.45	J	< 0.15	U	0.48	J
Trichlorofluoromethane	ug/L	2000	NAL	0.12	J	< 0.24	U	< 0.24	U	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.88	U	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**1.2**		**1.6**		**1.9**		< 0.5	U	< 0.5	U	< 0.32	U	< 0.32	U
Xylenes, Total	ug/L	**500**	NAL	< 0.88	U	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	MW-13		MW-13		MW-13		MW-13		MW-9		MW-9		MW-9	
			Sample Date	06/16/15		09/17/15		01/21/16		03/24/16		06/16/15		09/15/15		01/25/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	**923**		**525**		**1740**		**959**		**1750**		**2060**		**5440**	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 1.6	U	< 0.7	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	0.16	J	0.091	J	< 0.12	U	< 0.12	U	< 0.5	U	< 0.5	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 1.6	U	< 0.7	U	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 1.6	U	< 0.7	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	1.2	J	0.77		0.83	J	1.4		< 0.5	U	< 0.5	U	< 0.13	U
1,1-Dichloroethene	ug/L	3501	NAL	22		15		15		21		< 0.5	U	< 0.5	U	< 0.21	U
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 1.6	U	< 0.7	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 1.6	U	< 0.7	U	NS		NS		< 0.5	U	< 0.5	U	NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 1.6	U	< 0.7	U	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 1.6	U	< 0.7	U	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 1.6	U	< 0.7	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	**6.5**		**3.3**		**3**		**6.4**		< 0.5	U	< 0.5	U	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 1.6	U	< 0.7	U	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 1.6	U	< 0.7	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	NS		NS		< 0.16	U	< 0.16	U	NS		NS		< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 1.6	U	< 0.7	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 78	U	< 35	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 7.8	U	< 3.5	U	< 1.3	U	< 1.3	U	1.4	J	< 2.5	U	< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	NS		NS		< 0.64	U	< 0.64	U	NS		NS		< 0.64	U
2-Hexanone	ug/L	NAL	40	< 7.8	U	< 3.5	U	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 7.8	U	< 3.5	U	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 7.8	U	< 3.5	U	< 1.2	U	< 1.2	U	26		< 2.5	U	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 1.6	U	< 0.7	U	< 5	U	< 5	U	< 0.5	U	< 0.5	U	< 5	U
Acrolein	ug/L	NAL	4	< 16	U	< 7	U	< 4	U	< 4	U	< 5	U	< 5	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 16	U	< 7	U	< 3.5	U	< 3.5	U	< 5	U	< 5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 1.6	U	< 0.7	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U
Benzene	ug/L	**1**	NAL	< 1.6	U	< 0.7	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U
Bromodichloromethane	ug/L	0.6	NAL	< 1.6	U	< 0.7	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 1.6	U	< 0.7	U	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 1.6	U	< 0.7	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 1.6	U	< 0.7	U	< 1.5	U	< 1.5	U	0.13	J	0.045	J	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	**0.6**	**J**	**0.33**	**J**	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 1.6	U	< 0.7	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U
Chloroethane	ug/L	3000	NAL	< 1.6	U	< 0.7	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	9.4		5.3		4.5		7.1		< 0.5	U	< 0.5	U	< 0.18	U
Chloromethane	ug/L	3	NAL	< 1.6	U	< 0.7	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	**79**		42		36		55		< 0.5	U	< 0.5	U	0.83	J
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 1.6	U	< 0.7	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 1.6	U	< 0.7	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 1.6	U	< 0.7	U	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 1.6	U	< 0.7	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 16	U	< 7	U	< 0.38	U	< 0.38	U	< 5	U	< 5	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 1.6	U	< 0.7	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	< 1.6	U	< 0.7	U	NS		NS		< 0.5	U	< 0.5	U	NS	
Iodomethane	ug/L	NAL	NAL	< 1.6	U	< 0.7	U	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 78	U	< 35	U	< 11	U	< 11	U	< 25	U	< 25	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	NS		NS		< 0.17	U	< 0.17	U	NS		NS		< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 16	U	< 7	U	< 0.51	U	< 0.51	U	< 5	U	< 5	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 16	U	< 7	U	< 4.9	U	< 4.9	U	< 5	U	< 5	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 1.6	U	< 0.7	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	NS		NS		< 0.11	U	< 0.11	U	NS		NS		< 0.11	U
o-Xylene	ug/L	500	NAL	NS		NS		< 0.065	U	< 0.065	U	NS		NS		< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	< 1.6	U	< 0.7	U	NS		NS		< 0.5	U	< 0.5	U	NS	
Propionitrile	ug/L	NAL	NAL	< 78	U	< 35	U	< 5	U	< 5	U	< 25	U	< 25	U	< 5	U
Styrene	ug/L	70	NAL	< 1.6	U	< 0.7	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	**1.6**		**0.93**		**1.1**		**0.93**	**J**	< 0.5	U	< 0.5	U	< 0.17	U
Toluene	ug/L	**600**	NAL	< 1.6	U	< 0.7	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 1.6	U	0.12	J	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 1.6	U	< 0.7	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 6.2	U	< 2.8	U	< 0.7	U	< 0.7	U	< 2	U	< 2	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	**40**		**22**		**21**		**28**		0.24	J	0.091	J	1.4	
Trichlorofluoromethane	ug/L	2000	NAL	< 1.6	U	< 0.7	U	< 0.24	U	< 0.24	U	< 0.5	U	< 0.5	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 1.6	U	< 0.7	U	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**0.45**	**J**	**0.34**	**J**	< 0.32	U	**2**		< 0.5	U	< 0.5	U	< 0.32	U
Xylenes, Total	ug/L	**500**	NAL	< 1.6	U	< 0.7	U	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	MW-9		MW-B107		MW-B107		MW-B107		MW-B107		MW-B111		MW-B111	
			Sample Date	03/23/16		06/15/15		09/14/15		01/20/16		03/22/16		06/15/15		09/14/15	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		NS		NS		NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Ethene	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Methane	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		NS		NS		NS		NS		NS	
Metals																	
Iron	ug/L	**300**	NAL	**2360**		NS		NS		NS		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	0.29	J	0.36	J
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 0.5	U	< 0.5	U	< 0.28	U	< 0.28	U	< 0.5	U	< 0.5	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
1,1-Dichloroethane	ug/L	**6**	NAL	< 0.13	U	0.2	J	0.2	J	< 0.13	U	< 0.13	U	0.8		1.1	
1,1-Dichloroethene	ug/L	3501	NAL	< 0.21	U	0.83		0.76		2.8		2.5		8		9.4	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U	< 0.5	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 0.5	U	< 0.5	U	< 0.48	U	< 0.48	U	< 0.5	U	< 0.5	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 0.5	U	< 0.5	U	< 0.66	U	< 0.66	U	< 0.5	U	< 0.5	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U	0.096	J
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 0.5	U	< 0.5	U	< 0.1	U	< 0.1	U	< 0.5	U	< 0.5	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	NS		NS		< 0.16	U	< 0.16	U	NS		NS	
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 0.5	U	< 0.5	U	< 0.19	U	< 0.19	U	< 0.5	U	< 0.5	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 1.3	U	< 2.5	U	< 2.5	U	< 1.3	U	< 1.3	U	< 2.5	U	< 2.5	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	NS		NS		< 0.64	U	< 0.64	U	NS		NS	
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 2.5	U	< 2.5	U	< 0.88	U	< 0.88	U	< 2.5	U	< 2.5	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 2.5	U	< 2.5	U	< 1.1	U	< 1.1	U	< 2.5	U	< 2.5	U
Acetone	ug/L	6000	NAL	< 1.2	U	< 2.5	U	< 2.5	U	< 1.2	U	< 1.2	U	< 2.5	U	< 2.5	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 0.5	U	< 0.5	U	< 5	U	< 5	U	< 0.5	U	< 0.5	U
Acrolein	ug/L	NAL	4	< 4	U	< 5	U	< 5	U	< 4	U	< 4	U	< 5	U	< 5	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 5	U	< 5	U	< 3.5	U	< 3.5	U	< 5	U	< 5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U
Benzene	ug/L	**1**	NAL	< 0.15	U	0.046	J	0.046	J	< 0.15	U	< 0.15	U	0.072	J	0.094	J
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 0.5	U	< 0.5	U	< 0.22	U	< 0.22	U	< 0.5	U	< 0.5	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 0.5	U	0.038	J	< 1.5	U	< 1.5	U	< 0.5	U	< 0.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U
Chloroform	ug/L	**70**	NAL	< 0.18	U	< 0.5	U	< 0.5	U	< 0.18	U	< 0.18	U	0.71		0.7	
Chloromethane	ug/L	3	NAL	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	< 0.15	U	0.86		0.87		1.6		1.5		1.2		1.9	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 0.5	U	< 0.5	U	< 0.17	U	< 0.17	U	< 0.5	U	< 0.5	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 0.5	U	< 0.5	U	< 0.27	U	< 0.27	U	< 0.5	U	< 0.5	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.5	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 5	U	< 5	U	< 0.38	U	< 0.38	U	< 5	U	< 5	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 0.5	U	< 0.5	U	< 0.13	U	< 0.13	U	< 0.5	U	< 0.5	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		< 0.5	U	< 0.5	U	NS		NS		< 0.5	U	< 0.5	U
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 0.5	U	< 0.5	U	< 1.7	U	< 1.7	U	< 0.5	U	< 0.5	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 25	U	< 25	U	< 11	U	< 11	U	< 25	U	< 25	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	NS		NS		< 0.17	U	< 0.17	U	NS		NS	
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 5	U	< 5	U	< 0.51	U	< 0.51	U	< 5	U	< 5	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 5	U	< 5	U	< 4.9	U	< 4.9	U	< 5	U	< 5	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 0.5	U	< 0.5	U	< 0.23	U	< 0.23	U	< 0.5	U	< 0.5	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	NS		NS		< 0.11	U	< 0.11	U	NS		NS	
o-Xylene	ug/L	500	NAL	< 0.065	U	NS		NS		< 0.065	U	< 0.065	U	NS		NS	
Pentachloroethane	ug/L	NAL	NAL	NS		< 0.5	U	< 0.5	UJ	NS		NS		< 0.5	U	< 0.5	U
Propionitrile	ug/L	NAL	NAL	< 5	U	< 25	U	< 25	U	< 5	U	< 5	U	< 25	U	< 25	U
Styrene	ug/L	70	NAL	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.5	U
Tetrachloroethene	ug/L	**0.7**	NAL	< 0.17	U	< 0.5	U	< 0.5	UJ	< 0.17	U	< 0.17	U	0.65		**1.1**	
Toluene	ug/L	**600**	NAL	< 0.14	U	< 0.5	U	< 0.5	U	< 0.14	U	< 0.14	U	< 0.5	U	< 0.5	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	< 0.5	U	< 0.5	U	< 0.21	U	< 0.21	U	< 0.5	U	< 0.5	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 0.5	U	< 0.5	U	< 0.15	U	< 0.15	U	< 0.5	U	< 0.5	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 2	U	< 2	U	< 0.7	U	< 0.7	U	< 2	U	< 2	U
Trichloroethene	ug/L	**3**	NAL	< 0.15	U	0.61		0.5	J	0.8	J	0.68	J	**3.7**		**4.2**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 0.5	U	< 0.5	U	< 0.24	U	< 0.24	U	0.07	J	< 0.5	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 0.5	U	< 0.5	U	< 0.95	U	< 0.95	U	< 0.5	U	< 0.5	U
Vinyl Chloride	ug/L	**0.03**	NAL	< 0.32	U	< 0.5	U	< 0.5	U	< 0.32	U	< 0.32	U	**0.46**	**J**	**0.92**	
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 0.5	U	< 0.5	U	< 0.45	U	< 0.45	U	< 0.5	U	< 0.5	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	MW-B111		MW-B111		P-5		P-5		P-6		P-6		P-6	
			Sample Date	01/20/16		03/22/16		01/25/16		03/28/16		06/17/15		09/17/15		01/25/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters																	
Chloride	mg/L	**250**	NAL	NS		NS		NS		140		NS		NS		NS	
Sulfate	mg/L	250	NAL	NS		NS		4.9	J	4.4	J	NS		NS		NS	
Alkalinity, Total	mg/L	NAL	NAL	NS		NS		NS		360		NS		NS		NS	
Nitrate	mg/L	NAL	NAL	NS		NS		NS		< 0.025	R	NS		NS		NS	
Nitrite	mg/L	NAL	NAL	NS		NS		NS		< 0.017	U	NS		NS		NS	
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	NS		NS		NS		< 0.041	R	NS		NS		NS	
Phosphorus	mg/L	NAL	NAL	NS		NS		NS		0.12		NS		NS		NS	
Ethane	mg/L	NAL	NAL	NS		NS		0.0255		< 0.00047	U	0.0207		0.00149	J	0.00107	J
Ethene	mg/L	NAL	NAL	NS		NS		1.03		0.492		0.0295		0.00233	J	0.000793	J
Methane	mg/L	NAL	NAL	NS		NS		16.4		7.64		6.78		0.819		1.52	
Total Suspended Solids	mg/L	NAL	NAL	NS		NS		NS		36		NS		NS		NS	
Sulfide	mg/L	NAL	NAL	NS		NS		NS		< 0.01	U	NS		NS		NS	
Biochemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		75	>	NS		NS		NS	
Chemical Oxygen Demand	mg/L	NAL	NAL	NS		NS		NS		350		NS		NS		NS	
Total Organic Carbon	mg/L	NAL	NAL	NS		NS		110		75		NS		NS		2	
Metals																	
Iron	ug/L	**300**	NAL	NS		NS		NS		**5880**		NS		NS		NS	
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	UJ	< 0.17	U	< 0.17	U	< 170	U	< 0.5	U	< 0.5	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	UJ	< 0.12	U	13		< 120	U	< 0.5	U	0.55		< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	UJ	< 0.28	U	**120**		< 280	U	< 0.5	U	< 0.5	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	UJ	< 0.14	U	**67**		< 140	U	< 0.5	U	< 0.5	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	1.2	J	1.5		**150**		< 130	U	0.28	J	4.4		2.6	
1,1-Dichloroethene	ug/L	3501	NAL	10	J	12		< 210	U	780	J	0.34	J	48		22	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	UJ	< 0.23	U	**0.43**	**J**	< 230	U	< 0.5	U	< 0.5	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		NS		NS		NS		< 0.5	U	< 0.5	U	NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	UJ	< 0.48	U	< 0.48	U	< 480	U	< 0.5	U	< 0.5	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	UJ	< 0.66	U	< 0.66	U	< 660	U	< 0.5	U	< 0.5	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	UJ	< 0.19	U	5.8		< 190	U	< 0.5	U	0.13	J	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	UJ	< 0.21	U	**14000**		**15000**		**0.85**		**0.43**	**J**	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	UJ	< 0.1	U	< 0.1	U	< 100	U	< 0.5	U	< 0.5	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	UJ	< 0.15	U	< 0.15	U	< 150	U	< 0.5	U	< 0.5	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	UJ	< 0.16	U	< 0.16	U	< 160	U	NS		NS		< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	UJ	< 0.19	U	< 0.19	U	< 190	U	< 0.5	U	< 0.5	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	UJ	< 25	U	**1800**		< 25000	U	< 25	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 1.3	UJ	< 1.3	U	< 1300	U	< 1300	U	4		< 2.5	U	< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	UJ	< 0.64	U	< 0.64	U	< 640	U	NS		NS		< 0.64	U
2-Hexanone	ug/L	NAL	40	< 0.88	UJ	< 0.88	U	5		< 880	U	< 2.5	U	< 2.5	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	UJ	< 1.1	U	< 1100	U	< 1100	U	< 2.5	U	< 2.5	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 1.2	UJ	< 1.2	U	< 1200	U	< 1200	U	31		< 2.5	U	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 5	UJ	< 5	U	< 5	U	70000		< 0.5	U	< 0.5	U	< 5	U
Acrolein	ug/L	NAL	4	< 4	UJ	< 4	U	< 4	U	< 4000	U	< 5	U	< 5	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	UJ	< 3.5	U	< 3.5	U	< 3500	U	< 5	U	< 5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	UJ	< 0.11	U	< 0.11	U	< 110	U	< 0.5	U	< 0.5	U	< 0.11	U
Benzene	ug/L	**1**	NAL	< 0.15	UJ	< 0.15	U	**1700**		**1900**		**2.7**		0.61		0.48	J
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	UJ	< 0.17	U	< 0.17	U	< 170	U	< 0.5	U	< 0.5	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.22	UJ	< 0.22	U	< 0.22	U	< 220	U	< 0.5	U	< 0.5	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.14	UJ	< 0.14	U	< 0.14	U	< 140	U	< 0.5	U	< 0.5	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	UJ	< 1.5	U	< 1.5	U	< 1500	U	0.43	J	0.075	J	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	UJ	< 0.17	U	**180**		< 170	U	< 0.5	U	< 0.5	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	UJ	< 0.17	U	< 170	U	< 170	U	0.27	J	< 0.5	U	< 0.17	U
Chloroethane	ug/L	3000	NAL	< 0.23	UJ	< 0.23	U	< 0.23	U	< 230	U	0.5		< 0.5	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	0.58	J	0.6	J	**10000**		**8600**		< 0.5	U	0.31	J	0.66	J
Chloromethane	ug/L	3	NAL	< 0.13	UJ	< 0.13	U	< 0.13	U	< 130	U	< 0.5	U	< 0.5	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	2.6	J	3		**60000**		**58000**		1.7		63		67	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	UJ	< 0.2	U	< 0.2	U	< 200	U	< 0.5	U	< 0.5	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	UJ	< 0.17	U	< 0.17	U	< 170	U	< 0.5	U	< 0.5	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.27	UJ	< 0.27	U	< 0.27	U	< 270	U	< 0.5	U	< 0.5	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	UJ	< 0.2	U	< 0.2	U	< 200	U	< 0.5	U	< 0.5	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	UJ	< 0.38	U	< 0.38	U	< 380	U	< 5	U	< 5	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.13	UJ	< 0.13	U	190		< 130	U	0.11	J	< 0.5	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		NS		NS		NS		< 0.5	U	< 0.5	U	NS	
Iodomethane	ug/L	NAL	NAL	< 1.7	UJ	< 1.7	U	< 1.7	U	< 1700	U	< 0.5	U	< 0.5	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 11	UJ	< 11	U	< 11	U	< 11000	U	< 25	U	< 25	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	UJ	< 0.17	U	350		< 170	U	NS		NS		< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 0.51	UJ	< 0.51	U	< 0.51	U	< 510	U	< 5	U	< 5	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	UJ	< 4.9	U	< 4.9	U	< 4900	U	< 5	U	< 5	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	UJ	< 0.23	U	< 230	U	**1300**		< 0.5	U	0.068	J	< 0.23	U
Naphthalene	ug/L	**6**	NAL	< 0.11	UJ	< 0.11	U	< 110	U	< 110	U	NS		NS		< 0.11	U
o-Xylene	ug/L	500	NAL	< 0.065	UJ	< 0.065	U	< 65	U	< 65	U	NS		NS		< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	NS		NS		NS		NS		< 0.5	U	< 0.5	U	NS	
Propionitrile	ug/L	NAL	NAL	< 5	UJ	< 5	U	< 5	U	< 5000	U	< 25	U	< 25	U	< 5	U
Styrene	ug/L	70	NAL	< 0.11	UJ	< 0.11	U	< 0.11	U	< 110	U	< 0.5	U	< 0.5	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	**1.6**	**J**	**1.5**		**490**	**J**	< 170	U	< 0.5	U	**2.2**		**1.8**	
Toluene	ug/L	**600**	NAL	< 0.14	UJ	< 0.14	U	590	J	530	J	1.5		< 0.5	U	< 0.14	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	UJ	< 0.21	U	**590**	**J**	**980**	**J**	< 0.5	U	0.29	J	< 0.21	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	UJ	< 0.15	U	< 0.15	U	< 150	U	< 0.5	U	< 0.5	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	UJ	< 0.7	U	< 0.7	U	< 700	U	< 2	U	< 2	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	**6.5**	**J**	**6.7**		**64000**		**57000**		0.88		**100**		**66**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	UJ	< 0.24	U	< 0.24	U	< 240	U	< 0.5	U	< 0.5	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	UJ	< 0.95	U	< 0.95	U	< 950	U	< 0.5	U	< 0.5	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**1.5**	**J**	**2**		**3200**		**2800**		**19**		**13**		**12**	
Xylenes, Total	ug/L	**500**	NAL	< 0.45	UJ	< 0.45	U	**590**		< 450	U	0.32	J	< 0.5	U	< 0.45	U

Year 2 Groundwater Monitoring Event Results
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	P-6		W-1		W-1		W-1		W-1	
			Sample Date	03/25/16		06/16/15		09/16/15		01/21/16		03/24/16	
			N=Normal, FD=Field Duplicate	N		N		N		N		N	
Parameter	Unit	NC2L	NC-IMAC	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
General Chemistry Parameters													
Chloride	mg/L	**250**	NAL	140		NS		NS		NS		**310**	
Sulfate	mg/L	250	NAL	37		NS		NS		NS		17	
Alkalinity, Total	mg/L	NAL	NAL	510		NS		NS		NS		520	
Nitrate	mg/L	NAL	NAL	< 0.025	R	NS		NS		NS		0.12	J
Nitrite	mg/L	NAL	NAL	< 0.017	U	NS		NS		NS		< 0.017	U
Nitrogen, Nitrate-Nitrite	mg/L	NAL	NAL	< 0.041	R	NS		NS		NS		0.12	J
Phosphorus	mg/L	NAL	NAL	< 0.025	U	NS		NS		NS		0.03	J
Ethane	mg/L	NAL	NAL	< 0.00047	U	< 0.00047	U	< 0.00047	U	< 0.00047	U	< 0.00047	U
Ethene	mg/L	NAL	NAL	< 0.00062	U	< 0.00062	U	< 0.00062	U	< 0.00062	U	< 0.00062	U
Methane	mg/L	NAL	NAL	2.7		0.00066	J	< 0.00044	U	0.000553	J	0.00044	J
Total Suspended Solids	mg/L	NAL	NAL	20		NS		NS		NS		< 2.5	U
Sulfide	mg/L	NAL	NAL	< 0.01	U	NS		NS		NS		0.018	J
Biochemical Oxygen Demand	mg/L	NAL	NAL	< 2	U	NS		NS		NS		< 2	U
Chemical Oxygen Demand	mg/L	NAL	NAL	14		NS		NS		NS		29	
Total Organic Carbon	mg/L	NAL	NAL	2.3		NS		NS		2.5		2.3	
Metals													
Iron	ug/L	**300**	NAL	**423**		NS		NS		NS		45.7	J
Volatile Organic Compounds													
1,1,1,2-Tetrachloroethane	ug/L	NAL	1	< 0.17	U	< 2.5	U	< 2.1	U	< 0.17	U	< 0.17	U
1,1,1-Trichloroethane	ug/L	200	NAL	< 0.12	U	< 2.5	U	< 2.1	U	< 0.12	U	< 0.12	U
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	NAL	< 0.28	U	< 2.5	U	< 2.1	U	< 0.28	U	< 0.28	U
1,1,2-Trichloroethane	ug/L	NAL	**0.6**	< 0.14	U	< 2.5	U	< 2.1	U	< 0.14	U	< 0.14	U
1,1-Dichloroethane	ug/L	**6**	NAL	2.4		1	J	0.83	J	0.88	J	0.87	J
1,1-Dichloroethene	ug/L	3501	NAL	31		13		9.6		12		12	
1,2,3-Trichloropropane	ug/L	**0.005**	NAL	< 0.23	U	< 2.5	U	< 2.1	U	< 0.23	U	< 0.23	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	NS		< 2.5	U	< 2.1	U	NS		NS	
1,2-Dibromo-3-chloropropane	ug/L	0.04	NAL	< 0.48	U	< 2.5	U	< 2.1	U	< 0.48	U	< 0.48	U
1,2-Dibromoethane	ug/L	0.02	NAL	< 0.66	U	< 2.5	U	< 2.1	U	< 0.66	U	< 0.66	U
1,2-Dichlorobenzene	ug/L	20	NAL	< 0.19	U	< 2.5	U	< 2.1	U	< 0.19	U	< 0.19	U
1,2-Dichloroethane	ug/L	**0.4**	NAL	< 0.21	U	< 2.5	U	< 2.1	U	< 0.21	U	< 0.21	U
1,2-Dichloropropane	ug/L	0.6	NAL	< 0.1	U	< 2.5	U	< 2.1	U	< 0.1	U	< 0.1	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 0.15	U	< 2.5	U	< 2.1	U	< 0.15	U	< 0.15	U
1,3-Dichloropropane	ug/L	NAL	NAL	< 0.16	U	NS		NS		< 0.16	U	< 0.16	U
1,4-Dichlorobenzene	ug/L	**6**	NAL	< 0.19	U	< 2.5	U	< 2.1	U	< 0.19	U	< 0.19	U
1,4-Dioxane	ug/L	**3**	NAL	< 25	U	< 130	U	< 100	U	< 25	U	< 25	U
2-Butanone	ug/L	4000	NAL	< 1.3	U	< 13	U	< 10	U	< 1.3	U	< 1.3	U
2-Chloro-1,3-butadiene	ug/L	NAL	NAL	< 0.64	U	NS		NS		< 0.64	U	< 0.64	U
2-Hexanone	ug/L	NAL	40	< 0.88	U	< 13	U	< 10	U	< 0.88	U	< 0.88	U
4-Methyl-2-pentanone	ug/L	NAL	**100**	< 1.1	U	< 13	U	< 10	U	< 1.1	U	< 1.1	U
Acetone	ug/L	6000	NAL	< 1.2	U	< 13	U	< 10	U	< 1.2	U	< 1.2	U
Acetonitrile	ug/L	NAL	NAL	< 5	U	< 2.5	U	< 2.1	U	< 5	U	< 5	U
Acrolein	ug/L	NAL	4	< 4	U	< 25	U	< 21	U	< 4	U	< 4	U
Acrylonitrile	ug/L	NAL	NAL	< 3.5	U	< 25	U	< 21	U	< 3.5	U	< 3.5	U
Allyl Chloride	ug/L	NAL	NAL	< 0.11	U	< 2.5	U	< 2.1	U	< 0.11	U	< 0.11	U
Benzene	ug/L	**1**	NAL	0.43	J	< 2.5	U	< 2.1	U	< 0.15	U	< 0.15	U
Bromodichloromethane	ug/L	0.6	NAL	< 0.17	U	< 2.5	U	< 2.1	U	< 0.17	U	< 0.17	U
Bromoform	ug/L	4	NAL	< 0.22	U	< 2.5	U	< 2.1	U	< 0.22	U	< 0.22	U
Bromomethane	ug/L	NAL	10	< 0.14	U	< 2.5	U	< 2.1	U	< 0.14	U	< 0.14	U
Carbon Disulfide	ug/L	700	NAL	< 1.5	U	< 2.5	U	< 2.1	U	< 1.5	U	< 1.5	U
Carbon Tetrachloride	ug/L	**0.3**	NAL	< 0.17	U	< 2.5	U	< 2.1	U	< 0.17	U	< 0.17	U
Chlorobenzene	ug/L	**50**	NAL	< 0.17	U	< 2.5	U	< 2.1	U	< 0.17	U	< 0.17	U
Chloroethane	ug/L	3000	NAL	< 0.23	U	< 2.5	U	< 2.1	U	< 0.23	U	< 0.23	U
Chloroform	ug/L	**70**	NAL	< 0.18	U	2.6		2.2		2.2		2.2	
Chloromethane	ug/L	3	NAL	< 0.13	U	< 2.5	U	< 2.1	U	< 0.13	U	< 0.13	U
cis-1,2-Dichloroethene	ug/L	**70**	NAL	53		22		20		23		21	
cis-1,3-Dichloropropene	ug/L	0.4	NAL	< 0.2	U	< 2.5	U	< 2.1	U	< 0.2	U	< 0.2	U
Dibromochloromethane	ug/L	0.4	NAL	< 0.17	U	< 2.5	U	< 2.1	U	< 0.17	U	< 0.17	U
Dibromomethane	ug/L	NAL	70	< 0.27	U	< 2.5	U	< 2.1	U	< 0.27	U	< 0.27	U
Dichlorodifluoromethane	ug/L	1000	NAL	< 0.2	U	< 2.5	U	< 2.1	U	< 0.2	U	< 0.2	U
Ethyl Methacrylate	ug/L	NAL	NAL	< 0.38	U	< 25	U	< 21	U	< 0.38	U	< 0.38	U
Ethylbenzene	ug/L	600	NAL	< 0.13	U	< 2.5	U	< 2.1	U	< 0.13	U	< 0.13	U
Hexachlorobutadiene	ug/L	0.4	NAL	NS		< 2.5	U	< 2.1	U	NS		NS	
Iodomethane	ug/L	NAL	NAL	< 1.7	U	< 2.5	U	< 2.1	U	< 1.7	U	< 1.7	U
Isobutanol	ug/L	NAL	NAL	< 11	U	< 130	U	< 100	U	< 11	U	< 11	U
m,p-Xylenes	ug/L	**500**	NAL	< 0.17	U	NS		NS		< 0.17	U	< 0.17	U
Methyl Methacrylate	ug/L	NAL	25	< 0.51	U	< 25	U	< 21	U	< 0.51	U	< 0.51	U
Methylacrylonitrile	ug/L	NAL	NAL	< 4.9	U	< 25	U	< 21	U	< 4.9	U	< 4.9	U
Methylene Chloride	ug/L	**5**	NAL	< 0.23	U	< 2.5	U	< 2.1	U	< 0.23	U	< 0.23	U
Naphthalene	ug/L	**6**	NAL	< 0.11	U	NS		NS		< 0.11	U	< 0.11	U
o-Xylene	ug/L	500	NAL	< 0.065	U	NS		NS		< 0.065	U	< 0.065	U
Pentachloroethane	ug/L	NAL	NAL	NS		< 2.5	U	< 2.1	U	NS		NS	
Propionitrile	ug/L	NAL	NAL	< 5	U	< 130	U	< 100	U	< 5	U	< 5	U
Styrene	ug/L	70	NAL	< 0.11	U	< 2.5	U	< 2.1	U	< 0.11	U	< 0.11	U
Tetrachloroethene	ug/L	**0.7**	NAL	**2.7**		**4.9**		**3.1**		**6.2**		**5.9**	
Toluene	ug/L	**600**	NAL	< 0.14	U	< 2.5	U	< 2.1	U	< 0.14	U	< 0.14	U
trans-1,2-Dichloroethene	ug/L	**100**	NAL	< 0.21	U	0.49	J	0.31	J	< 0.21	U	< 0.21	U
trans-1,3-Dichloropropene	ug/L	**0.4**	NAL	< 0.15	U	< 2.5	U	< 2.1	U	< 0.15	U	< 0.15	U
trans-1,4-Dichloro-2-butene	ug/L	NAL	NAL	< 0.7	U	< 10	U	< 8.3	U	< 0.7	U	< 0.7	U
Trichloroethene	ug/L	**3**	NAL	**91**		**160**		**120**		**130**		**130**	
Trichlorofluoromethane	ug/L	2000	NAL	< 0.24	U	< 2.5	U	< 2.1	U	< 0.24	U	< 0.24	U
Vinyl Acetate	ug/L	NAL	88	< 0.95	U	< 2.5	U	< 2.1	U	< 0.95	U	< 0.95	U
Vinyl Chloride	ug/L	**0.03**	NAL	**13**		< 2.5	U	< 2.1	U	< 0.32	U	< 0.32	U
Xylenes, Total	ug/L	**500**	NAL	< 0.45	U	< 2.5	U	< 2.1	U	< 0.45	U	< 0.45	U

Notes:
1.) NC2L - Class GA standards, 15A NCAC 02L.0202 (4/1/2013)
2.) NC-IMAC - Interim Maximum Allowable Concentrations (4/1/2013)
3.) Detected results greater than either standard are shown in **bold.**

Abbreviations:
NS = standard not available
Qual = qualifier
Unit: ug/L = microgram per liter
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Qualifiers:
> = greater than
J = estimated result
R = rejected result
U = not detected above RL
UJ = not detected above RL; estimated RL

Year 2 Monitoring Event Results - SVOC
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-4	
			Sample Date	03/28/16	
			N=Normal, FD=Field Duplicate	N	
Parameter	Unit	NC2L 2016_04	NC-IMAC 2016_04	Result	Qual
Semivolatile Organic Compounds					
1,2,4,5-Tetrachlorobenzene	ug/L	NAL	2	< 2	U
1,2,4-Trichlorobenzene	ug/L	70	NAL	< 1.2	U
1,2-Dichlorobenzene	ug/L	20	NAL	1.1	J
1,3,5-Trinitrobenzene	ug/L	NAL	NAL	< 3	U
1,3-Dichlorobenzene	ug/L	200	NAL	< 1.1	U
1,3-Dinitrobenzene	ug/L	NAL	NAL	< 1.9	U
1,4-Dichlorobenzene	ug/L	6	NAL	< 1	U
1,4-Naphthoquinone	ug/L	NAL	NAL	< 2.5	U
1-Naphthylamine	ug/L	NAL	NAL	< 1.9	U
2,3,4,6-Tetrachlorophenol	ug/L	200	NAL	< 2	U
2,4,5-Trichlorophenol	ug/L	NAL	63	< 1	U
2,4,6-Trichlorophenol	ug/L	NAL	4	< 1.1	U
2,4-Dichlorophenol	ug/L	NAL	0.98	< 1.4	U
2,4-Dinitrophenol	ug/L	NAL	NAL	< 2.6	U
2,4-Dinitrotoluene	ug/L	NAL	0.1	< 0.026	U
2,6-Dichlorophenol	ug/L	NAL	NAL	< 1.1	U
2,6-Dinitrotoluene	ug/L	NAL	NAL	< 1.5	U
2-Acetylaminofluorene	ug/L	NAL	NAL	< 2.5	U
2-Aminonaphthalene	ug/L	NAL	NAL	< 3	U
2-Chloronaphthalene	ug/L	NAL	NAL	< 1	U
2-Chlorophenol	ug/L	0.4	NAL	< 1.2	U
2-Methylnaphthalene	ug/L	30	NAL	13	
2-Methylphenol	ug/L	NAL	400	< 1.4	U
2-Nitroaniline	ug/L	NAL	NAL	< 1.5	U
2-Nitrophenol	ug/L	NAL	NAL	< 1.1	U
2-Picoline	ug/L	NAL	NAL	< 2.6	U
3-, 4-Methylphenol (total)	ug/L	NAL	NAL	8.1	J
3,3'-Dichlorobenzidine	ug/L	NAL	NAL	< 3.3	U
3,3'-Dimethylbenzidine	ug/L	NAL	NAL	< 2.2	U
3-Methylcholanthrene	ug/L	NAL	NAL	< 1.3	U
3-Nitroaniline	ug/L	NAL	NAL	< 2.1	U
4,6-Dinitro-2-methylphenol	ug/L	NAL	NAL	< 2.9	U
4-Aminodiphenyl	ug/L	NAL	NAL	< 2.1	U
4-Bromophenyl Phenyl Ether	ug/L	NAL	NAL	< 1	U
4-Chloro-3-methylphenol	ug/L	NAL	NAL	< 1.5	U
4-Chloroaniline	ug/L	NAL	NAL	< 1.2	U
4-Chlorophenyl-phenylether	ug/L	NAL	NAL	< 1.6	U
4-Nitroaniline	ug/L	NAL	NAL	< 3.2	U
4-Nitroquinoline N-Oxide	ug/L	NAL	NAL	< 4	U
5-Nitro-o-toluidine	ug/L	NAL	NAL	< 3.2	U
7,12-Dimethylbenz[a]anthracene	ug/L	NAL	NAL	< 1.1	U

Year 2 Monitoring Event Results - SVOC
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-4	
			Sample Date	03/28/16	
			N=Normal, FD=Field Duplicate	N	
Parameter	Unit	NC2L 2016_04	NC-IMAC 2016_04	Result	Qual
Acenaphthene	ug/L	80	NAL	< 1.4	U
Acenaphthylene	ug/L	200	NAL	< 1.2	U
Acetophenone	ug/L	NAL	700	2.6	J
alpha, alpha-Dimethylphenethylamine	ug/L	NAL	NAL	< 2.8	U
Aniline	ug/L	NAL	NAL	< 1	U
Anthracene	ug/L	2000	NAL	< 0.034	U
Aramite	ug/L	NAL	NAL	< 1.2	U
Benzo[a]anthracene	ug/L	0.05	NAL	< 0.022	U
Benzo[a]pyrene	ug/L	0.005	NAL	< 0.024	U
Benzo[b]fluoranthene	ug/L	0.05	NAL	< 0.028	U
Benzo[g,h,i]perylene	ug/L	200	NAL	< 0.036	U
Benzo[k]fluoranthene	ug/L	0.5	NAL	< 0.033	U
Benzyl Alcohol	ug/L	NAL	700	< 1.4	U
Bis(2-chloro-1-methylethyl) Ether	ug/L	NAL	NAL	< 1.3	U
Bis(2-chloroethoxy)methane	ug/L	NAL	NAL	< 1.4	U
Bis(2-chloroethyl) Ether	ug/L	0.03	NAL	< 1.2	U
Bis(2-ethylhexyl) Phthalate	ug/L	3	NAL	< 1.7	U
Butylbenzyl Phthalate	ug/L	1000	NAL	< 2	U
Chrysene	ug/L	5	NAL	< 0.027	U
Diallate	ug/L	NAL	NAL	< 0.028	U
Dibenz[a,h]anthracene	ug/L	0.005	NAL	< 0.038	U
Dibenzofuran	ug/L	NAL	28	< 1.4	U
Diethyl Phthalate	ug/L	6000	NAL	< 2.1	U
Dimethoate	ug/L	NAL	NAL	< 0.033	U
Dimethyl Phthalate	ug/L	NAL	NAL	< 1.4	U
Di-n-Butyl Phthalate	ug/L	700	NAL	< 1.5	U
Di-n-octyl Phthalate	ug/L	100	NAL	< 3.1	U
Dinoseb	ug/L	NAL	7	< 1.2	U
Disulfoton	ug/L	0.3	NAL	< 0.034	U
Ethyl Methanesulfonate	ug/L	NAL	NAL	< 1.2	U
Fluoranthene	ug/L	300	NAL	< 0.032	U
Fluorene	ug/L	300	NAL	< 1.7	U
Hexachlorobenzene	ug/L	0.02	NAL	< 0.033	U
Hexachlorobutadiene	ug/L	0.4	NAL	< 0.031	U
Hexachlorocyclopentadiene	ug/L	NAL	NAL	< 1.3	U
Hexachloroethane	ug/L	NAL	NAL	< 1.1	U
Hexachlorophene	ug/L	NAL	NAL	< 2.8	U
Hexachloropropene	ug/L	NAL	NAL	< 1.7	U
Indeno[1,2,3-cd]pyrene	ug/L	0.05	NAL	< 0.038	U
Isophorone	ug/L	40	NAL	< 1.3	U
Isosafrole	ug/L	NAL	NAL	< 1.3	U
Kepone	ug/L	NAL	NAL	< 7.2	U

Year 2 Monitoring Event Results - SVOC
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

			Sample ID	GW-4	
			Sample Date	03/28/16	
			N=Normal, FD=Field Duplicate	N	
Parameter	Unit	NC2L 2016_04	NC-IMAC 2016_04	Result	Qual
Methapyrilene	ug/L	NAL	NAL	< 3.5	U
Methyl Methanesulfonate	ug/L	NAL	NAL	< 1	U
Naphthalene	ug/L	**6**	NAL	**7.1**	**J**
Nitrobenzene	ug/L	NAL	NAL	< 1.2	U
Nitrosomethylethylamine	ug/L	NAL	NAL	< 1.9	U
N-Nitrosodiethylamine	ug/L	NAL	NAL	< 1.3	U
N-Nitrosodimethylamine	ug/L	0.0007	NAL	< 1.3	U
N-Nitroso-di-n-butylamine	ug/L	NAL	NAL	< 1.2	U
N-Nitroso-di-n-propylamine	ug/L	NAL	NAL	< 1.5	U
N-Nitrosodiphenylamine	ug/L	NAL	NAL	< 2.1	U
N-Nitrosomorpholine	ug/L	NAL	NAL	< 1.1	U
N-Nitrosopiperidine	ug/L	NAL	NAL	< 1.1	U
N-Nitrosopyrrolidine	ug/L	NAL	NAL	< 1.3	U
o,o,o-Triethylphosphorothioate	ug/L	NAL	NAL	< 1.3	U
o-Toluidine	ug/L	NAL	NAL	< 1.1	U
Parathion, methyl	ug/L	NAL	NAL	< 0.02	U
p-Dimethylaminoazobenzene	ug/L	NAL	NAL	< 1.4	U
Pentachlorobenzene	ug/L	NAL	NAL	< 0.031	U
Pentachloroethane	ug/L	NAL	NAL	< 1.8	U
Pentachloronitrobenzene	ug/L	NAL	NAL	< 0.027	U
Pentachlorophenol	ug/L	0.3	NAL	< 1.8	U
Phenacetin	ug/L	NAL	NAL	< 2.7	U
Phenanthrene	ug/L	200	NAL	< 1.4	U
Phenol	ug/L	30	NAL	1.9	J
Phorate	ug/L	1	NAL	< 0.032	U
p-Phenylenediamine	ug/L	NAL	NAL	< 4	U
Pronamide	ug/L	NAL	NAL	< 1.4	U
Pyrene	ug/L	200	NAL	< 0.032	U
Pyridine	ug/L	NAL	NAL	< 1.3	U

Notes:

1.) NC2L - Class GA standards, 15A NCAC 02L.0202 (4/1/2013)
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3.) Detected results greater than either standard are shown in **bold.**

Abbreviations:

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D-2 YEAR 1 MONITORING EVENT RESULTS

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	BNP-1 / IW-17	BNP-1 / IW-17	BNP-1 / IW-17	BNP-1 / IW-17	BNP-1 / IW-17	BNP-1 / IW-17	BNP-1 / IW-17	BNP-1 / IW-17	BNP-2	BNP-2	BNP-2	BNP-2	BNP-4
				Sys Sample Code	BNP-1-IW-17_12192013	BNP-1-IW-17_12192013	BNP-1-IW-17_08072014	BNP-1-IW-17_08072014	IW-17_11062014	IW-17_11062014	IW-17_03032015	IW-17_03032015	BNP-2_04112014	BNP-2_04112014	BNP-2_02232015	BNP-2_02232015	BNP-4_04112014
				Sample Date	12/19/13	12/19/13	08/07/14	08/07/14	11/06/14	11/06/14	03/03/15	03/03/15	04/11/14	04/11/14	02/23/15	02/23/15	04/11/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	190	JD	140	JD	< 100	U	200	D	< 14	U	2		< 20
100-42-5	Styrene	70		ug/L	< 830	U	< 33	U	< 50	U	< 4	U	< 7.1	U	< 0.02	U	< 10
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 830	U	< 67	U	< 100	U	< 8	U	< 14	U	< 0.04	U	< 20
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 830	U	< 83	U	< 130	U	< 10	U	< 18	U	< 0.05	U	< 25
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 830	U	< 50	U	< 75	U	< 6	U	< 11	U	< 0.03	U	< 15
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 830	U	< 67	U	< 100	U	< 8	U	< 14	U	< 0.04	U	< 20
107-02-8	Acrolein		4	ug/L	< 8300	U	< 1700	U	< 2600	U	< 210	U	< 370	U	< 1	U	< 520
107-05-1	Allyl Chloride			ug/L	< 830	U	< 83	U	< 130	U	< 10	U	< 18	U	< 0.05	U	< 25
107-06-2	1,2-Dichloroethane	0.4		ug/L	**15000**	D	**12000**	D	**12000**	D	**14000**	D	**780**	D	**1400**	D	**1800**
107-12-0	Propionitrile			ug/L	< 42000	U	< 2300	U	< 3500	U	< 280	U	< 500	U	< 1.4	U	< 700
107-13-1	Acrylonitrile			ug/L	< 8300	U	< 600	U	< 900	U	< 72	U	< 130	U	< 0.36	U	< 180
108-05-4	Vinyl Acetate		88	ug/L	< 830	U	< 100	U	< 150	U	< 12	U	< 21	U	< 0.06	U	< 30
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 4200	U	< 700	U	< 1100	U	< 84	U	< 150	U	2.1	J	< 210
108-88-3	Toluene	600		ug/L	**620**	JD	530	JD	490	JD	**770**	D	57	JBD	8.4		110
108-90-7	Chlorobenzene	50		ug/L	**91**	JD	**85**	JD	< 50	U	**100**	D	< 7.1	U	4		< 10
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 3300	U	< 550	U	< 830	U	< 66	U	< 120	U	< 0.33	U	< 170
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 830	U	< 100	U	< 150	U	< 12	U	< 21	U	< 0.06	U	< 30
123-91-1	1,4-Dioxane	3		ug/L	< 42000	U	< 9000	U	< 14000	U	< 1100	U	< 1900	U	**14**	J	< 2700
124-48-1	Dibromochloromethane	0.4		ug/L	< 830	U	< 67	U	< 100	U	< 8	U	< 14	U	< 0.04	U	< 20
126-98-7	Methylacrylonitrile			ug/L	< 8300	U	< 650	U	< 980	U	< 78	U	< 140	U	< 0.39	U	< 200
127-18-4	Tetrachloroethene	0.7		ug/L	**320**	JD	**190**	JD	< 150	U	**95**	JD	< 21	U	**54**	E	< 30
1330-20-7	Xylenes, Total	500		ug/L	**870**	D	**720**	JD	< 75	U	**1100**	D	< 11	U	21		140
156-59-2	cis-1,2-Dichloroethene	70		ug/L	**43000**	D	**44000**	D	**120000**	D	**120000**	D	**11000**	D	**2000**	D	**20000**
156-60-5	trans-1,2-Dichloroethene	100		ug/L	**230**	JD	**170**	JD	< 130	U	**240**	D	57	JD	**110**	JD	**100**
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 830	U	< 67	U	< 100	U	< 8	U	< 14	U	< 0.04	U	< 20
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 830	U	< 50	U	< 75	U	**64**	JD	< 11	U	**45**	E	< 15
591-78-6	2-Hexanone		40	ug/L	< 4200	U	< 850	U	< 1300	U	< 100	U	< 180	U	< 0.51	U	< 260
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 830	U	< 33	U	< 50	U	< 4	U	< 7.1	U	< 0.02	U	< 10
67-64-1	Acetone	6000		ug/L	5300	BD	4900	D	< 1100	U	600	D	< 160	U	6.3		< 220
67-66-3	Chloroform	70		ug/L	**23000**	D	**19000**	D	**23000**	D	**23000**	D	**270**	D	**1200**	D	**590**
71-43-2	Benzene	1		ug/L	**1500**	D	**1400**	D	**1400**	D	**1900**	D	**180**	JD	**420**	JD	**330**
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 830	U	< 33	U	< 50	U	51	JD	< 7.1	U	16		< 10
74-83-9	Bromomethane		10	ug/L	< 830	U	< 180	U	< 280	U	< 22	U	< 39	U	< 0.11	U	< 55
74-87-3	Chloromethane	3		ug/L	< 830	U	< 180	U	< 280	U	< 22	U	< 39	U	< 0.11	U	< 55
74-88-4	Iodomethane			ug/L	< 830	U	< 50	U	< 75	U	< 6	U	< 11	U	< 0.03	U	< 15
74-95-3	Dibromomethane		70	ug/L	< 830	U	< 50	U	< 75	U	< 6	U	< 11	U	< 0.03	U	< 15
75-00-3	Chloroethane	3000		ug/L	< 830	U	< 330	U	< 500	U	< 40	U	< 71	U	< 0.2	U	< 100
75-01-4	Vinyl Chloride	0.03		ug/L	< 830	U	< 120	U	< 180	U	**220**	D	**4500**	D	**94**	JD	**2200**
75-05-8	Acetonitrile			ug/L	< 830	U	< 50	U	< 75	U	< 6	U	< 11	U	< 0.03	U	< 15
75-09-2	Methylene Chloride	5		ug/L	**3100**	D	**2800**	BD	**3300**	BD	**3300**	D	**61**	JBD	**14**		**330**
75-15-0	Carbon Disulfide	700		ug/L	< 830	U	< 33	U	< 50	U	< 4	U	< 7.1	U	1.4		< 10
75-25-2	Bromoform	4		ug/L	< 830	U	< 50	U	< 75	U	< 6	U	< 11	U	< 0.03	U	< 15
75-27-4	Bromodichloromethane	0.6		ug/L	< 830	U	< 50	U	< 75	U	< 6	U	< 11	U	< 0.03	U	< 15
75-34-3	1,1-Dichloroethane	6		ug/L	**300**	JD	**310**	JD	**300**	JD	**360**	D	**28**	JD	**23**		**57**
75-35-4	1,1-Dichloroethene	350*		ug/L	**1300**	D	**770**	JD	**1300**	D	**1400**	D	150	JD	240	JD	250
75-69-4	Trichlorofluoromethane	2000		ug/L	< 830	U	< 100	U	< 150	U	85	JD	< 21	U	3.2		< 30
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 830	U	< 50	U	< 75	U	< 6	U	< 11	U	0.13	J	< 15
76-01-7	Pentachloroethane			ug/L	< 830	U	< 120	U	< 180	U	< 14	U	< 25	U	< 0.07	U	< 35
78-83-1	Isobutanol			ug/L	< 42000	U	< 9800	U	< 15000	U	< 1200	U	< 2100	U	< 5.9	U	< 3000
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 830	U	< 200	U	< 300	U	< 24	U	< 43	U	< 0.12	U	< 60
78-93-3	2-Butanone	4000		ug/L	< 4200	U	< 470	U	< 700	U	< 56	U	< 100	U	< 0.28	U	< 140
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 830	U	< 67	U	< 100	U	**34**	JD	< 14	U	**3.6**		< 20
79-01-6	Trichloroethene	3		ug/L	**110000**	D	**80000**	D	**34000**	D	**39000**	D	**2600**	D	**36000**	BD	**370**
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 830	U	< 83	U	< 130	U	**240**	D	< 18	U	**1.7**		< 25
80-62-6	Methyl Methacrylate		25	ug/L	< 8300	U	< 930	U	< 1400	U	< 110	U	< 200	U	< 0.56	U	< 280
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 830	U	< 50	U	< 75	U	< 6	U	< 11	U	< 0.03	U	< 15
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 830	U	< 50	U	< 75	U	< 6	U	< 11	U	0.55		< 15
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 830	U	< 420	U	< 630	U	< 50	U	< 89	U	< 0.25	U	< 130
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 830	U	< 150	U	< 230	U	< 18	U	< 32	U	< 0.09	U	< 45
97-63-2	Ethyl Methacrylate			ug/L	< 8300	U	< 680	U	< 1000	U	< 82	U	< 150	U	< 0.41	U	< 210
	Total VOCs			**ug/L**	**204821**		**167015**		**161790**		**206759**		**19683**		**41684.38**		**26277**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	BNP-4	BNP-4	BNP-4	BNP-4	BNP-4	BNP-4	BNP-4	BR-1	BR-1	BR-1	BR-1	BR-2	BR-2
				Sys Sample Code	BNP-4_04112014	BNP-4_08072014	BNP-4_08072014	BNP-4_11062014	BNP-4_11062014	BNP-4_02232015	BNP-4_02232015	BR-1_12202013	BR-1_12202013	BR-1_03032015	BR-1_03032015	BR-2_12202013	BR-2_12202013
				Sample Date	04/11/14	08/07/14	08/07/14	11/06/14	11/06/14	02/23/15	02/23/15	12/20/13	12/20/13	03/03/15	03/03/15	12/20/13	12/20/13
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 40	U	< 14	U	30		0.27	J	< 0.8	U	0.042	J
100-42-5	Styrene	70		ug/L	U	< 20	U	< 7.1	U	< 0.02	U	< 0.5	U	< 0.4	U	< 0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 40	U	< 14	U	< 0.04	U	< 0.5	U	< 0.8	U	< 0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 50	U	< 18	U	< 0.05	U	< 0.5	U	< 1	U	< 0.5	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 30	U	< 11	U	< 0.03	U	< 0.5	U	< 0.6	U	< 0.5	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 40	U	< 14	U	< 0.04	U	< 0.5	U	< 0.8	U	< 0.5	U
107-02-8	Acrolein		4	ug/L	U	< 1000	U	< 370	U	< 1	U	< 5	U	< 21	U	< 5	U
107-05-1	Allyl Chloride			ug/L	U	< 50	U	< 18	U	< 0.05	U	< 0.5	U	< 1	U	< 0.5	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	D	< 30	U	**1000**	D	**87**	E	**1200**	D	**410**	D	**27**	
107-12-0	Propionitrile			ug/L	U	< 1400	U	< 500	U	< 1.4	U	< 25	U	< 28	U	< 25	U
107-13-1	Acrylonitrile			ug/L	U	< 360	U	< 130	U	< 0.36	U	< 5	U	< 7.2	U	< 5	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 60	U	< 21	U	< 0.06	U	< 0.5	U	< 1.2	U	< 0.5	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 420	U	< 150	U	45		< 2.5	U	< 8.4	U	< 2.5	U
108-88-3	Toluene	600		ug/L	JBD	230	JD	86	JD	170	JD	2.7		2.9	JD	0.15	JB
108-90-7	Chlorobenzene	50		ug/L	U	< 20	U	< 7.1	U	24		0.37	J	< 0.4	U	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 330	U	< 120	U	< 0.33	U	< 2	U	< 6.6	U	< 2	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 60	U	< 21	U	0.16	J	< 0.5	U	< 1.2	U	< 0.5	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 5400	U	< 1900	U	**67**		**15**	J	< 110	U	< 25	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 40	U	< 14	U	< 0.04	U	< 0.5	U	< 0.8	U	< 0.5	U
126-98-7	Methylacrylonitrile			ug/L	U	< 390	U	< 140	U	< 0.39	U	< 5	U	< 7.8	U	< 5	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	< 60	U	< 21	U	0.13	J	0.39	J	< 1.2	U	< 0.5	U
1330-20-7	Xylenes, Total	500		ug/L	JD	220	JD	< 11	U	140		1.1		0.73	JD	0.07	J
156-59-2	cis-1,2-Dichloroethene	70		ug/L	D	**33000**	D	**8700**	D	**3300**	D	**2200**	DE	**600**	D	**100**	E
156-60-5	trans-1,2-Dichloroethene	100		ug/L	JD	97	JD	29	JD	25		47	D	7.8	JD	3	
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 40	U	< 14	U	< 0.04	U	< 0.5	U	< 0.8	U	< 0.5	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 30	U	< 11	U	< 0.03	U	< 0.5	U	< 0.6	U	< 0.5	U
591-78-6	2-Hexanone		40	ug/L	U	< 510	U	< 180	U	< 0.51	U	< 2.5	U	< 10	U	< 2.5	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 20	U	< 7.1	U	< 0.02	U	< 0.5	U	< 0.4	U	< 0.5	U
67-64-1	Acetone	6000		ug/L	U	< 440	U	< 160	U	560	JD	34	B	42	JD	11	B
67-66-3	Chloroform	70		ug/L	D	< 30	U	**610**	D	24		**140**	D	**90**	D	2.6	
71-43-2	Benzene	1		ug/L	D	**640**	D	**320**	D	**460**	D	**63**	D	**34**	D	**1.6**	
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 20	U	< 7.1	U	0.086	J	< 0.5	U	< 0.4	U	< 0.5	U
74-83-9	Bromomethane		10	ug/L	U	< 110	U	< 39	U	< 0.11	U	< 0.5	U	< 2.2	U	< 0.5	U
74-87-3	Chloromethane	3		ug/L	U	< 110	U	< 39	U	0.3	J	0.16	J	< 2.2	U	0.28	J
74-88-4	Iodomethane			ug/L	U	< 30	U	< 11	U	< 0.03	U	< 0.5	U	< 0.6	U	< 0.5	U
74-95-3	Dibromomethane		70	ug/L	U	< 30	U	< 11	U	< 0.03	U	< 0.5	U	< 0.6	U	< 0.5	U
75-00-3	Chloroethane	3000		ug/L	U	< 200	U	< 71	U	0.35	J	< 0.5	U	< 4	U	< 0.5	U
75-01-4	Vinyl Chloride	0.03		ug/L	D	**1900**	D	**10000**	D	**15000**	D	**28**		**160**	D	**0.99**	
75-05-8	Acetonitrile			ug/L	U	< 30	U	< 11	U	< 0.03	U	< 0.5	U	< 0.6	U	< 0.5	U
75-09-2	Methylene Chloride	5		ug/L	BD	**36**	JBD	**350**	BD	1.1		**92**	BD	**32**	D	0.29	J
75-15-0	Carbon Disulfide	700		ug/L	U	< 20	U	< 7.1	U	0.96		0.063	JB	< 0.4	U	0.085	JB
75-25-2	Bromoform	4		ug/L	U	< 30	U	< 11	U	< 0.03	U	< 0.5	U	< 0.6	U	< 0.5	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 30	U	< 11	U	< 0.03	U	< 0.5	U	< 0.6	U	< 0.5	U
75-34-3	1,1-Dichloroethane	6		ug/L	JD	< 20	U	**57**	JD	**72**	JD	1.5		< 0.4	U	< 0.5	U
75-35-4	1,1-Dichloroethene	350*		ug/L	JD	290	JD	91	JD	14		50	D	13	D	2.6	
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 60	U	< 21	U	< 0.06	U	0.14	J	< 1.2	U	< 0.5	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 30	U	< 11	U	0.22	J	< 0.5	U	< 0.6	U	< 0.5	U
76-01-7	Pentachloroethane			ug/L	U	< 70	U	< 25	U	< 0.07	U	< 0.5	U	< 1.4	U	< 0.5	U
78-83-1	Isobutanol			ug/L	U	< 5900	U	< 2100	U	< 5.9	U	< 25	U	< 120	U	< 25	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 120	U	< 43	U	< 0.12	U	< 0.5	U	< 2.4	U	< 0.5	U
78-93-3	2-Butanone	4000		ug/L	U	< 280	U	< 100	U	42		< 2.5	U	< 5.6	U	< 2.5	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 40	U	< 14	U	**2.2**		< 0.5	U	< 0.8	U	< 0.5	U
79-01-6	Trichloroethene	3		ug/L	D	< 30	U	**55**	JD	1.3		**1100**	D	**260**	D	**38**	
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 50	U	< 18	U	**4.2**		< 0.5	U	< 1	U	< 0.5	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 560	U	< 200	U	< 0.56	U	< 5	U	< 11	U	< 5	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 30	U	< 11	U	< 0.03	U	< 0.5	U	< 0.6	U	< 0.5	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 30	U	< 11	U	0.71		< 0.5	U	< 0.6	U	< 0.5	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 250	U	< 89	U	< 0.25	U	< 0.5	U	< 5	U	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 90	U	< 32	U	< 0.09	U	< 0.5	U	< 1.8	U	< 0.5	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 410	U	< 150	U	< 0.41	U	< 5	U	< 8.2	U	< 5	U
	Total VOCs			**ug/L**		**36413**		**21298**		**20071.716**		**4975.693**		**1652.43**		**187.707**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	BR-2	BR-2	BR-3	BR-3	BR-3	BR-3	EW-4D	EW-4D	EW-4D	EW-4D	EW-4D	EW-4D	EW-4D
				Sys Sample Code	BR-2_03032015	BR-2_03032015	BR-3_12202013	BR-3_12202013	BR-3_03032015	BR-3_03032015	EW-04D_02032014	EW-04D_02032014	EW-4D_04112014	EW-4D_04112014	EW-04D_08072014	EW-04D_08072014	EW-04D_11062014
				Sample Date	03/03/15	03/03/15	12/20/13	12/20/13	03/03/15	03/03/15	02/03/14	02/03/14	04/11/14	04/11/14	08/07/14	08/07/14	11/06/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	1	JD	< 0.5	U	3.9	JD	< 3.6	U	< 0.25	U	< 0.1	U	< 0.1
100-42-5	Styrene	70		ug/L	< 0.2	U	< 0.5	U	< 1	U	< 3.6	U	< 0.13	U	0.12	JD	< 0.05
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.4	U	< 0.5	U	< 2	U	< 3.6	U	< 0.25	U	< 0.1	U	< 0.1
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.5	U	< 0.5	U	< 2.5	U	< 3.6	U	< 0.31	U	< 0.13	U	< 0.13
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.3	U	< 0.5	U	< 1.5	U	< 3.6	U	< 0.19	U	< 0.075	U	< 0.075
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.4	U	< 0.5	U	< 2	U	< 3.6	U	< 0.25	U	< 0.1	U	< 0.1
107-02-8	Acrolein		4	ug/L	< 10	U	< 5	U	< 52	U	< 36	U	**1300**	D	< 2.6	U	< 2.6
107-05-1	Allyl Chloride			ug/L	< 0.5	U	< 0.5	U	< 2.5	U	< 3.6	U	< 0.31	U	< 0.13	U	< 0.13
107-06-2	1,2-Dichloroethane	0.4		ug/L	**8.4**	D	**180**	D	**86**	D	< 3.6	U	< 0.19	U	**0.55**	JD	**0.62**
107-12-0	Propionitrile			ug/L	< 14	U	< 25	U	< 70	U	< 180	U	< 8.8	U	< 3.5	U	< 3.5
107-13-1	Acrylonitrile			ug/L	< 3.6	U	< 5	U	< 18	U	< 36	U	< 2.3	U	< 0.9	U	< 0.9
108-05-4	Vinyl Acetate		88	ug/L	< 0.6	U	< 0.5	U	< 3	U	< 3.6	U	< 0.38	U	< 0.15	U	< 0.15
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 4.2	U	< 2.5	U	< 21	U	< 18	U	< 2.6	U	< 1.1	U	< 1.1
108-88-3	Toluene	600		ug/L	6.4	D	1.1		12	JD	< 3.6	U	0.5	JBD	2.6	D	0.26
108-90-7	Chlorobenzene	50		ug/L	1.2	JD	5.9		18	JD	< 3.6	U	< 0.13	U	0.086	JD	< 0.05
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 3.3	U	< 2	U	< 17	U	< 14	U	< 2.1	U	< 0.83	U	< 0.83
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.6	U	< 0.5	U	< 3	U	< 3.6	U	< 0.38	U	< 0.15	U	< 0.15
123-91-1	1,4-Dioxane	3		ug/L	< 54	U	< 25	U	< 270	U	< 180	U	< 34	U	< 14	U	< 14
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.4	U	< 0.5	U	< 2	U	< 3.6	U	< 0.25	U	< 0.1	U	< 0.1
126-98-7	Methylacrylonitrile			ug/L	< 3.9	U	< 5	U	< 20	U	< 36	U	< 2.4	U	< 0.98	U	< 0.98
127-18-4	Tetrachloroethene	0.7		ug/L	< 0.6	U	**40**		**4.2**	JD	**6.4**	D	**3.2**	D	**2.6**	D	**0.91**
1330-20-7	Xylenes, Total	500		ug/L	2.4	JD	< 0.5	U	9.2	JD	< 3.6	U	< 0.19	U	< 0.075	U	< 0.075
156-59-2	cis-1,2-Dichloroethene	70		ug/L	15	D	**290**	D	**1500**	D	38	D	53	D	**74**	D	**87**
156-60-5	trans-1,2-Dichloroethene	100		ug/L	1.1	JD	15		20	JD	< 3.6	U	< 0.31	U	0.27	JD	0.24
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.4	U	< 0.5	U	< 2	U	< 3.6	U	< 0.25	U	< 0.1	U	< 0.1
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.3	U	< 0.5	U	< 1.5	U	< 3.6	U	< 0.19	U	< 0.075	U	< 0.075
591-78-6	2-Hexanone		40	ug/L	< 5.1	U	< 2.5	U	< 26	U	< 18	U	< 3.2	U	< 1.3	U	< 1.3
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.2	U	< 0.5	U	< 1	U	< 3.6	U	< 0.13	U	< 0.05	U	< 0.05
67-64-1	Acetone	6000		ug/L	31	D	9.6		< 22	U	< 18	U	< 2.8	U	15	D	33
67-66-3	Chloroform	70		ug/L	< 0.3	U	**84**	D	23	JD	1.3	JD	3	JD	1.3	D	0.72
71-43-2	Benzene	1		ug/L	**43**	D	**29**		**72**	D	0.39	JD	0.41	JD	0.45	JD	0.72
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.2	U	0.35	J	< 1	U	0.95	JD	0.31	JD	0.56	JD	0.47
74-83-9	Bromomethane		10	ug/L	< 1.1	U	< 0.5	U	< 5.5	U	< 3.6	U	< 0.69	U	< 0.28	U	< 0.28
74-87-3	Chloromethane	3		ug/L	< 1.1	U	< 0.5	U	< 5.5	U	< 3.6	U	< 0.69	U	< 0.28	U	< 0.28
74-88-4	Iodomethane			ug/L	< 0.3	U	< 0.5	U	< 1.5	U	< 3.6	U	< 0.19	U	< 0.075	U	< 0.075
74-95-3	Dibromomethane		70	ug/L	< 0.3	U	< 0.5	U	< 1.5	U	< 3.6	U	< 0.19	U	< 0.075	U	< 0.075
75-00-3	Chloroethane	3000		ug/L	< 2	U	< 0.5	U	< 10	U	< 3.6	U	< 1.3	U	< 0.5	U	< 0.5
75-01-4	Vinyl Chloride	0.03		ug/L	**310**	D	**5.9**		**540**	D	**4.5**	D	**4**	D	**4**	D	**38**
75-05-8	Acetonitrile			ug/L	< 0.3	U	< 0.5	U	< 1.5	U	< 3.6	U	< 0.19	U	< 0.075	U	< 0.075
75-09-2	Methylene Chloride	5		ug/L	0.65	JD	**21**		**5.4**	JD	2.6	JBD	1.2	JBD	0.36	JBD	0.35
75-15-0	Carbon Disulfide	700		ug/L	< 0.2	U	0.13	JB	< 1	U	< 3.6	U	0.22	JD	0.7	JD	0.85
75-25-2	Bromoform	4		ug/L	< 0.3	U	< 0.5	U	< 1.5	U	< 3.6	U	< 0.19	U	< 0.075	U	< 0.075
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.3	U	< 0.5	U	< 1.5	U	< 3.6	U	< 0.19	U	< 0.075	U	< 0.075
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.2	U	0.91		< 1	U	4.5	D	5.2	D	4.7	D	5.4
75-35-4	1,1-Dichloroethene	350*		ug/L	< 0.4	U	46	D	34	D	64	D	46	D	34	D	36
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.6	U	0.096	J	< 3	U	< 3.6	U	< 0.38	U	< 0.15	U	< 0.15
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.3	U	0.22	J	< 1.5	U	< 3.6	U	< 0.19	U	< 0.075	U	< 0.075
76-01-7	Pentachloroethane			ug/L	< 0.7	U	< 0.5	U	< 3.5	U	< 3.6	U	< 0.44	U	< 0.18	U	< 0.18
78-83-1	Isobutanol			ug/L	< 59	U	< 25	U	< 300	U	< 180	U	< 37	U	< 15	U	< 15
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 1.2	U	< 0.5	U	< 6	U	< 3.6	U	< 0.75	U	< 0.3	U	< 0.3
78-93-3	2-Butanone	4000		ug/L	< 2.8	U	< 2.5	U	< 14	U	< 18	U	< 1.8	U	< 0.7	U	< 0.7
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.4	U	0.13	J	< 2	U	< 3.6	U	< 0.25	U	< 0.1	U	< 0.1
79-01-6	Trichloroethene	3		ug/L	1.4	JD	**2200**	D	**52**	D	**240**	D	**160**	D	**58**	D	**36**
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.5	U	< 0.5	U	< 2.5	U	< 3.6	U	< 0.31	U	< 0.13	U	< 0.13
80-62-6	Methyl Methacrylate		25	ug/L	< 5.6	U	< 5	U	< 28	U	< 36	U	< 3.5	U	< 1.4	U	< 1.4
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.3	U	< 0.5	U	< 1.5	U	< 3.6	U	< 0.19	U	< 0.075	U	< 0.075
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.3	U	< 0.5	U	< 1.5	U	< 3.6	U	< 0.19	U	0.13	JD	< 0.075
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 2.5	U	< 0.5	U	< 13	U	< 3.6	U	< 1.6	U	< 0.63	U	< 0.63
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.9	U	< 0.5	U	< 4.5	U	< 3.6	U	< 0.56	U	< 0.23	U	< 0.23
97-63-2	Ethyl Methacrylate			ug/L	< 4.1	U	< 5	U	< 21	U	< 36	U	< 2.6	U	< 1	U	< 1
	Total VOCs			**ug/L**	**421.55**		**2929.336**		**2379.7**		**362.64**		**1577.04**		**199.426**		**240.54**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	EW-4D	GW-12I	GW-12I	GW-12I	GW-12I	GW-12I	GW-12I	GW-12I	GW-12I	GW-12I	GW-12I	GW-12S	GW-12S
				Sys Sample Code	EW-04D_11062014	GW-12I_12202013	GW-12I_12202013	GW-12I_04092014	GW-12I_04092014	GW-12I_08062014	GW-12I_08062014	GW-12I_11062014	GW-12I_11062014	GW-12I_02162015	GW-12I_02162015	GW-12S_12182013	GW-12S_12182013
				Sample Date	11/06/14	12/20/13	12/20/13	04/09/14	04/09/14	08/06/14	08/06/14	11/06/14	11/06/14	02/16/15	02/16/15	12/18/13	12/18/13
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
100-42-5	Styrene	70		ug/L	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
107-02-8	Acrolein		4	ug/L	U	< 5	U	< 1	U	< 1	U	< 1	U	< 1	U	< 5	U
107-05-1	Allyl Chloride			ug/L	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	JD	**0.93**	B	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
107-12-0	Propionitrile			ug/L	U	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 25	U
107-13-1	Acrylonitrile			ug/L	U	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 5	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 2.5	U
108-88-3	Toluene	600		ug/L	JD	0.059	JB	0.17	J	0.056	J	0.044	J	0.037	J	< 0.5	U
108-90-7	Chlorobenzene	50		ug/L	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 2	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 25	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 25	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
126-98-7	Methylacrylonitrile			ug/L	U	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 5	U
127-18-4	Tetrachloroethene	0.7		ug/L	JD	0.13	J	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	D	1.7		0.054	J	< 0.03	U	0.063	J	< 0.03	U	1.1	
156-60-5	trans-1,2-Dichloroethene	100		ug/L	JD	0.075	J	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
591-78-6	2-Hexanone		40	ug/L	U	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 2.5	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U
67-64-1	Acetone	6000		ug/L	D	3.9	B	1.5	J	< 0.44	U	< 0.44	U	< 0.44	U	2.3	J
67-66-3	Chloroform	70		ug/L	JD	0.29	JB	< 0.03	U	< 0.03	U	0.049	J	< 0.03	U	< 0.5	U
71-43-2	Benzene	1		ug/L	JD	0.18	JB	< 0.03	U	< 0.03	U	< 0.03	U	0.11	J	0.048	J
71-55-6	1,1,1-Trichloroethane	200		ug/L	JD	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U
74-83-9	Bromomethane		10	ug/L	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U
74-87-3	Chloromethane	3		ug/L	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U
74-88-4	Iodomethane			ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U
75-01-4	Vinyl Chloride	0.03		ug/L	D	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	**0.24**	J
75-05-8	Acetonitrile			ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
75-09-2	Methylene Chloride	5		ug/L	JBD	0.068	JB	< 0.02	U	0.056	JB	0.038	JB	< 0.02	U	0.15	JB
75-15-0	Carbon Disulfide	700		ug/L	JBD	3.4		1.3		0.22	J	0.43	J	0.57		< 0.5	U
75-25-2	Bromoform	4		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
75-34-3	1,1-Dichloroethane	6		ug/L	D	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	1.2	
75-35-4	1,1-Dichloroethene	350*		ug/L	D	0.17	J	0.22	J	< 0.04	U	< 0.04	U	< 0.04	U	15	
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
76-01-7	Pentachloroethane			ug/L	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U
78-83-1	Isobutanol			ug/L	U	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 25	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5	U
78-93-3	2-Butanone	4000		ug/L	U	< 2.5	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 2.5	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
79-01-6	Trichloroethene	3		ug/L	D	**6.9**	B	0.2	J	0.11	J	0.13	J	< 0.03	U	2.5	
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 5	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.5	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 5	U
	Total VOCs			**ug/L**		**17.802**		**3.444**		**0.442**		**0.754**		**0.717**		**22.538**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-12S	GW-12S	GW-12S	GW-12S	GW-12S	GW-12S	GW-12S	GW-12S	GW-14I	GW-14I	GW-14I	GW-14I	GW-14I
				Sys Sample Code	GW-12S_04092014	GW-12S_04092014	GW-12S_08062014	GW-12S_08062014	GW-12S_11062014	GW-12S_11062014	GW-12S_02162015	GW-12S_02162015	GW-14I_12262013	GW-14I_12262013	GW-14I_04102014	GW-14I_04102014	GW-14I_07312014
				Sample Date	04/09/14	04/09/14	08/06/14	08/06/14	11/06/14	11/06/14	02/16/15	02/16/15	12/26/13	12/26/13	04/10/14	04/10/14	07/31/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.5	U	< 0.5
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.25	U	< 0.25
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.5	U	< 0.5
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.63	U	< 0.63
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.38
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.5	U	< 0.5
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 1	U	< 1	U	< 5	U	< 13	U	< 13
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.63	U	< 0.63
107-06-2	1,2-Dichloroethane	0.4		ug/L	0.087	J	< 0.03	U	< 0.03	U	< 0.03	U	0.28	JB	< 0.38	U	< 0.38
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 25	U	< 18	U	< 18
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 5	U	< 4.5	U	< 4.5
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.75	U	< 0.75
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 2.5	U	< 5.3	U	< 5.3
108-88-3	Toluene	600		ug/L	0.041	J	0.04	J	< 0.03	U	< 0.03	U	0.048	JB	< 0.38	U	< 0.38
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.25	U	< 0.25
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 2	U	< 4.1	U	< 4.1
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.75	U	< 0.75
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 25	U	< 68	U	< 68
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.5	U	< 0.5
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 5	U	< 4.9	U	< 4.9
127-18-4	Tetrachloroethene	0.7		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.75	U	< 0.75
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.38
156-59-2	cis-1,2-Dichloroethene	70		ug/L	0.92		1		0.74		0.8		0.36	J	< 0.38	U	< 0.38
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.63	U	< 0.63
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.5	U	< 0.5
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.38
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 2.5	U	< 6.4	U	< 6.4
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.25	U	< 0.25
67-64-1	Acetone	6000		ug/L	0.96	J	< 0.44	U	< 0.44	U	0.87	J	1800	D	2000	D	2200
67-66-3	Chloroform	70		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	0.09	JB	< 0.38	U	< 0.38
71-43-2	Benzene	1		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	0.065	J	0.044	JB	< 0.38	U	< 0.38
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.25	U	< 0.25
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 1.4	U	< 1.4
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 1.4	U	< 1.4
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.38
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.38
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U	< 2.5	U	< 2.5
75-01-4	Vinyl Chloride	0.03		ug/L	**0.22**	J	**0.1**	J	**0.14**	J	< 0.07	U	< 0.5	U	< 0.88	U	< 0.88
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.38
75-09-2	Methylene Chloride	5		ug/L	0.023	JB	< 0.02	U	0.07	JB	< 0.02	U	0.043	J	< 0.25	U	0.96
75-15-0	Carbon Disulfide	700		ug/L	< 0.02	U	< 0.02	U	0.047	J	< 0.02	U	0.18	JB	< 0.25	U	< 0.25
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.38
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.38
75-34-3	1,1-Dichloroethane	6		ug/L	1.4		1.4		1.2		0.97		< 0.5	U	< 0.25	U	< 0.25
75-35-4	1,1-Dichloroethene	350*		ug/L	20		16		20		14		< 0.5	U	< 0.5	U	< 0.5
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.75	U	< 0.75
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.38
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U	< 0.88	U	< 0.88
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 25	U	< 74	U	< 74
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5	U	< 1.5	U	< 1.5
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	2100	D	1900	D	1600
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.5	U	< 0.5
79-01-6	Trichloroethene	3		ug/L	1.7		1.6		1.4		1.3		2	B	0.99	JD	< 0.38
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.63	U	< 0.63
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 5	U	< 7	U	< 7
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.38
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.38
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5	U	< 3.1	U	< 3.1
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.5	U	< 1.1	U	< 1.1
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 5	U	< 5.1	U	< 5.1
	Total VOCs			**ug/L**	**25**		**20.14**		**23.597**		**18.005**		**3903.045**		**3900.99**		**3800.96**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-14I	GW-14I	GW-14I	GW-14I	GW-14I	GW-14S	GW-14S	GW-14S	GW-14S	GW-14S	GW-14S	GW-14S	GW-14S
				Sys Sample Code	GW-14I_07312014	GW-14I_11052014	GW-14I_11052014	GW-14I_02122015	GW-14I_02122015	GW-14S_12202013	GW-14S_12202013	GW-14S_04102014	GW-14S_04102014	GW-14S_07312014	GW-14S_07312014	GW-14S DUP_07312014	GW-14S DUP_07312014
				Sample Date	07/31/14	11/05/14	11/05/14	02/12/15	02/12/15	12/20/13	12/20/13	04/10/14	04/10/14	07/31/14	07/31/14	07/31/14	07/31/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	FD	FD
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.5	U	< 0.13	U	< 0.5	U	< 0.25	U	< 0.04	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 0.25	U	< 0.063	U	< 0.5	U	< 0.13	U	< 0.02	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.13	U	< 0.5	U	< 0.25	U	< 0.04	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.63	U	< 0.16	U	< 0.5	U	< 0.31	U	< 0.05	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.38	U	< 0.094	U	< 0.5	U	< 0.19	U	< 0.03	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.5	U	< 0.13	U	< 0.5	U	< 0.25	U	< 0.04	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 13	U	< 3.2	U	< 5	U	< 6.4	U	< 1	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.63	U	< 0.16	U	< 0.5	U	< 0.31	U	< 0.05	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.38	U	< 0.094	U	**0.54**		< 0.19	U	0.14	J	0.14	J
107-12-0	Propionitrile			ug/L	U	< 18	U	< 4.4	U	< 25	U	< 8.8	U	< 1.4	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 4.5	U	< 1.1	U	< 5	U	< 2.3	U	< 0.36	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.75	U	< 0.19	U	< 0.5	U	< 0.38	U	< 0.06	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 5.3	U	< 1.3	U	< 2.5	U	< 2.6	U	< 0.42	U	< 0.42	U
108-88-3	Toluene	600		ug/L	U	< 0.38	U	< 0.094	U	0.044	JB	< 0.19	U	0.097	J	0.099	J
108-90-7	Chlorobenzene	50		ug/L	U	1	JD	< 0.063	U	0.073	J	< 0.13	U	< 0.02	U	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 4.1	U	< 1	U	< 2	U	< 2.1	U	< 0.33	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.75	U	< 0.19	U	< 0.5	U	< 0.38	U	< 0.06	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 68	U	< 17	U	< 25	U	< 34	U	< 5.4	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.5	U	< 0.13	U	< 0.5	U	< 0.25	U	< 0.04	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 4.9	U	< 1.2	U	< 5	U	< 2.4	U	< 0.39	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	< 0.75	U	< 0.19	U	**4.1**		**2.3**	JD	0.27	J	0.19	J
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.38	U	< 0.094	U	< 0.5	U	< 0.19	U	< 0.03	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	U	< 0.38	U	< 0.094	U	29		44	D	3.7		2.6	
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.63	U	< 0.16	U	0.27	J	< 0.31	U	< 0.05	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.5	U	< 0.13	U	< 0.5	U	< 0.25	U	< 0.04	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.38	U	< 0.094	U	< 0.5	U	< 0.19	U	< 0.03	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 6.4	U	< 1.6	U	< 2.5	U	< 3.2	U	< 0.51	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.25	U	< 0.063	U	< 0.5	U	< 0.13	U	< 0.02	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	D	2300	D	1100	D	< 2.5	U	5.4	JD	66		65	
67-66-3	Chloroform	70		ug/L	U	< 0.38	U	< 0.094	U	0.73		2.4	JD	< 0.03	U	< 0.03	U
71-43-2	Benzene	1		ug/L	U	< 0.38	U	< 0.094	U	0.37	JB	< 0.19	U	< 0.03	U	< 0.03	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.25	U	< 0.063	U	0.69		0.59	JD	< 0.02	U	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 1.4	U	< 0.34	U	< 0.5	U	< 0.69	U	< 0.11	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 1.4	U	< 0.34	U	< 0.5	U	< 0.69	U	< 0.11	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.38	U	< 0.094	U	< 0.5	U	< 0.19	U	< 0.03	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.38	U	< 0.094	U	< 0.5	U	< 0.19	U	< 0.03	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 2.5	U	< 0.63	U	< 0.5	U	< 1.3	U	< 0.2	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 0.88	U	< 0.22	U	**13**		**12**	D	**14**		**14**	
75-05-8	Acetonitrile			ug/L	U	< 0.38	U	< 0.094	U	< 0.5	U	< 0.19	U	< 0.03	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	JBD	< 0.25	U	< 0.063	U	0.1	J	0.31	JBD	0.23	JB	0.23	JB
75-15-0	Carbon Disulfide	700		ug/L	U	1.3	JBD	0.33	JD	0.18	JB	0.33	JD	0.67		0.6	
75-25-2	Bromoform	4		ug/L	U	< 0.38	U	< 0.094	U	< 0.5	U	< 0.19	U	< 0.03	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.38	U	< 0.094	U	< 0.5	U	< 0.19	U	< 0.03	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	U	< 0.25	U	< 0.063	U	3.6		3.3	D	1.2		1	
75-35-4	1,1-Dichloroethene	350*		ug/L	U	< 0.5	U	< 0.13	U	37		44	D	5.4		4.6	
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.75	U	< 0.19	U	< 0.5	U	< 0.38	U	< 0.06	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.38	U	< 0.094	U	< 0.5	U	< 0.19	U	< 0.03	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.88	U	< 0.22	U	< 0.5	U	< 0.44	U	< 0.07	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 74	U	< 18	U	< 25	U	< 37	U	< 5.9	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 1.5	U	< 0.38	U	< 0.5	U	< 0.75	U	< 0.12	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	D	880	D	590	D	< 2.5	U	< 1.8	U	24		24	
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.5	U	< 0.13	U	< 0.5	U	< 0.25	U	< 0.04	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	U	< 0.38	U	< 0.094	U	**170**	D	**190**	D	**8.9**		**5**	
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.63	U	< 0.16	U	< 0.5	U	< 0.31	U	< 0.05	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 7	U	< 1.8	U	< 5	U	< 3.5	U	< 0.56	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.38	U	< 0.094	U	< 0.5	U	< 0.19	U	< 0.03	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	1.7	JD	< 0.094	U	0.11	J	< 0.19	U	< 0.03	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 3.1	U	< 0.78	U	< 0.5	U	< 1.6	U	< 0.25	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 1.1	U	< 0.28	U	< 0.5	U	< 0.56	U	< 0.09	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 5.1	U	< 1.3	U	< 5	U	< 2.6	U	< 0.41	U	< 0.41	U
	Total VOCs			**ug/L**		**3184**		**1690.33**		**259.807**		**304.63**		**124.607**		**117.459**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-14S	GW-14S	GW-14S	GW-14S	GW-1A	GW-1A	GW-1A	GW-1A	GW-1A	GW-1A	GW-1A	GW-1A	GW-1A
				Sys Sample Code	GW-14S_11052014	GW-14S_11052014	GW-14S_02122015	GW-14S_02122015	GW-1A_12202013	GW-1A_12202013	GW-1A_04082014	GW-1A_04082014	GW-1A_07312014	GW-1A_07312014	GW-1A_11042014	GW-1A_11042014	GW-1A_02132015
				Sample Date	11/05/14	11/05/14	02/12/15	02/12/15	12/20/13	12/20/13	04/08/14	04/08/14	07/31/14	07/31/14	11/04/14	11/04/14	02/13/15
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 5	U	< 1	U	< 1	U	< 1	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	0.17	J	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42
108-88-3	Toluene	600		ug/L	0.11	J	0.21	J	0.032	JB	< 0.03	U	0.035	J	< 0.03	U	< 0.03
108-90-7	Chlorobenzene	50		ug/L	0.049	J	< 0.02	U	< 0.5	U	< 0.02	U	0.054	J	< 0.02	U	< 0.02
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 5.4	U	< 25	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	**1.4**		0.064	J	< 0.5	U	< 0.06	U	< 0.06	U	0.079	J	< 0.06
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
156-59-2	cis-1,2-Dichloroethene	70		ug/L	18		1.5		0.26	J	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
156-60-5	trans-1,2-Dichloroethene	100		ug/L	0.1	J	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
67-64-1	Acetone	6000		ug/L	45		30		4.2	B	0.84	J	1.5	J	2.8	B	< 0.44
67-66-3	Chloroform	70		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
71-43-2	Benzene	1		ug/L	0.21	J	0.12	J	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
71-55-6	1,1,1-Trichloroethane	200		ug/L	0.2	J	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	0.24	J	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2
75-01-4	Vinyl Chloride	0.03		ug/L	**11**		**6.2**		< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	0.12	JB	< 0.02	U	< 0.5	U	< 0.02	U	0.064	JB	< 0.02	U	< 0.02
75-15-0	Carbon Disulfide	700		ug/L	0.33	J	0.072	J	0.21	JB	0.11	J	0.59		0.12	J	< 0.02
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	1.8		0.18	J	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
75-35-4	1,1-Dichloroethene	350*		ug/L	21		0.9		< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	16		7.2		< 2.5	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	**61**	D	0.81		1.4	B	0.12	J	0.16	J	< 0.03	U	< 0.03
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41
	Total VOCs			**ug/L**	**176.489**		**47.496**		**6.102**		**1.07**		**2.403**		**2.999**		**0**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-1A	GW-1A-D	GW-1A-D	GW-1A-D	GW-1A-D	GW-1A-D	GW-1A-D	GW-1A-D	GW-1A-D	GW-1A-D	GW-1A-D	GW-20S	GW-20S
				Sys Sample Code	GW-1A_02132015	GW-1AD_12202013	GW-1AD_12202013	GW-1A-D_04092014	GW-1A-D_04092014	GW-1A-D_07312014	GW-1A-D_07312014	GW-1A-D_11042014	GW-1A-D_11042014	GW-1A-D_02132015	GW-1A-D_02132015	GW-20S_12192013	GW-20S_12192013
				Sample Date	02/13/15	12/20/13	12/20/13	04/09/14	04/09/14	07/31/14	07/31/14	11/04/14	11/04/14	02/13/15	02/13/15	12/19/13	12/19/13
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	0.79	JD
100-42-5	Styrene	70		ug/L	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 1.3	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 1.3	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 1.3	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 1.3	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 1.3	U
107-02-8	Acrolein		4	ug/L	U	< 5	U	< 1	U	< 1	U	< 1	U	< 1	U	< 13	U
107-05-1	Allyl Chloride			ug/L	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 1.3	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	0.3	JB	0.3	J	0.21	J	0.14	J	0.16	J	**43**	D
107-12-0	Propionitrile			ug/L	U	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 63	U
107-13-1	Acrylonitrile			ug/L	U	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 13	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 1.3	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 6.3	U
108-88-3	Toluene	600		ug/L	U	0.043	JB	0.079	J	0.095	J	0.051	J	0.058	J	6.1	D
108-90-7	Chlorobenzene	50		ug/L	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	0.21	JD
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 5	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	0.19	JD
123-91-1	1,4-Dioxane	3		ug/L	U	< 25	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 63	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 1.3	U
126-98-7	Methylacrylonitrile			ug/L	U	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 13	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	0.12	J	< 0.06	U	0.066	J	0.1	J	< 0.06	U	< 1.3	U
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	0.039	J	< 0.03	U	3	D
156-59-2	cis-1,2-Dichloroethene	70		ug/L	U	3		2.3		2.3		1.8		2.1		**1800**	DE
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.5	B	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	25	D
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 1.3	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	0.13	JD
591-78-6	2-Hexanone		40	ug/L	U	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 6.3	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 1.3	U
67-64-1	Acetone	6000		ug/L	U	3.1	B	< 0.44	U	2.5	J	3.2	B	1.3	J	5.1	JBD
67-66-3	Chloroform	70		ug/L	U	0.22	JB	0.18	J	0.17	J	0.1	J	0.052	J	1.7	D
71-43-2	Benzene	1		ug/L	U	0.11	JB	0.067	J	0.088	J	0.076	J	0.13	J	**62**	D
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 1.3	U
74-83-9	Bromomethane		10	ug/L	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 1.3	U
74-87-3	Chloromethane	3		ug/L	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 1.3	U
74-88-4	Iodomethane			ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 1.3	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 1.3	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 1.3	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 0.5	U	< 0.07	U	< 0.07	U	**0.3**	J	< 0.07	U	**9.9**	D
75-05-8	Acetonitrile			ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 1.3	U
75-09-2	Methylene Chloride	5		ug/L	U	0.066	J	< 0.02	U	0.094	JB	< 0.02	U	0.028	J	0.36	JD
75-15-0	Carbon Disulfide	700		ug/L	U	0.066	JB	0.056	J	0.32	J	0.047	J	0.08	J	0.92	JD
75-25-2	Bromoform	4		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 1.3	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 1.3	U
75-34-3	1,1-Dichloroethane	6		ug/L	U	0.54		0.49	J	0.5		0.36	J	0.37	J	**7.5**	D
75-35-4	1,1-Dichloroethene	350*		ug/L	U	5.8		3.5		4.7		6		4.4		48	D
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 1.3	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 1.3	U
76-01-7	Pentachloroethane			ug/L	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 1.3	U
78-83-1	Isobutanol			ug/L	U	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 63	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 1.3	U
78-93-3	2-Butanone	4000		ug/L	U	< 2.5	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 6.3	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 1.3	U
79-01-6	Trichloroethene	3		ug/L	U	**8**	B	**3.8**		**4.6**		2.8		**3.5**		**60**	D
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 1.3	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 13	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 1.3	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 1.3	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 1.3	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 1.3	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 13	U
	Total VOCs			**ug/L**		**21.365**		**10.772**		**15.643**		**15.013**		**12.178**		**2073.9**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-20S	GW-20S	GW-20S	GW-20S	GW-20S	GW-20S	GW-20S	GW-20S	GW-22S	GW-22S	GW-22S	GW-22S	GW-22S
				Sys Sample Code	GW-20S_04102014	GW-20S_04102014	GW-20S_08072014	GW-20S_08072014	GW-20S_11062014	GW-20S_11062014	GW-20S_02252015	GW-20S_02252015	GW-22S_12052013	GW-22S_12052013	GW-22S_04092014	GW-22S_04092014	GW-22S_08052014
				Sample Date	04/10/14	04/10/14	08/07/14	08/07/14	11/06/14	11/06/14	02/25/15	02/25/15	12/05/13	12/05/13	04/09/14	04/09/14	08/05/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 10	U	< 13	U	< 14	U	< 7.1	U	< 310	U	< 29	U	< 20
100-42-5	Styrene	70		ug/L	< 5	U	< 6.7	U	< 7.1	U	< 3.6	U	< 310	U	< 14	U	< 10
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 10	U	< 13	U	< 14	U	< 7.1	U	< 310	U	< 29	U	< 20
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 13	U	< 17	U	< 18	U	< 8.9	U	< 310	U	< 36	U	< 25
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 10	U	< 13	U	< 14	U	< 7.1	U	< 310	U	< 29	U	< 20
107-02-8	Acrolein		4	ug/L	< 260	U	< 340	U	< 370	U	< 180	U	< 3100	U	< 740	U	< 520
107-05-1	Allyl Chloride			ug/L	< 13	U	< 17	U	< 18	U	< 8.9	U	< 310	U	< 36	U	< 25
107-06-2	1,2-Dichloroethane	0.4		ug/L	**67**	JD	**74**	JD	**79**	JD	**65**	JD	< 310	U	< 21	U	< 15
107-12-0	Propionitrile			ug/L	< 350	U	< 470	U	< 500	U	< 250	U	< 16000	U	< 1000	U	< 700
107-13-1	Acrylonitrile			ug/L	< 90	U	< 120	U	< 130	U	< 64	U	< 3100	U	< 260	U	< 180
108-05-4	Vinyl Acetate		88	ug/L	< 15	U	< 20	U	< 21	U	< 11	U	< 310	U	< 43	U	< 30
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 110	U	< 140	U	< 150	U	< 75	U	< 1600	U	< 300	U	< 210
108-88-3	Toluene	600		ug/L	9.4	JD	18	JD	< 11	U	10	JBD	**49**	JD	**41**	JD	**59**
108-90-7	Chlorobenzene	50		ug/L	< 5	U	< 6.7	U	< 7.1	U	< 3.6	U	< 310	U	< 14	U	< 10
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 83	U	< 110	U	< 120	U	< 59	U	< 1300	U	< 240	U	< 170
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 15	U	< 20	U	< 21	U	< 11	U	< 310	U	< 43	U	< 30
123-91-1	1,4-Dioxane	3		ug/L	< 1400	U	< 1800	U	< 1900	U	< 960	U	< 16000	U	< 3900	U	< 2700
124-48-1	Dibromochloromethane	0.4		ug/L	< 10	U	< 13	U	< 14	U	< 7.1	U	< 310	U	< 29	U	< 20
126-98-7	Methylacrylonitrile			ug/L	< 98	U	< 130	U	< 140	U	< 70	U	< 3100	U	< 280	U	< 200
127-18-4	Tetrachloroethene	0.7		ug/L	< 15	U	< 20	U	< 21	U	< 11	U	< 310	U	< 43	U	< 30
1330-20-7	Xylenes, Total	500		ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
156-59-2	cis-1,2-Dichloroethene	70		ug/L	**7300**	D	**7300**	D	**9100**	D	**4800**	D	**1300**	D	**150**	JD	< 15
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 13	U	**24**	JD	< 18	U	< 8.9	U	**65**	JD	**50**	JD	< 25
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 10	U	< 13	U	< 14	U	< 7.1	U	< 310	U	< 29	U	< 20
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
591-78-6	2-Hexanone		40	ug/L	< 130	U	< 170	U	< 180	U	< 91	U	< 1600	U	< 360	U	< 260
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 5	U	< 6.7	U	< 7.1	U	< 3.6	U	< 310	U	< 14	U	< 10
67-64-1	Acetone	6000		ug/L	< 110	U	< 150	U	< 160	U	< 79	U	< 1600	U	< 310	U	< 220
67-66-3	Chloroform	70		ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
71-43-2	Benzene	1		ug/L	**51**	JD	**82**	JD	**77**	JD	**52**	JD	**260**	JD	< 21	U	**240**
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 5	U	< 6.7	U	< 7.1	U	< 3.6	U	< 310	U	< 14	U	< 10
74-83-9	Bromomethane		10	ug/L	< 28	U	< 37	U	< 39	U	< 20	U	< 310	U	< 79	U	< 55
74-87-3	Chloromethane	3		ug/L	< 28	U	< 37	U	< 39	U	< 20	U	< 310	U	< 79	U	< 55
74-88-4	Iodomethane			ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
74-95-3	Dibromomethane		70	ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
75-00-3	Chloroethane	3000		ug/L	< 50	U	< 67	U	< 71	U	< 36	U	< 310	U	< 140	U	< 100
75-01-4	Vinyl Chloride	0.03		ug/L	**130**	D	**580**	D	**1300**	D	**710**	D	**20000**	D	**18000**	D	**12000**
75-05-8	Acetonitrile			ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
75-09-2	Methylene Chloride	5		ug/L	**31**	JBD	**33**	JBD	< 7.1	U	< 3.6	U	**73**	JD	**110**	JBD	**630**
75-15-0	Carbon Disulfide	700		ug/L	< 5	U	< 6.7	U	< 7.1	U	< 3.6	U	< 310	U	< 14	U	< 10
75-25-2	Bromoform	4		ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
75-27-4	Bromodichloromethane	0.6		ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
75-34-3	1,1-Dichloroethane	6		ug/L	< 5	U	< 6.7	U	< 7.1	U	< 3.6	U	< 310	U	**27**	JD	< 10
75-35-4	1,1-Dichloroethene	350*		ug/L	73	JD	66	JD	90	JD	34	JD	< 310	U	< 29	U	< 20
75-69-4	Trichlorofluoromethane	2000		ug/L	< 15	U	< 20	U	< 21	U	< 11	U	< 310	U	< 43	U	< 30
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
76-01-7	Pentachloroethane			ug/L	< 18	U	< 23	U	< 25	U	< 12	U	< 310	U	< 50	U	< 35
78-83-1	Isobutanol			ug/L	< 1500	U	< 2000	U	< 2100	U	< 1100	U	< 16000	U	< 4200	U	< 3000
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 30	U	< 40	U	< 43	U	< 21	U	< 310	U	< 86	U	< 60
78-93-3	2-Butanone	4000		ug/L	< 70	U	< 93	U	< 100	U	< 50	U	< 1600	U	< 200	U	< 140
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 10	U	< 13	U	< 14	U	< 7.1	U	< 310	U	< 29	U	< 20
79-01-6	Trichloroethene	3		ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 13	U	< 17	U	< 18	U	< 8.9	U	< 310	U	< 36	U	< 25
80-62-6	Methyl Methacrylate		25	ug/L	< 140	U	< 190	U	< 200	U	< 100	U	< 3100	U	< 400	U	< 280
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 7.5	U	< 10	U	< 11	U	< 5.4	U	< 310	U	< 21	U	< 15
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 63	U	< 83	U	< 89	U	< 45	U	< 310	U	< 180	U	< 130
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 23	U	< 30	U	< 32	U	< 16	U	< 310	U	< 64	U	< 45
97-63-2	Ethyl Methacrylate			ug/L	< 100	U	< 140	U	< 150	U	< 73	U	< 3100	U	< 290	U	< 210
	Total VOCs			**ug/L**	**7661.4**		**8177**		**10646**		**5671**		**21747**		**18378**		**12929**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-22S	GW-22S	GW-22S	GW-22S	GW-22S	GW-27S	GW-27S	GW-27S	GW-27S	GW-28S	GW-28S	GW-28S	GW-28S
				Sys Sample Code	GW-22S_08052014	GW-22S_11042014	GW-22S_11042014	GW-22S_02232015	GW-22S_02232015	GW-27S_04082014	GW-27S_04082014	GW-27S_02232015	GW-27S_02232015	GW-28S_04092014	GW-28S_04092014	GW-28S_03022015	GW-28S_03022015
				Sample Date	08/05/14	11/04/14	11/04/14	02/23/15	02/23/15	04/08/14	04/08/14	02/23/15	02/23/15	04/09/14	04/09/14	03/02/15	03/02/15
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 20	U	6.2		< 0.04	U	< 0.04	U	< 2.9	U	< 5	U
100-42-5	Styrene	70		ug/L	U	< 10	U	< 0.02	U	< 0.02	U	< 0.02	U	< 1.4	U	< 2.5	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 20	U	< 0.04	U	< 0.04	U	< 0.04	U	< 2.9	U	< 5	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 25	U	< 0.05	U	< 0.05	U	< 0.05	U	< 3.6	U	< 6.3	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 15	U	< 0.03	U	< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 20	U	< 0.04	U	< 0.04	U	< 0.04	U	< 2.9	U	< 5	U
107-02-8	Acrolein		4	ug/L	U	< 520	U	< 1	U	< 1	U	< 1	U	< 74	U	< 130	U
107-05-1	Allyl Chloride			ug/L	U	< 25	U	< 0.05	U	< 0.05	U	< 0.05	U	< 3.6	U	< 6.3	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 15	U	**14**		**3.9**		**3.8**		**210**	D	**390**	D
107-12-0	Propionitrile			ug/L	U	< 700	U	< 1.4	U	< 1.4	U	< 1.4	U	< 100	U	< 180	U
107-13-1	Acrylonitrile			ug/L	U	< 180	U	< 0.36	U	< 0.36	U	< 0.36	U	< 26	U	< 45	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 30	U	< 0.06	U	< 0.06	U	< 0.06	U	< 4.3	U	< 7.5	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 210	U	< 0.42	U	< 0.42	U	< 0.42	U	< 30	U	< 53	U
108-88-3	Toluene	600		ug/L	JD	34	JD	29		0.031	J	< 0.03	U	2.8	JD	6.9	JBD
108-90-7	Chlorobenzene	50		ug/L	U	< 10	U	7.4		< 0.02	U	< 0.02	U	< 1.4	U	< 2.5	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 170	U	< 0.33	U	< 0.33	U	< 0.33	U	< 24	U	< 41	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 30	U	< 0.06	U	< 0.06	U	< 0.06	U	< 4.3	U	< 7.5	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 2700	U	**50**		< 5.4	U	< 5.4	U	< 390	U	< 680	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 20	U	< 0.04	U	< 0.04	U	< 0.04	U	< 2.9	U	< 5	U
126-98-7	Methylacrylonitrile			ug/L	U	< 200	U	< 0.39	U	< 0.39	U	< 0.39	U	< 28	U	< 49	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	< 30	U	**1.1**		< 0.06	U	< 0.06	U	< 4.3	U	< 7.5	U
1330-20-7	Xylenes, Total	500		ug/L	U	< 15	U	26		< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	U	69	JD	60	JD	33		32		**2300**	D	**3300**	D
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 25	U	15		0.27	J	0.28	J	21	JD	51	JD
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 20	U	< 0.04	U	< 0.04	U	< 0.04	U	< 2.9	U	< 5	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 15	U	< 0.03	U	< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
591-78-6	2-Hexanone		40	ug/L	U	< 260	U	< 0.51	U	< 0.51	U	< 0.51	U	< 36	U	< 64	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 10	U	< 0.02	U	< 0.02	U	< 0.02	U	< 1.4	U	< 2.5	U
67-64-1	Acetone	6000		ug/L	U	< 220	U	**57**		< 0.44	U	< 0.44	U	< 31	U	< 55	U
67-66-3	Chloroform	70		ug/L	U	< 15	U	< 0.03	U	< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
71-43-2	Benzene	1		ug/L	JD	**230**	JD	**240**	JD	0.033	J	0.075	J	**21**	JD	**41**	JD
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 10	U	< 0.02	U	< 0.02	U	< 0.02	U	< 1.4	U	< 2.5	U
74-83-9	Bromomethane		10	ug/L	U	< 55	U	< 0.11	U	< 0.11	U	< 0.11	U	< 7.9	U	< 14	U
74-87-3	Chloromethane	3		ug/L	U	< 55	U	< 0.11	U	< 0.11	U	< 0.11	U	< 7.9	U	< 14	U
74-88-4	Iodomethane			ug/L	U	< 15	U	< 0.03	U	< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
74-95-3	Dibromomethane		70	ug/L	U	< 15	U	< 0.03	U	< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
75-00-3	Chloroethane	3000		ug/L	U	< 100	U	0.73		< 0.2	U	< 0.2	U	< 14	U	< 25	U
75-01-4	Vinyl Chloride	0.03		ug/L	D	**14000**	D	**9100**	D	**3.8**		**2.6**		**9.4**	JD	**14**	JD
75-05-8	Acetonitrile			ug/L	U	< 15	U	< 0.03	U	< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
75-09-2	Methylene Chloride	5		ug/L	BD	< 10	U	0.29	J	< 0.02	U	< 0.02	U	**5**	JBD	< 2.5	U
75-15-0	Carbon Disulfide	700		ug/L	U	< 10	U	0.84		< 0.02	U	< 0.02	U	< 1.4	U	< 2.5	U
75-25-2	Bromoform	4		ug/L	U	< 15	U	< 0.03	U	< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 15	U	< 0.03	U	< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
75-34-3	1,1-Dichloroethane	6		ug/L	U	< 10	U	**24**		0.09	J	0.12	J	4.5	JD	< 2.5	U
75-35-4	1,1-Dichloroethene	350*		ug/L	U	< 20	U	1		0.54		0.96		51	D	64	D
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 30	U	< 0.06	U	< 0.06	U	< 0.06	U	< 4.3	U	< 7.5	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 15	U	0.19	J	< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
76-01-7	Pentachloroethane			ug/L	U	< 35	U	< 0.07	U	< 0.07	U	< 0.07	U	< 5	U	< 8.8	U
78-83-1	Isobutanol			ug/L	U	< 3000	U	< 5.9	U	< 5.9	U	< 5.9	U	< 420	U	< 740	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 60	U	< 0.12	U	< 0.12	U	< 0.12	U	< 8.6	U	< 15	U
78-93-3	2-Butanone	4000		ug/L	U	< 140	U	26		< 0.28	U	< 0.28	U	< 20	U	< 35	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 20	U	< 0.04	U	< 0.04	U	< 0.04	U	< 2.9	U	< 5	U
79-01-6	Trichloroethene	3		ug/L	U	< 15	U	1.3		**3.2**		**3.3**		**98**	D	**100**	BD
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 25	U	< 0.05	U	< 0.05	U	< 0.05	U	< 3.6	U	< 6.3	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 280	U	< 0.56	U	< 0.56	U	< 0.56	U	< 40	U	< 70	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 15	U	< 0.03	U	< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 15	U	< 0.03	U	< 0.03	U	< 0.03	U	< 2.1	U	< 3.8	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 130	U	< 0.25	U	< 0.25	U	< 0.25	U	< 18	U	< 31	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 45	U	< 0.09	U	< 0.09	U	< 0.09	U	< 6.4	U	< 11	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 210	U	< 0.41	U	< 0.41	U	< 0.41	U	< 29	U	< 51	U
	Total VOCs			**ug/L**		**14333**		**9660.05**		**44.864**		**43.135**		**2722.7**		**3966.9**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-30I
				Sys Sample Code	GW-3_12182013	GW-3_12182013	GW-3_04092014	GW-3_04092014	GW-3_08062014	GW-3_08062014	GW-3_11042014	GW-3_11042014	GW-3_02162015	GW-3_02162015	GW-3_03022015	GW-3_03022015	GW-30I_12062013
				Sample Date	12/18/13	12/18/13	04/09/14	04/09/14	08/06/14	08/06/14	11/04/14	11/04/14	02/16/15	02/16/15	03/02/15	03/02/15	12/06/13
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 2.5	U	< 0.1	U	< 0.083	U	< 0.1	U	< 0.04	U	< 0.091	U	< 0.5
100-42-5	Styrene	70		ug/L	< 2.5	U	< 0.05	U	< 0.042	U	< 0.05	U	< 0.02	U	< 0.045	U	< 0.5
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 2.5	U	< 0.1	U	< 0.083	U	< 0.1	U	< 0.04	U	< 0.091	U	< 0.5
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 2.5	U	< 0.13	U	< 0.1	U	< 0.13	U	< 0.05	U	< 0.11	U	< 0.5
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 2.5	U	< 0.075	U	< 0.062	U	< 0.075	U	< 0.03	U	< 0.068	U	< 0.5
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 2.5	U	< 0.1	U	< 0.083	U	< 0.1	U	< 0.04	U	< 0.091	U	< 0.5
107-02-8	Acrolein		4	ug/L	< 25	U	< 2.6	U	< 2.1	U	< 2.6	U	< 1	U	< 2.3	U	< 5
107-05-1	Allyl Chloride			ug/L	< 2.5	U	< 0.13	U	< 0.1	U	< 0.13	U	< 0.05	U	< 0.11	U	< 0.5
107-06-2	1,2-Dichloroethane	0.4		ug/L	**0.79**	JD	**0.84**	JD	**0.87**	JD	**1.4**	D	**1.5**		**1.1**	JD	**0.55**
107-12-0	Propionitrile			ug/L	< 130	U	< 3.5	U	< 2.9	U	< 3.5	U	< 1.4	U	< 3.2	U	< 25
107-13-1	Acrylonitrile			ug/L	< 25	U	< 0.9	U	< 0.75	U	< 0.9	U	< 0.36	U	< 0.82	U	< 5
108-05-4	Vinyl Acetate		88	ug/L	< 2.5	U	< 0.15	U	< 0.12	U	< 0.15	U	< 0.06	U	< 0.14	U	< 0.5
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 13	U	< 1.1	U	< 0.87	U	< 1.1	U	< 0.42	U	< 0.95	U	< 2.5
108-88-3	Toluene	600		ug/L	< 2.5	U	< 0.075	U	0.064	JD	< 0.075	U	0.043	J	< 0.068	U	0.031
108-90-7	Chlorobenzene	50		ug/L	< 2.5	U	< 0.05	U	< 0.042	U	< 0.05	U	0.041	J	< 0.045	U	< 0.5
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 10	U	< 0.83	U	< 0.69	U	< 0.83	U	< 0.33	U	< 0.75	U	< 2
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 2.5	U	< 0.15	U	< 0.12	U	< 0.15	U	< 0.06	U	< 0.14	U	< 0.5
123-91-1	1,4-Dioxane	3		ug/L	< 130	U	< 14	U	< 11	U	< 14	U	< 5.4	U	< 12	U	< 25
124-48-1	Dibromochloromethane	0.4		ug/L	< 2.5	U	< 0.1	U	< 0.083	U	< 0.1	U	< 0.04	U	< 0.091	U	< 0.5
126-98-7	Methylacrylonitrile			ug/L	< 25	U	< 0.98	U	< 0.81	U	< 0.98	U	< 0.39	U	< 0.89	U	< 5
127-18-4	Tetrachloroethene	0.7		ug/L	**4.9**	D	**1.9**	D	**2.8**	D	**3.4**	D	**5.2**		**3.3**	D	< 0.5
1330-20-7	Xylenes, Total	500		ug/L	< 2.5	U	< 0.075	U	< 0.062	U	< 0.075	U	< 0.03	U	< 0.068	U	< 0.5
156-59-2	cis-1,2-Dichloroethene	70		ug/L	17	D	12	D	17	D	20	D	28		25	D	2.5
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 2.5	U	< 0.13	U	< 0.1	U	< 0.13	U	0.11	J	< 0.11	U	< 0.5
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 2.5	U	< 0.1	U	< 0.083	U	< 0.1	U	< 0.04	U	< 0.091	U	< 0.5
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 2.5	U	0.17	JD	< 0.062	U	0.21	JD	0.14	J	0.14	JD	< 0.5
591-78-6	2-Hexanone		40	ug/L	< 13	U	< 1.3	U	< 1.1	U	< 1.3	U	< 0.51	U	< 1.2	U	< 2.5
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 2.5	U	< 0.05	U	< 0.042	U	< 0.05	U	< 0.02	U	< 0.045	U	< 0.5
67-64-1	Acetone	6000		ug/L	< 13	U	< 1.1	U	3.8	JD	< 1.1	U	< 0.44	U	< 1	U	< 2.5
67-66-3	Chloroform	70		ug/L	4.3	D	3.4	D	3.3	D	4.6	D	2.7		3	D	0.18
71-43-2	Benzene	1		ug/L	0.17	JD	< 0.075	U	< 0.062	U	0.12	JD	0.23	J	0.2	JD	0.037
71-55-6	1,1,1-Trichloroethane	200		ug/L	2.2	JD	1.5	D	1.1	D	1.7	D	1		1.1	D	< 0.5
74-83-9	Bromomethane		10	ug/L	< 2.5	U	< 0.28	U	< 0.23	U	< 0.28	U	< 0.11	U	< 0.25	U	< 0.5
74-87-3	Chloromethane	3		ug/L	< 2.5	U	< 0.28	U	< 0.23	U	< 0.28	U	< 0.11	U	< 0.25	U	< 0.5
74-88-4	Iodomethane			ug/L	< 2.5	U	< 0.075	U	< 0.062	U	< 0.075	U	< 0.03	U	< 0.068	U	< 0.5
74-95-3	Dibromomethane		70	ug/L	< 2.5	U	< 0.075	U	< 0.062	U	< 0.075	U	< 0.03	U	< 0.068	U	< 0.5
75-00-3	Chloroethane	3000		ug/L	< 2.5	U	< 0.5	U	< 0.42	U	< 0.5	U	< 0.2	U	< 0.45	U	< 0.5
75-01-4	Vinyl Chloride	0.03		ug/L	**2.9**	D	**2**	D	**1.3**	D	**2.3**	D	**1.7**		**1.9**	D	**0.15**
75-05-8	Acetonitrile			ug/L	< 2.5	U	< 0.075	U	< 0.062	U	< 0.075	U	< 0.03	U	< 0.068	U	< 0.5
75-09-2	Methylene Chloride	5		ug/L	< 2.5	U	0.2	JBD	< 0.042	U	0.13	JBD	0.084	J	0.067	JD	< 0.5
75-15-0	Carbon Disulfide	700		ug/L	< 2.5	U	< 0.05	U	< 0.042	U	< 0.05	U	< 0.02	U	< 0.045	U	< 0.5
75-25-2	Bromoform	4		ug/L	< 2.5	U	< 0.075	U	< 0.062	U	< 0.075	U	< 0.03	U	< 0.068	U	< 0.5
75-27-4	Bromodichloromethane	0.6		ug/L	< 2.5	U	< 0.075	U	< 0.062	U	< 0.075	U	< 0.03	U	< 0.068	U	< 0.5
75-34-3	1,1-Dichloroethane	6		ug/L	5.7	D	4.5	D	4.3	D	**6.1**	D	4.1		4.4	D	0.32
75-35-4	1,1-Dichloroethene	350*		ug/L	73	D	63	D	43	D	92	D	48	D	51	D	1.8
75-69-4	Trichlorofluoromethane	2000		ug/L	< 2.5	U	< 0.15	U	< 0.12	U	0.19	JD	0.099	J	< 0.14	U	< 0.5
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 2.5	U	< 0.075	U	< 0.062	U	< 0.075	U	< 0.03	U	< 0.068	U	< 0.5
76-01-7	Pentachloroethane			ug/L	< 2.5	U	< 0.18	U	< 0.15	U	< 0.18	U	< 0.07	U	< 0.16	U	< 0.5
78-83-1	Isobutanol			ug/L	< 130	U	< 15	U	< 12	U	< 15	U	< 5.9	U	< 13	U	< 25
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 2.5	U	< 0.3	U	< 0.25	U	< 0.3	U	< 0.12	U	< 0.27	U	< 0.5
78-93-3	2-Butanone	4000		ug/L	< 13	U	< 0.7	U	< 0.58	U	< 0.7	U	< 0.28	U	< 0.64	U	< 2.5
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 2.5	U	< 0.1	U	< 0.083	U	< 0.1	U	0.065	J	< 0.091	U	< 0.5
79-01-6	Trichloroethene	3		ug/L	**92**	D	**79**	D	**44**	D	**69**	D	**44**	D	**39**	D	1.7
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 2.5	U	< 0.13	U	< 0.1	U	< 0.13	U	< 0.05	U	< 0.11	U	< 0.5
80-62-6	Methyl Methacrylate		25	ug/L	< 25	U	< 1.4	U	< 1.2	U	< 1.4	U	< 0.56	U	< 1.3	U	< 5
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 2.5	U	< 0.075	U	< 0.062	U	< 0.075	U	< 0.03	U	< 0.068	U	< 0.5
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 2.5	U	< 0.075	U	< 0.062	U	< 0.075	U	< 0.03	U	< 0.068	U	< 0.5
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 2.5	U	< 0.63	U	< 0.52	U	< 0.63	U	< 0.25	U	< 0.57	U	< 0.5
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 2.5	U	< 0.23	U	< 0.19	U	< 0.23	U	< 0.09	U	< 0.2	U	< 0.5
97-63-2	Ethyl Methacrylate			ug/L	< 25	U	< 1	U	< 0.85	U	< 1	U	< 0.41	U	< 0.93	U	< 5
	Total VOCs			**ug/L**	**202.96**		**168.51**		**121.534**		**201.15**		**137.012**		**130.207**		**7.268**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-30I	GW-30I	GW-30I	GW-30I	GW-30I	GW-30I	GW-30I	GW-30I	GW-30I	GW-30S	GW-30S	GW-30S	GW-30S
				Sys Sample Code	GW-30I_12062013	GW-30I_04082014	GW-30I_04082014	GW-30I_08052014	GW-30I_08052014	GW-30I_11042014	GW-30I_11042014	GW-30I_02232015	GW-30I_02232015	GW-30S_12062013	GW-30S_12062013	GW-30S_04082014	GW-30S_04082014
				Sample Date	12/06/13	04/08/14	04/08/14	08/05/14	08/05/14	11/04/14	11/04/14	02/23/15	02/23/15	12/06/13	12/06/13	04/08/14	04/08/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 1	U	< 1	U	< 1	U	< 1	U	< 5	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L		**0.58**		**0.49**	J	0.3	J	0.32	J	< 0.5	U	< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 25	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 5	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 2.5	U	< 0.42	U
108-88-3	Toluene	600		ug/L	J	0.06	J	< 0.03	U	0.032	J	0.031	J	< 0.5	U	0.04	J
108-90-7	Chlorobenzene	50		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 2	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 25	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 5	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	< 0.06	U	< 0.06	U	0.1	J	< 0.06	U	< 0.5	U	< 0.06	U
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L		4.8		1.3		2.7		3.3		< 0.5	U	0.051	J
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	0.064	J	< 0.05	U	0.06	J	< 0.05	U	< 0.5	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 2.5	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	U	0.77	J	2.5	J	2.9	B	< 0.44	U	< 2.5	U	0.59	J
67-66-3	Chloroform	70		ug/L	J	0.095	J	0.14	J	0.052	J	< 0.03	U	< 0.5	U	< 0.03	U
71-43-2	Benzene	1		ug/L	J	< 0.03	U	< 0.03	U	0.16	J	< 0.03	U	< 0.5	U	< 0.03	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	J	**0.18**	J	< 0.07	U	**3.8**		< 0.07	U	< 0.5	U	< 0.07	U
75-05-8	Acetonitrile			ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	U	< 0.02	U	0.88	B	< 0.02	U	0.032	J	< 0.5	U	< 0.02	U
75-15-0	Carbon Disulfide	700		ug/L	U	< 0.02	U	< 0.02	U	0.043	J	< 0.02	U	< 0.5	U	< 0.02	U
75-25-2	Bromoform	4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	J	0.63		0.29	J	0.43	J	0.41	J	< 0.5	U	< 0.02	U
75-35-4	1,1-Dichloroethene	350*		ug/L		4.1		0.91		4.3		2.2		< 0.5	U	< 0.04	U
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 25	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 2.5	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L		1.1		0.61		0.62		0.8		0.11	J	0.095	J
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 5	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.5	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 5	U	< 0.41	U
	Total VOCs			**ug/L**		**12.379**		**7.12**		**15.497**		**7.093**		**0.11**		**0.776**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-30S	GW-30S	GW-30S	GW-30S	GW-30S	GW-30S	GW-30S	GW-30S	GW-4	GW-4	GW-4	GW-4	GW-4
				Sys Sample Code	GW-30S DUP_04082014	GW-30S DUP_04082014	GW-30S_08052014	GW-30S_08052014	GW-30S_11042014	GW-30S_11042014	GW-30S_02232015	GW-30S_02232015	GW-4_12192013	GW-4_12192013	GW-4_04112014	GW-4_04112014	GW-4_08072014
				Sample Date	04/08/14	04/08/14	08/05/14	08/05/14	11/04/14	11/04/14	02/23/15	02/23/15	12/19/13	12/19/13	04/11/14	04/11/14	08/07/14
				Sample Type	FD	FD	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	**35**	JD	< 80	U	< 40
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 360	U	< 40	U	< 20
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 360	U	< 80	U	< 40
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 360	U	< 100	U	< 50
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 360	U	< 60	U	< 30
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 360	U	< 80	U	< 40
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 1	U	< 1	U	< 3600	U	< 2100	U	< 1000
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 360	U	< 100	U	< 50
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	**890**	D	**1400**	D	**840**
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 18000	U	< 2800	U	< 1400
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 3600	U	< 720	U	< 360
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 360	U	< 120	U	< 60
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 1800	U	< 840	U	< 420
108-88-3	Toluene	600		ug/L	0.038	J	0.098	J	< 0.03	U	< 0.03	U	100	JD	220	JBD	83
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	23	JD	< 40	U	< 20
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 1400	U	< 660	U	< 330
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 360	U	< 120	U	< 60
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 18000	U	< 11000	U	< 5400
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 360	U	< 80	U	< 40
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 3600	U	< 780	U	< 390
127-18-4	Tetrachloroethene	0.7		ug/L	< 0.06	U	< 0.06	U	0.061	J	< 0.06	U	**47**	JD	< 120	U	< 60
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	120	JD	< 60	U	150
156-59-2	cis-1,2-Dichloroethene	70		ug/L	0.052	J	< 0.03	U	0.14	J	0.14	J	**8700**	D	**1600**	D	**1500**
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	**110**	JD	< 100	U	58
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 360	U	< 80	U	< 40
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	**110**	JD	**280**	JD	< 30
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 1800	U	< 1000	U	< 510
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 360	U	< 40	U	< 20
67-64-1	Acetone	6000		ug/L	0.44	J	2	J	2.7	B	< 0.44	U	< 1800	U	< 880	U	< 440
67-66-3	Chloroform	70		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	**1100**	D	**1800**	D	**520**
71-43-2	Benzene	1		ug/L	< 0.03	U	< 0.03	U	0.066	J	< 0.03	U	**540**	D	< 60	U	**290**
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 360	U	66	JD	< 20
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 360	U	< 220	U	< 110
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 360	U	< 220	U	< 110
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 360	U	< 60	U	< 30
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 360	U	< 60	U	< 30
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 360	U	< 400	U	< 200
75-01-4	Vinyl Chloride	0.03		ug/L	< 0.07	U	< 0.07	U	**1**		**0.1**	J	**4600**	D	**370**	JD	**1100**
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 360	U	< 60	U	< 30
75-09-2	Methylene Chloride	5		ug/L	< 0.02	U	0.34	JB	< 0.02	U	< 0.02	U	**160**	JBD	**340**	JBD	< 20
75-15-0	Carbon Disulfide	700		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 360	U	< 40	U	< 20
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 360	U	< 60	U	< 30
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 360	U	< 60	U	< 30
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 360	U	< 40	U	< 20
75-35-4	1,1-Dichloroethene	350*		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	180	JD	320	JD	50
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 360	U	< 120	U	< 60
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 360	U	< 60	U	< 30
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 360	U	< 140	U	< 70
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 18000	U	< 12000	U	< 5900
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 360	U	< 240	U	< 120
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 1800	U	< 560	U	< 280
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 360	U	< 80	U	< 40
79-01-6	Trichloroethene	3		ug/L	0.084	J	0.081	J	0.064	J	< 0.03	U	**37000**	D	**79000**	D	**22000**
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 360	U	< 100	U	< 50
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 3600	U	< 1100	U	< 560
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 360	U	< 60	U	< 30
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 360	U	< 60	U	< 30
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 360	U	< 500	U	< 250
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 360	U	< 180	U	< 90
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 3600	U	< 820	U	< 410
	Total VOCs			**ug/L**	**0.614**		**2.519**		**4.031**		**0.24**		**53715**		**85396**		**26591**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-4	GW-4	GW-4	GW-4	GW-4	GW-4	GW-4	GW-44S	GW-44S	GW-44S	GW-44S	GW-44S	GW-44S
				Sys Sample Code	GW-4_08072014	GW-4_11062014	GW-4_11062014	GW-4_02252015	GW-4_02252015	GW-4DUP_02252015	GW-4DUP_02252015	GW-44S_12052013	GW-44S_12052013	GW-44S_04082014	GW-44S_04082014	GW-44S_08052014	GW-44S_08052014
				Sample Date	08/07/14	11/06/14	11/06/14	02/25/15	02/25/15	02/25/15	02/25/15	12/05/13	12/05/13	04/08/14	04/08/14	08/05/14	08/05/14
				Sample Type	N	N	N	N	N	FD	FD	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 40	U	75	E	< 67	U	< 0.84	U	< 0.04	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 20	U	< 0.02	U	< 33	U	< 0.84	U	< 0.02	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 40	U	< 0.04	U	< 67	U	< 0.84	U	< 0.04	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 50	U	< 0.05	U	< 83	U	< 0.84	U	< 0.05	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 30	U	< 0.03	U	< 50	U	< 0.84	U	< 0.03	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 40	U	< 0.04	U	< 67	U	< 0.84	U	< 0.04	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 1000	U	< 1	U	< 1700	U	< 8.4	U	< 1	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 50	U	< 0.05	U	< 83	U	< 0.84	U	< 0.05	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	D	**660**	D	**1200**	D	**1200**	D	< 0.84	U	< 0.03	U	< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 1400	U	< 1.4	U	< 2300	U	< 42	U	< 1.4	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 360	U	< 0.36	U	< 600	U	< 8.4	U	< 0.36	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 60	U	< 0.06	U	< 100	U	< 0.84	U	< 0.06	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 420	U	9.1		< 700	U	< 4.2	U	< 0.42	U	< 0.42	U
108-88-3	Toluene	600		ug/L	JD	83	JD	160	JBD	160	JBD	0.13	JD	0.031	J	< 0.03	U
108-90-7	Chlorobenzene	50		ug/L	U	25	JD	3.8		< 33	U	< 0.84	U	< 0.02	U	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 330	U	< 0.33	U	< 550	U	< 3.3	U	< 0.33	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 60	U	< 0.06	U	< 100	U	< 0.84	U	< 0.06	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 5400	U	**16**	J	< 9000	U	< 42	U	< 5.4	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 40	U	< 0.04	U	< 67	U	< 0.84	U	< 0.04	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 390	U	< 0.39	U	< 650	U	< 8.4	U	< 0.39	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	< 60	U	**110**	E	**110**	JD	< 0.84	U	< 0.06	U	< 0.06	U
1330-20-7	Xylenes, Total	500		ug/L	JD	< 30	U	290		250	JD	< 0.84	U	< 0.03	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	D	**2800**	D	**2400**	D	**2400**	D	4.3	D	< 0.03	U	< 0.03	U
156-60-5	trans-1,2-Dichloroethene	100		ug/L	JD	< 50	U	96	JD	**110**	JD	0.18	JD	< 0.05	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 40	U	< 0.04	U	< 67	U	< 0.84	U	< 0.04	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 30	U	**140**	JD	**160**	JD	< 0.84	U	< 0.03	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 510	U	< 0.51	U	< 850	U	< 4.2	U	< 0.51	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 20	U	< 0.02	U	< 33	U	< 0.84	U	< 0.02	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	U	< 440	U	23		< 730	U	< 4.2	U	< 0.44	U	1.2	J
67-66-3	Chloroform	70		ug/L	D	**650**	D	**1200**	D	**1200**	D	0.1	JD	0.053	J	0.087	J
71-43-2	Benzene	1		ug/L	JD	**390**	JD	**570**	JD	**580**	JD	0.77	JD	< 0.03	U	< 0.03	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 20	U	41	E	< 33	U	< 0.84	U	< 0.02	U	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 110	U	< 0.11	U	< 180	U	< 0.84	U	< 0.11	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 110	U	< 0.11	U	< 180	U	< 0.84	U	< 0.11	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 30	U	< 0.03	U	< 50	U	< 0.84	U	< 0.03	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 30	U	< 0.03	U	< 50	U	< 0.84	U	< 0.03	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 200	U	< 0.2	U	< 330	U	< 0.84	U	< 0.2	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	D	**8000**	D	**350**	JD	**290**	JD	**39**	D	< 0.07	U	< 0.07	U
75-05-8	Acetonitrile			ug/L	U	< 30	U	< 0.03	U	< 50	U	< 0.84	U	< 0.03	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	U	**77**	JBD	**39**		< 33	U	< 0.84	U	< 0.02	U	0.4	JB
75-15-0	Carbon Disulfide	700		ug/L	U	< 20	U	3		< 33	U	< 0.84	U	< 0.02	U	< 0.02	U
75-25-2	Bromoform	4		ug/L	U	< 30	U	< 0.03	U	< 50	U	< 0.84	U	< 0.03	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 30	U	< 0.03	U	< 50	U	< 0.84	U	< 0.03	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	U	< 20	U	**15**		< 33	U	< 0.84	U	< 0.02	U	< 0.02	U
75-35-4	1,1-Dichloroethene	350*		ug/L	JD	< 40	U	210	JD	210	JD	< 0.84	U	< 0.04	U	< 0.04	U
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 60	U	5.3		< 100	U	< 0.84	U	< 0.06	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 30	U	0.11	J	< 50	U	< 0.84	U	< 0.03	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 70	U	< 0.07	U	< 120	U	< 0.84	U	< 0.07	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 5900	U	< 5.9	U	< 9800	U	< 42	U	< 5.9	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 120	U	< 0.12	U	< 200	U	< 0.84	U	< 0.12	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 280	U	< 0.28	U	< 470	U	< 4.2	U	< 0.28	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 40	U	**3.8**		< 67	U	< 0.84	U	< 0.04	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	D	**31000**	D	**53000**	BD	**55000**	BD	< 0.84	U	< 0.03	U	< 0.03	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 50	U	**3.9**		< 83	U	< 0.84	U	< 0.05	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 560	U	< 0.56	U	< 930	U	< 8.4	U	< 0.56	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 30	U	< 0.03	U	< 50	U	< 0.84	U	< 0.03	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 30	U	1.7		< 50	U	< 0.84	U	< 0.03	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 250	U	< 0.25	U	< 420	U	< 0.84	U	< 0.25	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 90	U	< 0.09	U	< 150	U	< 0.84	U	< 0.09	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 410	U	< 0.41	U	< 680	U	< 8.4	U	< 0.41	U	< 0.41	U
	Total VOCs			**ug/L**		**43685**		**59965.71**		**61670**		**44.48**		**0.084**		**1.687**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-44S	GW-44S	GW-44S	GW-44S	GW-4I	GW-4I	GW-4I	GW-4I	GW-4I	GW-4I	GW-4I	GW-4I	GW-4I
				Sys Sample Code	GW-44S_11042014	GW-44S_11042014	GW-44S_02232015	GW-44S_02232015	GW-4I_12192013	GW-4I_12192013	GW-4IDUP_12192013	GW-4IDUP_12192013	GW-4I_04112014	GW-4I_04112014	GW-4I_08072014	GW-4I_08072014	GW-4I_11062014
				Sample Date	11/04/14	11/04/14	02/23/15	02/23/15	12/19/13	12/19/13	12/19/13	12/19/13	04/11/14	04/11/14	08/07/14	08/07/14	11/06/14
				Sample Type	N	N	N	N	N	N	FD	FD	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 5	U	< 5	U	< 0.14	U	< 0.2	U	< 0.2
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 5	U	< 5	U	< 0.071	U	< 0.1	U	< 0.1
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 5	U	< 5	U	< 0.14	U	< 0.2	U	< 0.2
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 5	U	< 5	U	< 0.18	U	< 0.25	U	< 0.25
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.03	U	< 5	U	< 5	U	< 0.11	U	< 0.15	U	< 0.15
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 5	U	< 5	U	< 0.14	U	< 0.2	U	< 0.2
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 50	U	< 50	U	< 3.7	U	< 5.2	U	< 5.2
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 5	U	< 5	U	< 0.18	U	< 0.25	U	< 0.25
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	< 0.03	U	**23**	D	**22**	D	**12**	D	**13**	D	**6.3**
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 250	U	< 250	U	< 5	U	< 7	U	< 7
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 50	U	< 50	U	< 1.3	U	< 1.8	U	< 1.8
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 5	U	< 5	U	< 0.21	U	< 0.3	U	< 0.3
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 25	U	< 25	U	< 1.5	U	< 2.1	U	< 2.1
108-88-3	Toluene	600		ug/L	< 0.03	U	< 0.03	U	0.53	JD	0.36	JD	0.16	JD	0.28	JD	< 0.15
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	< 0.02	U	0.3	JD	0.28	JD	< 0.071	U	0.16	JD	< 0.1
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 20	U	< 20	U	< 1.2	U	< 1.7	U	< 1.7
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 5	U	< 5	U	< 0.21	U	< 0.3	U	< 0.3
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 5.4	U	< 250	U	< 250	U	< 19	U	< 27	U	< 27
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 5	U	< 5	U	< 0.14	U	< 0.2	U	< 0.2
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 50	U	< 50	U	< 1.4	U	< 2	U	< 2
127-18-4	Tetrachloroethene	0.7		ug/L	< 0.06	U	< 0.06	U	**3.7**	JD	**3.6**	JD	**1.7**	JD	< 0.3	U	< 0.3
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	< 0.03	U	< 5	U	< 5	U	< 0.11	U	< 0.15	U	< 0.15
156-59-2	cis-1,2-Dichloroethene	70		ug/L	0.05	J	< 0.03	U	**130**	D	**99**	D	46	D	**130**	D	18
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	< 0.05	U	1.4	JD	1.3	JD	0.41	JD	1.6	JD	0.62
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.04	U	< 5	U	< 5	U	< 0.14	U	< 0.2	U	< 0.2
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 5	U	< 5	U	< 0.11	U	< 0.15	U	< 0.15
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 25	U	< 25	U	< 1.8	U	< 2.6	U	< 2.6
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 5	U	< 5	U	< 0.071	U	< 0.1	U	< 0.1
67-64-1	Acetone	6000		ug/L	< 0.44	U	< 0.44	U	28	D	< 25	U	< 1.6	U	15	D	110
67-66-3	Chloroform	70		ug/L	0.078	J	0.045	J	7.5	D	4.4	JD	< 0.11	U	< 0.15	U	< 0.15
71-43-2	Benzene	1		ug/L	< 0.03	U	< 0.03	U	**4**	JD	**2.6**	JD	< 0.11	U	0.79	JD	**1.1**
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	< 0.02	U	< 5	U	< 5	U	0.81	JD	0.16	JD	< 0.1
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 5	U	< 5	U	< 0.39	U	< 0.55	U	< 0.55
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 5	U	< 5	U	< 0.39	U	< 0.55	U	< 0.55
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 5	U	< 5	U	< 0.11	U	< 0.15	U	< 0.15
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 5	U	< 5	U	< 0.11	U	< 0.15	U	< 0.15
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.2	U	< 5	U	< 5	U	< 0.71	U	< 1	U	4.5
75-01-4	Vinyl Chloride	0.03		ug/L	**0.2**	J	< 0.07	U	**40**	D	**27**	D	**6.1**	D	**7.6**	D	**180**
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 5	U	< 5	U	< 0.11	U	< 0.15	U	< 0.15
75-09-2	Methylene Chloride	5		ug/L	0.085	JB	< 0.02	U	0.71	JD	0.63	JD	0.39	JBD	0.34	JBD	0.55
75-15-0	Carbon Disulfide	700		ug/L	< 0.02	U	< 0.02	U	< 5	U	< 5	U	< 0.071	U	0.43	JD	0.29
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 5	U	< 5	U	< 0.11	U	< 0.15	U	< 0.15
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 5	U	< 5	U	< 0.11	U	< 0.15	U	< 0.15
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.02	U	< 0.02	U	**7.6**	D	**7.4**	D	**6.2**	D	**7.3**	D	1.9
75-35-4	1,1-Dichloroethene	350*		ug/L	< 0.04	U	< 0.04	U	100	D	99	D	85	D	45	D	3.2
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.06	U	< 5	U	< 5	U	< 0.21	U	< 0.3	U	< 0.3
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 5	U	< 5	U	< 0.11	U	< 0.15	U	< 0.15
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 5	U	< 5	U	< 0.25	U	< 0.35	U	< 0.35
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 250	U	< 250	U	< 21	U	< 30	U	< 30
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 5	U	< 5	U	< 0.43	U	< 0.6	U	< 0.6
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 0.28	U	< 25	U	< 25	U	< 1	U	< 1.4	U	62
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.04	U	< 5	U	< 5	U	< 0.14	U	< 0.2	U	< 0.2
79-01-6	Trichloroethene	3		ug/L	< 0.03	U	< 0.03	U	**230**	D	**180**	D	**100**	D	< 0.15	U	0.45
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 5	U	< 5	U	< 0.18	U	< 0.25	U	< 0.25
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 50	U	< 50	U	< 2	U	< 2.8	U	< 2.8
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 5	U	< 5	U	< 0.11	U	< 0.15	U	< 0.15
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 0.03	U	< 5	U	< 5	U	< 0.11	U	< 0.15	U	< 0.15
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 5	U	< 5	U	< 0.89	U	< 1.3	U	< 1.3
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 5	U	< 5	U	< 0.32	U	< 0.45	U	< 0.45
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 50	U	< 50	U	< 1.5	U	< 2.1	U	< 2.1
	Total VOCs			**ug/L**	**0.413**		**0.045**		**576.74**		**447.57**		**258.77**		**221.66**		**388.91**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	GW-4I	GW-4I	GW-4I	IW-01	IW-01	IW-01	IW-01	IW-03	IW-03	IW-03	IW-03	IW-03D	IW-03D
				Sys Sample Code	GW-4I_11062014	GW-4I_02252015	GW-4I_02252015	IW-01_12192013	IW-01_12192013	IW-01_03032015	IW-01_03032015	IW-03_12192013	IW-03_12192013	IW-03_03032015	IW-03_03032015	IW-03D_12262013	IW-03D_12262013
				Sample Date	11/06/14	02/25/15	02/25/15	12/19/13	12/19/13	03/03/15	03/03/15	12/19/13	12/19/13	03/03/15	03/03/15	12/26/13	12/26/13
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.2	U	< 0.5	U	0.88		< 1	U	0.56		< 0.5	U
100-42-5	Styrene	70		ug/L	U	< 0.1	U	< 0.5	U	< 0.02	U	< 1	U	< 0.02	U	< 0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.2	U	< 0.5	U	< 0.04	U	< 1	U	< 0.04	U	< 0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.25	U	< 0.5	U	< 0.05	U	< 1	U	< 0.05	U	< 0.5	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.15	U	1.5		0.87		< 1	U	< 0.03	U	< 0.5	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.2	U	< 0.5	U	< 0.04	U	< 1	U	< 0.04	U	< 0.5	U
107-02-8	Acrolein		4	ug/L	U	< 5.2	U	< 5	U	< 1	U	< 10	U	< 1	U	< 5	U
107-05-1	Allyl Chloride			ug/L	U	< 0.25	U	< 0.5	U	< 0.05	U	< 1	U	< 0.05	U	< 0.5	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	D	**2.6**	D	**2.4**		**1.4**		< 1	U	**0.76**		**7.5**	
107-12-0	Propionitrile			ug/L	U	< 7	U	< 25	U	< 1.4	U	< 52	U	< 1.4	U	< 25	U
107-13-1	Acrylonitrile			ug/L	U	< 1.8	U	< 5	U	< 0.36	U	< 10	U	< 0.36	U	< 5	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.3	U	< 0.5	U	< 0.06	U	< 1	U	< 0.06	U	< 0.5	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 2.1	U	< 2.5	U	< 0.42	U	< 5.2	U	< 0.42	U	< 2.5	U
108-88-3	Toluene	600		ug/L	U	0.25	JBD	0.08	JB	2.9		< 1	U	2		0.033	JB
108-90-7	Chlorobenzene	50		ug/L	U	< 0.1	U	< 0.5	U	< 0.02	U	< 1	U	< 0.02	U	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 1.7	U	< 2	U	< 0.33	U	< 4.2	U	< 0.33	U	< 2	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.3	U	5.6		1.1		< 1	U	< 0.06	U	< 0.5	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 27	U	< 25	U	< 5.4	U	< 52	U	< 5.4	U	< 25	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.2	U	< 0.5	U	< 0.04	U	< 1	U	< 0.04	U	< 0.5	U
126-98-7	Methylacrylonitrile			ug/L	U	< 2	U	< 5	U	< 0.39	U	< 10	U	< 0.39	U	< 5	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	< 0.3	U	0.21	J	0.1	J	< 1	U	< 0.06	U	< 0.5	U
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.15	U	0.3	J	1.5		< 1	U	0.95		0.13	J
156-59-2	cis-1,2-Dichloroethene	70		ug/L	D	2.2	JD	54	E	1.6		< 1	U	0.17	J	51	E
156-60-5	trans-1,2-Dichloroethene	100		ug/L	JD	0.59	JD	0.15	J	< 0.05	U	< 1	U	< 0.05	U	0.15	J
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.2	U	0.29	J	0.19	J	< 1	U	< 0.04	U	< 0.5	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.15	U	**0.78**		< 0.03	U	< 1	U	< 0.03	U	< 0.5	U
591-78-6	2-Hexanone		40	ug/L	U	< 2.6	U	< 2.5	U	< 0.51	U	< 5.2	U	< 0.51	U	< 2.5	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.1	U	< 0.5	U	< 0.02	U	< 1	U	< 0.02	U	< 0.5	U
67-64-1	Acetone	6000		ug/L	D	14	D	12	B	38		370	D	32		1.3	JB
67-66-3	Chloroform	70		ug/L	U	< 0.15	U	2.8		< 0.03	U	2.1	D	< 0.03	U	< 0.5	U
71-43-2	Benzene	1		ug/L	JD	**1.4**	JD	**1.9**		**1.7**		< 1	U	**1.1**		0.56	
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.1	U	< 0.5	U	< 0.02	U	< 1	U	< 0.02	U	< 0.5	U
74-83-9	Bromomethane		10	ug/L	U	< 0.55	U	< 0.5	U	< 0.11	U	< 1	U	< 0.11	U	< 0.5	U
74-87-3	Chloromethane	3		ug/L	U	< 0.55	U	< 0.5	U	< 0.11	U	< 1	U	< 0.11	U	< 0.5	U
74-88-4	Iodomethane			ug/L	U	< 0.15	U	< 0.5	U	< 0.03	U	< 1	U	< 0.03	U	< 0.5	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.15	U	< 0.5	U	< 0.03	U	< 1	U	< 0.03	U	< 0.5	U
75-00-3	Chloroethane	3000		ug/L	D	5.2	D	< 0.5	U	0.21	J	< 1	U	< 0.2	U	< 0.5	U
75-01-4	Vinyl Chloride	0.03		ug/L	D	**160**	D	**0.17**	J	**5.5**		< 1	U	**6.1**		**0.096**	J
75-05-8	Acetonitrile			ug/L	U	< 0.15	U	< 0.5	U	< 0.03	U	< 1	U	< 0.03	U	< 0.5	U
75-09-2	Methylene Chloride	5		ug/L	JBD	< 0.1	U	1.7		0.37	JB	0.14	JD	0.06	JB	0.097	JB
75-15-0	Carbon Disulfide	700		ug/L	JD	< 0.1	U	0.028	J	0.086	J	0.53	JD	0.091	J	< 0.5	U
75-25-2	Bromoform	4		ug/L	U	< 0.15	U	< 0.5	U	< 0.03	U	< 1	U	< 0.03	U	< 0.5	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.15	U	< 0.5	U	< 0.03	U	< 1	U	< 0.03	U	< 0.5	U
75-34-3	1,1-Dichloroethane	6		ug/L	JD	< 0.1	U	0.2	J	< 0.02	U	< 1	U	< 0.02	U	< 0.5	U
75-35-4	1,1-Dichloroethene	350*		ug/L	D	0.52	JD	1.4		< 0.04	U	< 1	U	< 0.04	U	0.36	J
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.3	U	< 0.5	U	< 0.06	U	< 1	U	< 0.06	U	< 0.5	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.15	U	< 0.5	U	< 0.03	U	< 1	U	< 0.03	U	< 0.5	U
76-01-7	Pentachloroethane			ug/L	U	< 0.35	U	< 0.5	U	< 0.07	U	< 1	U	< 0.07	U	< 0.5	U
78-83-1	Isobutanol			ug/L	U	< 30	U	< 25	U	< 5.9	U	< 52	U	< 5.9	U	< 25	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.6	U	< 0.5	U	< 0.12	U	< 1	U	< 0.12	U	< 0.5	U
78-93-3	2-Butanone	4000		ug/L	D	< 1.4	U	< 2.5	U	9.5		< 5.2	U	6.8		< 2.5	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.2	U	< 0.5	U	< 0.04	U	< 1	U	< 0.04	U	< 0.5	U
79-01-6	Trichloroethene	3		ug/L	JD	2.5	JBD	**15**		0.18	J	< 1	U	< 0.03	U	0.78	B
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.25	U	< 0.5	U	< 0.05	U	< 1	U	< 0.05	U	< 0.5	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 2.8	U	< 5	U	< 0.56	U	< 10	U	< 0.56	U	< 5	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.15	U	< 0.5	U	< 0.03	U	< 1	U	< 0.03	U	< 0.5	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.15	U	0.29	J	0.18	J	< 1	U	< 0.03	U	< 0.5	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 1.3	U	< 0.5	U	< 0.25	U	< 1	U	< 0.25	U	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.45	U	< 0.5	U	< 0.09	U	< 1	U	< 0.09	U	< 0.5	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 2.1	U	< 5	U	< 0.41	U	< 10	U	< 0.41	U	< 5	U
	Total VOCs			**ug/L**		**189.26**		**100.798**		**66.266**		**372.77**		**50.591**		**62.006**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	IW-03D	IW-03D	IW-05	IW-05	IW-05	IW-05	IW-06	IW-06	IW-06	IW-06	IW-06D	IW-06D	IW-06D
				Sys Sample Code	IW-03D_03032015	IW-03D_03032015	IW-05_12192013	IW-05_12192013	IW-05_03022015	IW-05_03022015	IW-06_12262013	IW-06_12262013	IW-06_03022015	IW-06_03022015	IW-06D_12262013	IW-06D_12262013	IW-06D_03022015
				Sample Date	03/03/15	03/03/15	12/19/13	12/19/13	03/02/15	03/02/15	12/26/13	12/26/13	03/02/15	03/02/15	12/26/13	12/26/13	03/02/15
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier		Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	0.47	J	< 10	U	0.62	JD	< 0.5	U	0.89	JD	< 0.5	U	0.75
100-42-5	Styrene	70		ug/L	< 0.02	U	< 10	U	<0.13	U	< 0.5	U	< 0.036	U	< 0.5	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 10	U	<0.25	U	< 0.5	U	< 0.072	U	< 0.5	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 10	U	<0.31	U	< 0.5	U	< 0.09	U	< 0.5	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 10	U	<0.19	U	< 0.5	U	< 0.054	U	< 0.5	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 10	U	<0.25	U	< 0.5	U	< 0.072	U	< 0.5	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 1	U	< 100	U	<6.4	U	< 5	U	< 1.8	U	< 5	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 10	U	<0.5	U	< 0.5	U	< 0.09	U	< 0.5	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	**0.57**		**270**	D	**120**	D	**96**	D	**23**	D	**61**	D	**0.93**
107-12-0	Propionitrile			ug/L	< 1.4	U	< 500	U	<8.8	U	< 25	U	< 2.5	U	< 25	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 100	U	<2.3	U	< 5	U	< 0.64	U	< 5	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 10	U	<0.38	U	< 0.5	U	< 0.11	U	< 0.5	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	0.97	J	< 50	U	<2.6	U	< 2.5	U	< 0.75	U	< 2.5	U	< 0.42
108-88-3	Toluene	600		ug/L	9.5		< 10	U	2.5	JD	0.11	JB	3.2	D	0.031	JB	2.7
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	< 10	U	<0.13	U	1.6		0.36	JD	0.45	J	< 0.02
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 40	U	<2.1	U	< 2	U	< 0.59	U	< 2	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 10	U	<0.38	U	< 0.5	U	< 0.11	U	< 0.5	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 500	U	<34	U	< 25	U	< 9.7	U	< 25	U	< 5.4
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 10	U	<0.25	U	< 0.5	U	< 0.072	U	< 0.5	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 100	U	<3.5	U	< 5	U	< 0.7	U	< 5	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	0.13	J	< 10	U	<0.38	U	0.42	J	0.3	JD	0.092	J	0.12
1330-20-7	Xylenes, Total	500		ug/L	0.79		< 10	U	0.95	JD	< 0.5	U	1.4	D	< 0.5	U	1.5
156-59-2	cis-1,2-Dichloroethene	70		ug/L	1.9		**170**	D	**91**	D	**71**	D	14	D	19		1.5
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	1.2	JD	<0.31	U	0.25	J	0.15	JD	0.073	J	< 0.05
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 10	U	<0.25	U	< 0.5	U	< 0.072	U	< 0.5	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 10	U	<0.19	U	< 0.5	U	< 0.054	U	< 0.5	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	1.9	J	< 50	U	<3.2	U	< 2.5	U	< 0.91	U	< 2.5	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 10	U	<0.13	U	< 0.5	U	< 0.036	U	< 0.5	U	< 0.02
67-64-1	Acetone	6000		ug/L	120		48	JD	13	JD	58		20	D	15	B	150
67-66-3	Chloroform	70		ug/L	< 0.03	U	38	D	**87**	D	4.6		9.7	D	15		< 0.03
71-43-2	Benzene	1		ug/L	0.6		**3**	JD	**3.6**	D	**1.4**		**2.9**	D	0.23	JB	0.45
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	< 10	U	<0.13	U	< 0.5	U	< 0.036	U	< 0.5	U	< 0.02
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 10	U	<0.69	U	< 0.5	U	< 0.2	U	< 0.5	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 10	U	<0.69	U	< 0.5	U	< 0.2	U	< 0.5	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.03	U	< 10	U	<0.19	U	< 0.5	U	< 0.054	U	< 0.5	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 10	U	<0.19	U	< 0.5	U	< 0.054	U	< 0.5	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 10	U	<1.3	U	< 0.5	U	< 0.36	U	< 0.5	U	< 0.2
75-01-4	Vinyl Chloride	0.03		ug/L	**0.76**		**8.6**	JD	<0.44	U	**6.2**		**14**	D	**0.24**	J	< 0.07
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 10	U	<0.19	U	< 0.5	U	< 0.054	U	< 0.5	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	0.22	JB	3.5	JD	**5.3**	BD	1.7		3.8	BD	0.27	J	0.16
75-15-0	Carbon Disulfide	700		ug/L	0.21	J	< 10	U	<0.13	U	< 0.5	U	< 0.036	U	0.31	J	0.13
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 10	U	<0.19	U	< 0.5	U	< 0.054	U	< 0.5	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 10	U	<0.19	U	< 0.5	U	< 0.054	U	< 0.5	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.02	U	< 10	U	<0.13	U	0.44	J	< 0.036	U	0.19	J	< 0.02
75-35-4	1,1-Dichloroethene	350*		ug/L	< 0.04	U	6.9	JD	1.8	JD	3.3		0.45	JD	1.9		< 0.04
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 10	U	<0.38	U	0.12	J	< 0.11	U	< 0.5	U	< 0.06
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 10	U	<0.19	U	< 0.5	U	< 0.054	U	< 0.5	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 10	U	<0.44	U	< 0.5	U	< 0.13	U	< 0.5	U	< 0.07
78-83-1	Isobutanol			ug/L	< 5.9	U	< 500	U	<37	U	< 25	U	< 11	U	< 25	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 10	U	<0.75	U	< 0.5	U	< 0.21	U	< 0.5	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	100		< 50	U	<1.8	U	< 2.5	U	6.8	D	< 2.5	U	83
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 10	U	<0.25	U	< 0.5	U	< 0.072	U	< 0.5	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	0.84		**420**	D	**180**	D	**490**	D	**51**	D	**72**	D	0.18
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 10	U	<0.31	U	< 0.5	U	< 0.09	U	< 0.5	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 100	U	<3.5	U	< 5	U	< 1	U	< 5	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 10	U	<0.19	U	< 0.5	U	< 0.054	U	< 0.5	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 10	U	<0.19	U	< 0.5	U	< 0.054	U	< 0.5	U	< 0.03
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 10	U	<1.6	U	< 0.5	U	< 0.45	U	< 0.5	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 10	U	<0.56	U	< 0.5	U	< 0.16	U	< 0.5	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 100	U	<2.6	U	< 5	U	< 0.73	U	< 5	U	< 0.41
	Total VOCs			**ug/L**	**238.86**		**969.2**				**735.14**		**151.95**		**185.786**		**241.42**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	IW-06D	IW-08	IW-08	IW-08	IW-08	IW-08D	IW-08D	IW-08D	IW-08D	IW-10	IW-10	IW-10	IW-10
				Sys Sample Code	IW-06D_03022015	IW-08_12262013	IW-08_12262013	IW-08_03022015	IW-08_03022015	IW-08D_12262013	IW-08D_12262013	IW-08D_03022015	IW-08D_03022015	IW-10_12262013	IW-10_12262013	IW-10_03022015	IW-10_03022015
				Sample Date	03/02/15	12/26/13	12/26/13	03/02/15	03/02/15	12/26/13	12/26/13	03/02/15	03/02/15	12/26/13	12/26/13	03/02/15	03/02/15
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L		< 0.5	U	< 1.3	U	0.13	JD	0.11	J	< 0.5	U	< 0.4	U
100-42-5	Styrene	70		ug/L	U	< 0.5	U	< 0.67	U	< 1	U	< 0.02	U	< 0.5	U	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 1.3	U	< 1	U	< 0.04	U	< 0.5	U	< 0.4	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 1.7	U	< 1	U	< 0.05	U	< 0.5	U	< 0.5	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.5	U	< 1	U	< 1	U	< 0.03	U	< 0.5	U	< 0.3	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.5	U	< 1.3	U	< 1	U	< 0.04	U	< 0.5	U	< 0.4	U
107-02-8	Acrolein		4	ug/L	U	< 5	U	< 34	U	< 10	U	< 1	U	< 5	U	< 10	U
107-05-1	Allyl Chloride			ug/L	U	< 0.5	U	< 1.7	U	< 1	U	< 0.05	U	< 0.5	U	< 0.5	U
107-06-2	1,2-Dichloroethane	0.4		ug/L		**85**	D	**130**	D	**0.94**	JDB	**0.86**		**42**	D	**6.9**	D
107-12-0	Propionitrile			ug/L	U	< 25	U	< 47	U	< 50	U	< 1.4	U	< 25	U	< 14	U
107-13-1	Acrylonitrile			ug/L	U	< 5	U	< 12	U	< 10	U	< 0.36	U	< 5	U	< 3.6	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.5	U	< 2	U	< 1	U	< 0.06	U	< 0.5	U	< 0.6	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 2.5	U	< 14	U	< 5	U	< 0.42	U	< 2.5	U	< 4.2	U
108-88-3	Toluene	600		ug/L		< 0.5	U	1.2	JD	0.09	JDB	0.43	J	0.063	J	2.2	JD
108-90-7	Chlorobenzene	50		ug/L	U	0.18	J	< 0.67	U	< 1	U	0.091	J	0.26	J	1.3	JD
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 2	U	< 11	U	< 4	U	< 0.33	U	< 2	U	< 3.3	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.5	U	< 2	U	< 1	U	< 0.06	U	< 0.5	U	< 0.6	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 25	U	< 180	U	< 50	U	< 5.4	U	< 25	U	< 54	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.5	U	< 1.3	U	< 1	U	< 0.04	U	< 0.5	U	< 0.4	U
126-98-7	Methylacrylonitrile			ug/L	U	< 5	U	< 13	U	< 10	U	< 0.39	U	< 5	U	< 3.9	U
127-18-4	Tetrachloroethene	0.7		ug/L	J	**1.7**		< 2	U	**2.6**	D	0.18	J	**1.7**		< 0.6	U
1330-20-7	Xylenes, Total	500		ug/L		< 0.5	U	< 1	U	1.9	D	0.52		< 0.5	U	0.37	JD
156-59-2	cis-1,2-Dichloroethene	70		ug/L		**92**	D	**970**	D	3.8	D	0.87		**90**	D	12	D
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	3		7.9	JD	< 1	U	0.061	J	1.9		0.98	JD
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.5	U	< 1.3	U	< 1	U	< 0.04	U	< 0.5	U	< 0.4	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	**2.2**		< 1	U	< 1	U	< 0.03	U	**0.7**		< 0.3	U
591-78-6	2-Hexanone		40	ug/L	U	< 2.5	U	< 17	U	< 5	U	< 0.51	U	< 2.5	U	< 5.1	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.5	U	< 0.67	U	< 1	U	< 0.02	U	< 0.5	U	< 0.2	U
67-64-1	Acetone	6000		ug/L		5	B	< 15	U	2.3	BD	68		3.4	B	38	D
67-66-3	Chloroform	70		ug/L	U	**220**	D	57	D	0.13	JD	< 0.03	U	61	D	< 0.3	U
71-43-2	Benzene	1		ug/L	J	0.31	J	**4.9**	JD	0.3	JDB	0.82		0.81		**9.5**	D
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.5	U	< 0.67	U	1.5	D	< 0.02	U	< 0.5	U	< 0.2	U
74-83-9	Bromomethane		10	ug/L	U	< 0.5	U	< 3.7	U	< 1	U	< 0.11	U	< 0.5	U	< 1.1	U
74-87-3	Chloromethane	3		ug/L	U	< 0.5	U	< 3.7	U	< 1	U	< 0.11	U	< 0.5	U	< 1.1	U
74-88-4	Iodomethane			ug/L	U	< 0.5	U	< 1	U	< 1	U	< 0.03	U	< 0.5	U	< 0.3	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.5	U	< 1	U	< 1	U	< 0.03	U	< 0.5	U	< 0.3	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.5	U	< 6.7	U	< 1	U	0.87		< 0.5	U	< 2	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	**0.19**	J	**37**	D	**4.1**	D	**33**		**0.56**		**340**	D
75-05-8	Acetonitrile			ug/L	U	< 0.5	U	< 1	U	< 1	U	< 0.03	U	< 0.5	U	< 0.3	U
75-09-2	Methylene Chloride	5		ug/L	JB	2.3		3.3	JBD	0.16	JBD	0.16	JB	3.2		1.1	JBD
75-15-0	Carbon Disulfide	700		ug/L	J	< 0.5	U	< 0.67	U	< 1	U	0.14	J	0.14	J	< 0.2	U
75-25-2	Bromoform	4		ug/L	U	< 0.5	U	< 1	U	< 1	U	< 0.03	U	< 0.5	U	< 0.3	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.5	U	< 1	U	< 1	U	< 0.03	U	< 0.5	U	< 0.3	U
75-34-3	1,1-Dichloroethane	6		ug/L	U	0.36	J	< 0.67	U	4.2	D	1.9		3.5		1.8	JD
75-35-4	1,1-Dichloroethene	350*		ug/L	U	5.1		17	D	50	D	0.69		4.1		< 0.4	U
75-69-4	Trichlorofluoromethane	2000		ug/L	U	0.23	J	< 2	U	< 1	U	< 0.06	U	0.069	J	< 0.6	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	0.035	J	< 1	U	< 1	U	< 0.03	U	< 0.5	U	< 0.3	U
76-01-7	Pentachloroethane			ug/L	U	< 0.5	U	< 2.3	U	< 1	U	< 0.07	U	< 0.5	U	< 0.7	U
78-83-1	Isobutanol			ug/L	U	< 25	U	< 200	U	< 50	U	< 5.9	U	< 25	U	< 59	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.5	U	< 4	U	< 1	U	< 0.12	U	< 0.5	U	< 1.2	U
78-93-3	2-Butanone	4000		ug/L		< 2.5	U	< 9.3	U	< 5	U	12		< 2.5	U	< 2.8	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	0.29	J	< 1.3	U	< 1	U	< 0.04	U	< 0.5	U	< 0.4	U
79-01-6	Trichloroethene	3		ug/L	J	**1100**	D	**670**	D	**11**	DB	0.71		**440**	D	**3.4**	JD
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.5	U	< 1.7	U	< 1	U	< 0.05	U	< 0.5	U	< 0.5	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 5	U	< 19	U	< 5	U	< 0.56	U	< 5	U	< 5.6	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.5	U	< 1	U	< 1	U	< 0.03	U	< 0.5	U	< 0.3	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.5	U	< 1	U	0.17	JD	< 0.03	U	< 0.5	U	< 0.3	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.5	U	< 8.3	U	< 1	U	< 0.25	U	< 0.5	U	< 2.5	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.5	U	< 3	U	< 1	U	< 0.09	U	< 0.5	U	< 0.9	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 5	U	< 14	U	< 10	U	< 0.41	U	< 5	U	< 4.1	U
	Total VOCs			**ug/L**		**1517.895**		**1898.3**		**83.32**		**121.412**		**653.402**		**417.55**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	IW-10D	IW-10D	IW-10D	IW-10D	IW-11	IW-11	IW-11	IW-11	IW-12	IW-12	IW-12	IW-12	IW-12D
				Sys Sample Code	IW-10D_12262013	IW-10D_12262013	IW-10D_03022015	IW-10D_03022015	IW-11_12202013	IW-11_12202013	IW-11_03032015	IW-11_03032015	IW-12_12202013	IW-12_12202013	IW-12_02252015	IW-12_02252015	IW-12D_12202013
				Sample Date	12/26/13	12/26/13	03/02/15	03/02/15	12/20/13	12/20/13	03/03/15	03/03/15	12/20/13	12/20/13	02/25/15	02/25/15	12/20/13
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	0.088	J	0.81		0.97		< 0.5	U	4.3		21	JD	8.9
100-42-5	Styrene	70		ug/L	< 0.5	U	< 0.02	U	< 0.5	U	< 0.25	U	< 0.5	U	< 6.3	U	< 0.5
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.5	U	< 0.04	U	< 0.5	U	< 0.5	U	< 0.5	U	< 13	U	< 0.5
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.5	U	< 0.05	U	< 0.5	U	< 0.63	U	< 0.5	U	< 16	U	< 0.5
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.5	U	< 0.03	U	< 0.5	U	< 0.38	U	0.046	J	< 9.4	U	< 0.5
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.5	U	< 0.04	U	< 0.5	U	< 0.5	U	< 0.5	U	< 13	U	< 0.5
107-02-8	Acrolein		4	ug/L	< 5	U	< 1	U	< 5	U	< 13	U	< 5	U	< 320	U	< 5
107-05-1	Allyl Chloride			ug/L	< 0.5	U	< 0.05	U	< 0.5	U	< 0.63	U	< 0.5	U	< 16	U	< 0.5
107-06-2	1,2-Dichloroethane	0.4		ug/L	**1.4**		**0.67**		**170**	D	**8.6**	D	**2300**	D	**2800**	D	**2000**
107-12-0	Propionitrile			ug/L	< 25	U	< 1.4	U	< 25	U	< 18	U	< 25	U	< 440	U	< 25
107-13-1	Acrylonitrile			ug/L	< 5	U	< 0.36	U	< 5	U	< 4.5	U	< 5	U	< 110	U	< 5
108-05-4	Vinyl Acetate		88	ug/L	< 0.5	U	< 0.06	U	< 0.5	U	< 0.75	U	< 0.5	U	< 19	U	< 0.5
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 2.5	U	< 0.42	U	< 2.5	U	< 5.3	U	3.1		< 130	U	37
108-88-3	Toluene	600		ug/L	0.15	J	2.7		13		3	JD	8.4		61	JBD	59
108-90-7	Chlorobenzene	50		ug/L	< 0.5	U	< 0.02	U	1.9		2.3	JD			**160**	D	8.1
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 2	U	< 0.33	U	< 2	U	< 4.1	U	< 2	U	< 100	U	< 2
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.5	U	< 0.06	U	< 0.5	U	< 0.75	U	< 0.5	U	< 19	U	< 0.5
123-91-1	1,4-Dioxane	3		ug/L	< 25	U	< 5.4	U	**190**		< 68	U	< 25	U	< 1700	U	< 25
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.5	U	< 0.04	U	< 0.5	U	< 0.5	U	< 0.5	U	< 13	U	< 0.5
126-98-7	Methylacrylonitrile			ug/L	< 5	U	< 0.39	U	< 5	U	< 4.9	U	< 5	U	< 120	U	< 5
127-18-4	Tetrachloroethene	0.7		ug/L	0.38	J	0.16	J	**32**		**1.4**	JD	**130**	D	**340**	D	**30**
1330-20-7	Xylenes, Total	500		ug/L	0.28	J	1.6		2.4		0.61	JD	11		65	JD	32
156-59-2	cis-1,2-Dichloroethene	70		ug/L	5.5		0.52		**600**	D	20	D	**5000**	D	**8000**	D	**2300**
156-60-5	trans-1,2-Dichloroethene	100		ug/L	0.065	J	< 0.05	U	6.1		0.97	JD	**130**	D	**140**	JD	**130**
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.5	U	< 0.04	U	< 0.5	U	< 0.5	U	< 0.5	U	< 13	U	< 0.5
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.5	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.5	U	< 9.4	U	< 0.5
591-78-6	2-Hexanone		40	ug/L	< 2.5	U	< 0.51	U	< 2.5	U	< 6.4	U	< 2.5	U	< 160	U	< 2.5
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.5	U	< 0.02	U	< 0.5	U	< 0.25	U	< 0.5	U	< 6.3	U	< 0.5
67-64-1	Acetone	6000		ug/L	2600	D	63		0.87	JB	47	D	48		< 140	U	1000
67-66-3	Chloroform	70		ug/L	2.7		< 0.03	U	17		< 0.38	U	**540**	D	**1200**	D	**320**
71-43-2	Benzene	1		ug/L	0.45	J	**1.1**		**24**		**19**	D	**200**	D	**410**	D	**240**
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.5	U	< 0.02	U	< 0.5	U	< 0.25	U	0.5	J	< 6.3	U	1.1
74-83-9	Bromomethane		10	ug/L	< 0.5	U	< 0.11	U	< 0.5	U	< 1.4	U	< 0.5	U	< 34	U	< 0.5
74-87-3	Chloromethane	3		ug/L	0.35	J	< 0.11	U	< 0.5	U	< 1.4	U	0.26	J	< 34	U	0.66
74-88-4	Iodomethane			ug/L	< 0.5	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.5	U	< 9.4	U	< 0.5
74-95-3	Dibromomethane		70	ug/L	< 0.5	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.5	U	< 9.4	U	< 0.5
75-00-3	Chloroethane	3000		ug/L	< 0.5	U	1.3		< 0.5	U	< 2.5	U	< 0.5	U	< 63	U	< 0.5
75-01-4	Vinyl Chloride	0.03		ug/L	**0.27**	J	**2.1**		**12**		**400**	D	**9.5**		**190**	D	**90**
75-05-8	Acetonitrile			ug/L	< 0.5	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.5	U	< 9.4	U	< 0.5
75-09-2	Methylene Chloride	5		ug/L	1.3		0.3	JB	**95**	D	**5**	JD	**21**		**150**	JD	**340**
75-15-0	Carbon Disulfide	700		ug/L	1.3		< 0.02	U	0.074	JB	< 0.25	U	0.13	JB	< 6.3	U	0.31
75-25-2	Bromoform	4		ug/L	< 0.5	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.5	U	< 9.4	U	< 0.5
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.5	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.5	U	< 9.4	U	< 0.5
75-34-3	1,1-Dichloroethane	6		ug/L	0.82		0.21	J	**33**		2.2	JD	**6.2**		< 6.3	U	**9**
75-35-4	1,1-Dichloroethene	350*		ug/L	3.4		0.14	J	21		< 0.5	U	170	D	290	D	90
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.5	U	< 0.06	U	< 0.5	U	< 0.75	U	< 0.5	U	< 19	U	0.25
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.5	U	< 0.03	U	0.051	J	< 0.38	U	0.24	J	< 9.4	U	0.051
76-01-7	Pentachloroethane			ug/L	< 0.5	U	< 0.07	U	< 0.5	U	< 0.88	U	< 0.5	U	< 22	U	< 0.5
78-83-1	Isobutanol			ug/L	< 25	U	< 5.9	U	< 25	U	< 74	U	< 25	U	< 1800	U	< 25
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.5	U	< 0.12	U	< 0.5	U	< 1.5	U	< 0.5	U	< 38	U	< 0.5
78-93-3	2-Butanone	4000		ug/L	**7300**	D	23		< 2.5	U	< 3.5	U	< 2.5	U	< 88	U	< 2.5
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.5	U	< 0.04	U	< 0.5	U	< 0.5	U	**1.7**		< 13	U	< 0.5
79-01-6	Trichloroethene	3		ug/L	**14**		0.68		**510**	D	2.2	JD	**9300**	D	**11000**	BD	**9200**
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.5	U	< 0.05	U	< 0.5	U	< 0.63	U	0.13	J	< 16	U	< 0.5
80-62-6	Methyl Methacrylate		25	ug/L	< 5	U	< 0.56	U	< 5	U	< 7	U	< 5	U	< 180	U	< 5
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.5	U	< 0.03	U	< 0.5	U	< 0.38	U	< 0.5	U	< 9.4	U	< 0.5
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.5	U	< 0.03	U	0.14	J	< 0.38	U	0.39	J	< 9.4	U	0.16
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.5	U	< 0.25	U	< 0.5	U	< 3.1	U	< 0.5	U	< 78	U	< 0.5
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.5	U	< 0.09	U	< 0.5	U	< 1.1	U	< 0.5	U	< 28	U	< 0.5
97-63-2	Ethyl Methacrylate			ug/L	< 5	U	< 0.41	U	< 5	U	< 5.1	U	< 5	U	< 130	U	< 5
	Total VOCs			**ug/L**	**9932.453**		**98.29**		**1729.505**		**512.28**		**17884.896**		**24827**		**15896.531**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	IW-12D	IW-12D	IW-12D	IW-12D (RESAMPLE)	IW-12D (RESAMPLE)	IW-14	IW-14	IW-14	IW-14	IW-14D	IW-14D	IW-14D	IW-14D
				Sys Sample Code	IW-12D_12202013	IW-12D_03022015	IW-12D_03022015	IW-12D_02192014	IW-12D_02192014	IW-14_12202013	IW-14_12202013	IW-14_02252015	IW-14_02252015	IW-14D_12202013	IW-14D_12202013	IW-14D_03032015	IW-14D_03032015
				Sample Date	12/20/13	03/02/15	03/02/15	02/19/14	02/19/14	12/20/13	12/20/13	02/25/15	02/25/15	12/20/13	12/20/13	03/03/15	03/03/15
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L		0.62	JD	< 110	U	15		< 14	U	< 0.5	U	0.34	J
100-42-5	Styrene	70		ug/L	U	< 0.033	U	< 110	U	< 0.5	U	< 7.1	U	< 0.5	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.067	U	< 110	U	< 0.5	U	< 14	U	< 0.5	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.084	U	< 110	U	< 0.5	U	< 18	U	< 0.5	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.05	U	< 110	U	3.8		< 11	U	< 0.5	U	0.26	J
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.067	U	< 110	U	< 0.5	U	< 14	U	< 0.5	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 1.7	U	< 1100	U	< 5	U	< 370	U	< 5	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.084	U	< 110	U	< 0.5	U	< 18	U	< 0.5	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	D	**6.3**	D	**1400**	D	**3500**	D	**210**	D	**15**		**4.2**	
107-12-0	Propionitrile			ug/L	U	< 2.3	U	< 5700	U	< 25	U	< 500	U	< 25	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 0.6	U	< 1100	U	< 5	U	< 130	U	< 5	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.1	U	< 110	U	< 0.5	U	< 21	U	< 0.5	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L		< 0.7	U	< 570	U	22		< 150	U	< 2.5	U	< 0.42	U
108-88-3	Toluene	600		ug/L	JD	2.3	D	46	JD	39		71	JBD	< 0.5	U	1.2	
108-90-7	Chlorobenzene	50		ug/L		0.63	JD	< 110	U	3.9		< 7.1	U	0.061	J	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 0.55	U	< 450	U	< 2	U	< 120	U	< 2	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.1	U	< 110	U	2.4		< 21	U	< 0.5	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 9	U	< 5700	U	**50**		< 1900	U	< 25	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.067	U	< 110	U	< 0.5	U	< 14	U	< 0.5	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 0.65	U	< 1100	U	< 5	U	< 140	U	< 5	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L		< 0.1	U	**24**	JD	**17**		< 21	U	**0.88**		0.12	J
1330-20-7	Xylenes, Total	500		ug/L		1.3	D	< 110	U	70		< 11	U	< 0.5	U	0.76	
156-59-2	cis-1,2-Dichloroethene	70		ug/L	D	14	D	**1600**	D	**6800**	D	**11000**	D	22		35	
156-60-5	trans-1,2-Dichloroethene	100		ug/L	JD	0.39	JD	77	JD	29		81	JD	0.32	J	0.14	J
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.067	U	< 110	U	0.37	J	< 14	U	< 0.5	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.05	U	< 110	U	**7.9**		< 11	U	< 0.5	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 0.85	U	< 570	U	< 2.5	U	< 180	U	< 2.5	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.033	U	< 110	U	< 0.5	U	< 7.1	U	< 0.5	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	D	90	D	1200	D	140		< 160	U	5.2	B	110	
67-66-3	Chloroform	70		ug/L	D	< 0.05	U	**220**	D	**3400**	D	**130**	JD	0.82		< 0.03	U
71-43-2	Benzene	1		ug/L	D	**4.4**	D	**160**	D	**340**	D	**140**	JD	**1.6**		**1.6**	
71-55-6	1,1,1-Trichloroethane	200		ug/L		< 0.033	U	< 110	U	< 0.5	U	< 7.1	U	0.16	J	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 0.18	U	< 110	U	< 0.5	U	< 39	U	< 0.5	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L		< 0.18	U	< 110	U	0.34	J	< 39	U	< 0.5	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.05	U	< 110	U	< 0.5	U	< 11	U	0.33	J	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.05	U	< 110	U	< 0.5	U	< 11	U	< 0.5	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.33	U	< 110	U	< 0.5	U	< 71	U	< 0.5	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	JD	**46**	D	**68**	JD	**14**		**1800**	D	**2.9**		**3.5**	
75-05-8	Acetonitrile			ug/L	U	< 0.05	U	< 110	U	< 0.5	U	< 11	U	< 0.5	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	BD	0.72	JD	**260**	D	**400**	BD	< 7.1	U	**11**		0.86	
75-15-0	Carbon Disulfide	700		ug/L	J	0.38	JD	< 110	U	0.19	JB	< 7.1	U	0.19	JB	0.2	J
75-25-2	Bromoform	4		ug/L	U	< 0.05	U	< 110	U	< 0.5	U	< 11	U	< 0.5	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.05	U	< 110	U	< 0.5	U	< 11	U	< 0.5	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L		0.23	JD	< 110	U	**23**		< 7.1	U	1.4		< 0.02	U
75-35-4	1,1-Dichloroethene	350*		ug/L	JD	0.25	JD	84	JD	75	JD	220	D	19		0.67	
75-69-4	Trichlorofluoromethane	2000		ug/L	J	< 0.1	U	< 110	U	7.6		< 21	U	< 0.5	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	J	< 0.05	U	< 110	U	0.15	J	< 11	U	< 0.5	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.12	U	< 110	U	< 0.5	U	< 25	U	< 0.5	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 9.9	U	< 5700	U	< 25	U	< 2100	U	< 25	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.2	U	< 110	U	< 0.5	U	< 43	U	< 0.5	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	**27**	D	< 570	U	< 2.5	U	< 100	U	< 2.5	U	**67**	
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.067	U	< 110	U	0.52		< 14	U	< 0.5	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	D	1.1	D	**7400**	D	**9200**	D	**80**	JBD	**48**	D	0.93	
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.084	U	< 110	U	< 0.5	U	< 18	U	< 0.5	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 0.94	U	< 1100	U	< 5	U	< 200	U	< 5	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.05	U	< 110	U	< 0.5	U	< 11	U	< 0.5	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	J	< 0.05	U	< 110	U	0.37	J	< 11	U	< 0.5	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.42	U	< 110	U	< 0.5	U	< 89	U	< 0.5	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.15	U	< 110	U	< 0.5	U	< 32	U	< 0.5	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 0.68	U	< 1100	U	< 5	U	< 150	U	< 5	U	< 0.41	U
	Total VOCs			**ug/L**		**195.62**		**12539**		**24161.54**		**13732**		**128.861**		**226.78**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	IW-16	IW-16	IW-16	IW-16	IW-18	IW-18	IW-18	IW-18	MW-13	MW-13	MW-13	MW-13	MW-13
				Sys Sample Code	IW-16_12192013	IW-16_12192013	IW-16_02252015	IW-16_02252015	IW-18_12192013	IW-18_12192013	IW-18_02252015	IW-18_02252015	MW-13_12052013	MW-13_12052013	MW-13_04082014	MW-13_04082014	MW-13_08052014
				Sample Date	12/19/13	12/19/13	02/25/15	02/25/15	12/19/13	12/19/13	02/25/15	02/25/15	12/05/13	12/05/13	04/08/14	04/08/14	08/05/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 500	U	88	JD	< 130	U	< 10	U	< 0.5	U	< 0.04	U	< 0.077
100-42-5	Styrene	70		ug/L	< 500	U	< 33	U	< 130	U	< 5	U	< 0.5	U	< 0.02	U	< 0.038
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 500	U	< 67	U	< 130	U	< 10	U	< 0.5	U	< 0.04	U	< 0.077
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 500	U	< 83	U	< 130	U	< 13	U	< 0.5	U	< 0.05	U	< 0.096
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 500	U	< 50	U	< 130	U	< 7.5	U	< 0.5	U	< 0.03	U	< 0.058
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 500	U	< 67	U	< 130	U	< 10	U	< 0.5	U	< 0.04	U	< 0.077
107-02-8	Acrolein		4	ug/L	< 5000	U	< 1700	U	< 1300	U	< 260	U	< 5	U	< 1	U	< 2
107-05-1	Allyl Chloride			ug/L	< 500	U	< 83	U	< 130	U	< 13	U	< 0.5	U	< 0.05	U	< 0.096
107-06-2	1,2-Dichloroethane	0.4		ug/L	**8800**	D	**6700**	D	**2100**	D	< 7.5	U	**2.1**		**0.53**		**6**
107-12-0	Propionitrile			ug/L	< 25000	U	< 2300	U	< 6300	U	< 350	U	< 25	U	< 1.4	U	< 2.7
107-13-1	Acrylonitrile			ug/L	< 5000	U	< 600	U	< 1300	U	< 90	U	< 5	U	< 0.36	U	< 0.69
108-05-4	Vinyl Acetate		88	ug/L	< 500	U	< 100	U	< 130	U	< 15	U	< 0.5	U	< 0.06	U	< 0.12
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 2500	U	< 700	U	< 630	U	< 110	U	< 2.5	U	< 0.42	U	< 0.81
108-88-3	Toluene	600		ug/L	120	JD	170	JBD	19	JD	29	JBD	< 0.5	U	0.034	J	0.13
108-90-7	Chlorobenzene	50		ug/L	< 500	U	< 33	U	**58**	JD	**69**	JD	< 0.5	U	< 0.02	U	< 0.038
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 2000	U	< 550	U	< 500	U	< 83	U	< 2	U	< 0.33	U	< 0.63
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 500	U	< 100	U	< 130	U	< 15	U	< 0.5	U	< 0.06	U	< 0.12
123-91-1	1,4-Dioxane	3		ug/L	< 25000	U	< 9000	U	< 6300	U	< 1400	U	< 25	U	< 5.4	U	< 10
124-48-1	Dibromochloromethane	0.4		ug/L	< 500	U	< 67	U	< 130	U	< 10	U	< 0.5	U	< 0.04	U	< 0.077
126-98-7	Methylacrylonitrile			ug/L	< 5000	U	< 650	U	< 1300	U	< 98	U	< 5	U	< 0.39	U	< 0.75
127-18-4	Tetrachloroethene	0.7		ug/L	< 500	U	< 100	U	**260**	D	< 15	U	**0.81**		0.17	J	**1.2**
1330-20-7	Xylenes, Total	500		ug/L	< 500	U	76	JD	16	JD	11	JD	< 0.5	U	< 0.03	U	< 0.058
156-59-2	cis-1,2-Dichloroethene	70		ug/L	**25000**	D	**35000**	D	**8000**	D	**490**	D	18		3.1		62
156-60-5	trans-1,2-Dichloroethene	100		ug/L	**250**	JD	**220**	JD	59	JD	16	JD	< 0.5	U	< 0.05	U	< 0.096
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 500	U	< 67	U	< 130	U	< 10	U	< 0.5	U	< 0.04	U	< 0.077
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 500	U	< 50	U	< 130	U	< 7.5	U	**0.41**	J	0.15	J	**0.73**
591-78-6	2-Hexanone		40	ug/L	< 2500	U	< 850	U	< 630	U	< 130	U	< 2.5	U	< 0.51	U	< 0.98
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 500	U	< 33	U	< 130	U	< 5	U	< 0.5	U	< 0.02	U	< 0.038
67-64-1	Acetone	6000		ug/L	< 2500	U	< 730	U	< 630	U	< 110	U	1.1	JB	1.2	J	4.8
67-66-3	Chloroform	70		ug/L	**3800**	D	**5400**	D	**980**	D	< 7.5	U	5		2		10
71-43-2	Benzene	1		ug/L	**710**	D	**930**	D	**250**	D	**310**	D	< 0.5	U	< 0.03	U	< 0.058
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 500	U	< 33	U	< 130	U	< 5	U	0.15	J	0.049	J	0.22
74-83-9	Bromomethane		10	ug/L	< 500	U	< 180	U	< 130	U	< 28	U	< 0.5	U	< 0.11	U	< 0.21
74-87-3	Chloromethane	3		ug/L	< 500	U	< 180	U	< 130	U	< 28	U	< 0.5	U	< 0.11	U	< 0.21
74-88-4	Iodomethane			ug/L	< 500	U	< 50	U	< 130	U	< 7.5	U	< 0.5	U	< 0.03	U	< 0.058
74-95-3	Dibromomethane		70	ug/L	< 500	U	< 50	U	< 130	U	< 7.5	U	< 0.5	U	< 0.03	U	< 0.058
75-00-3	Chloroethane	3000		ug/L	< 500	U	< 330	U	< 130	U	< 50	U	< 0.5	U	< 0.2	U	< 0.38
75-01-4	Vinyl Chloride	0.03		ug/L	< 500	U	**470**	JD	< 130	U	**7000**	D	< 0.5	U	< 0.07	U	< 0.13
75-05-8	Acetonitrile			ug/L	< 500	U	< 50	U	< 130	U	< 7.5	U	< 0.5	U	< 0.03	U	< 0.058
75-09-2	Methylene Chloride	5		ug/L	< 500	U	**110**	JD	**15**	JD	< 5	U	< 0.5	U	< 0.02	U	0.58
75-15-0	Carbon Disulfide	700		ug/L	< 500	U	< 33	U	< 130	U	< 5	U	< 0.5	U	< 0.02	U	< 0.038
75-25-2	Bromoform	4		ug/L	< 500	U	< 50	U	< 130	U	< 7.5	U	< 0.5	U	< 0.03	U	< 0.058
75-27-4	Bromodichloromethane	0.6		ug/L	< 500	U	< 50	U	< 130	U	< 7.5	U	< 0.5	U	< 0.03	U	< 0.058
75-34-3	1,1-Dichloroethane	6		ug/L	**190**	JD	**200**	JD	**68**	JD	**68**	JD	0.78		0.31	J	1.2
75-35-4	1,1-Dichloroethene	350*		ug/L	**910**	D	**780**	JD	**410**	D	< 10	U	20		7.3		25
75-69-4	Trichlorofluoromethane	2000		ug/L	< 500	U	< 100	U	< 130	U	< 15	U	< 0.5	U	< 0.06	U	< 0.12
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 500	U	< 50	U	< 130	U	< 7.5	U	< 0.5	U	< 0.03	U	< 0.058
76-01-7	Pentachloroethane			ug/L	< 500	U	< 120	U	< 130	U	< 18	U	< 0.5	U	< 0.07	U	< 0.13
78-83-1	Isobutanol			ug/L	< 25000	U	< 9800	U	< 6300	U	< 1500	U	< 25	U	< 5.9	U	< 11
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 500	U	< 200	U	< 130	U	< 30	U	< 0.5	U	< 0.12	U	< 0.23
78-93-3	2-Butanone	4000		ug/L	< 2500	U	< 470	U	< 630	U	< 70	U	< 2.5	U	< 0.28	U	< 0.54
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 500	U	< 67	U	< 130	U	< 10	U	< 0.5	U	< 0.04	U	< 0.077
79-01-6	Trichloroethene	3		ug/L	**41000**	D	**38000**	BD	**6400**	D	**22**	JBD	**20**		**5**		**39**
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 500	U	< 83	U	< 130	U	< 13	U	< 0.5	U	< 0.05	U	< 0.096
80-62-6	Methyl Methacrylate		25	ug/L	< 5000	U	< 930	U	< 1300	U	< 140	U	< 5	U	< 0.56	U	< 1.1
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 500	U	< 50	U	< 130	U	< 7.5	U	< 0.5	U	< 0.03	U	< 0.058
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 500	U	< 50	U	< 130	U	< 7.5	U	< 0.5	U	< 0.03	U	< 0.058
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 500	U	< 420	U	< 130	U	< 63	U	< 0.5	U	< 0.25	U	< 0.48
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 500	U	< 150	U	< 130	U	< 23	U	< 0.5	U	< 0.09	U	< 0.17
97-63-2	Ethyl Methacrylate			ug/L	< 5000	U	< 680	U	< 1300	U	< 100	U	< 5	U	< 0.41	U	< 0.79
	Total VOCs			**ug/L**	**80780**		**88144**		**18635**		**8015**		**68.35**		**20**		**150.86**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-13
				Sys Loc Code	MW-13	MW-13	MW-13	MW-13	MW-13	P-6	P-6	P-6	P-6	P-6	P-6	P-6	P-6
				Sys Sample Code	MW-13_08052014	MW-13_11042014	MW-13_11042014	MW-13_02232015	MW-13_02232015	P-6_12262013	P-6_12262013	P-6_04102014	P-6_04102014	P-6_08072014	P-6_08072014	P-6_11062014	P-6_11062014
				Sample Date	08/05/14	11/04/14	11/04/14	02/23/15	02/23/15	12/26/13	12/26/13	04/10/14	04/10/14	08/07/14	08/07/14	11/06/14	11/06/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.05	U	< 0.04	U	< 0.5	U	< 0.4	U	< 0.2	U	5.9	D
100-42-5	Styrene	70		ug/L	U	< 0.025	U	< 0.02	U	< 0.5	U	< 0.2	U	< 0.1	U	< 0.1	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.05	U	< 0.04	U	< 0.5	U	< 0.4	U	< 0.2	U	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.063	U	< 0.05	U	< 0.5	U	< 0.5	U	< 0.25	U	< 0.25	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.038	U	< 0.03	U	< 0.5	U	< 0.3	U	< 0.15	U	< 0.15	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.05	U	< 0.04	U	< 0.5	U	< 0.4	U	< 0.2	U	< 0.2	U
107-02-8	Acrolein		4	ug/L	U	< 1.3	U	< 1	U	< 5	U	**130**	D	< 5.2	U	< 5.2	U
107-05-1	Allyl Chloride			ug/L	U	< 0.063	U	< 0.05	U	< 0.5	U	< 0.5	U	< 0.25	U	< 0.25	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	D	**3.2**	D	**3**		**1.1**		**0.65**	JD	**11**	**D**	**1.7**	JD
107-12-0	Propionitrile			ug/L	U	< 1.8	U	< 1.4	U	< 25	U	< 14	U	< 7	U	< 7	U
107-13-1	Acrylonitrile			ug/L	U	< 0.45	U	< 0.36	U	< 5	U	< 3.6	U	< 1.8	U	< 1.8	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.075	U	< 0.06	U	< 0.5	U	< 0.6	U	< 0.3	U	< 0.3	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 0.53	U	< 0.42	U	< 2.5	U	< 4.2	U	< 2.1	U	< 2.1	U
108-88-3	Toluene	600		ug/L	JD	< 0.038	U	< 0.03	U	0.048	JB	0.32	JD	2.7	D	1.7	JD
108-90-7	Chlorobenzene	50		ug/L	U	< 0.025	U	< 0.02	U	0.12	J	< 0.2	U	< 0.1	U	< 0.1	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 0.41	U	< 0.33	U	< 2	U	< 3.3	U	< 1.7	U	< 1.7	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.075	U	< 0.06	U	< 0.5	U	< 0.6	U	< 0.3	U	< 0.3	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 6.8	U	< 5.4	U	< 25	U	< 54	U	< 27	U	< 27	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.05	U	< 0.04	U	< 0.5	U	< 0.4	U	< 0.2	U	< 0.2	U
126-98-7	Methylacrylonitrile			ug/L	U	< 0.49	U	< 0.39	U	< 5	U	< 3.9	U	< 2	U	< 2	U
127-18-4	Tetrachloroethene	0.7		ug/L	D	**0.99**	D	**0.94**		**7.2**		**4.1**	JD	0.66	JD	**2.3**	JD
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.038	U	< 0.03	U	< 0.5	U	< 0.3	U	0.34	JD	17	D
156-59-2	cis-1,2-Dichloroethene	70		ug/L	D	42	D	32		48	D	47	D	38	D	48	D
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.063	U	< 0.05	U	0.3	J	< 0.5	U	0.32	JD	< 0.25	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.05	U	< 0.04	U	< 0.5	U	< 0.4	U	< 0.2	U	< 0.2	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	JD	**0.4**	JD	**0.36**	J	0.063	J	< 0.3	U	< 0.15	U	< 0.15	U
591-78-6	2-Hexanone		40	ug/L	U	< 0.64	U	< 0.51	U	< 2.5	U	< 5.1	U	< 2.6	U	< 2.6	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.025	U	< 0.02	U	< 0.5	U	< 0.2	U	< 0.1	U	< 0.1	U
67-64-1	Acetone	6000		ug/L	D	3.5	BD	< 0.44	U	4.5	B	< 4.4	U	66	D	27	D
67-66-3	Chloroform	70		ug/L	D	6.4	D	5.4		1.5		3.7	JD	< 0.15	U	< 0.15	U
71-43-2	Benzene	1		ug/L	U	< 0.038	U	0.042	J	0.52		< 0.3	U	**11**	D	**8.5**	D
71-55-6	1,1,1-Trichloroethane	200		ug/L	JD	0.12	JD	0.099	J	1.3		0.84	JD	< 0.1	U	0.56	JD
74-83-9	Bromomethane		10	ug/L	U	< 0.14	U	< 0.11	U	< 0.5	U	< 1.1	U	< 0.55	U	< 0.55	U
74-87-3	Chloromethane	3		ug/L	U	< 0.14	U	< 0.11	U	< 0.5	U	< 1.1	U	< 0.55	U	< 0.55	U
74-88-4	Iodomethane			ug/L	U	< 0.038	U	< 0.03	U	< 0.5	U	< 0.3	U	< 0.15	U	< 0.15	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.038	U	< 0.03	U	< 0.5	U	< 0.3	U	< 0.15	U	< 0.15	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.25	U	< 0.2	U	< 0.5	U	< 2	U	< 1	U	< 1	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 0.088	U	< 0.07	U	**6.5**		**4.7**	JD	**150**	D	**110**	D
75-05-8	Acetonitrile			ug/L	U	< 0.038	U	< 0.03	U	< 0.5	U	< 0.3	U	< 0.15	U	< 0.15	U
75-09-2	Methylene Chloride	5		ug/L	JBD	< 0.025	U	0.04	J	0.073	J	0.93	JBD	0.85	JBD	0.55	JBD
75-15-0	Carbon Disulfide	700		ug/L	U	< 0.025	U	< 0.02	U	< 0.5	U	1.7	JD	0.4	JD	0.22	JD
75-25-2	Bromoform	4		ug/L	U	< 0.038	U	< 0.03	U	< 0.5	U	< 0.3	U	< 0.15	U	< 0.15	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.038	U	< 0.03	U	< 0.5	U	< 0.3	U	< 0.15	U	< 0.15	U
75-34-3	1,1-Dichloroethane	6		ug/L	D	0.78	D	0.77		5.6		5.1	D	2.4	JD	4.3	D
75-35-4	1,1-Dichloroethene	350*		ug/L	D	26	D	17		99	D	57	D	11	D	48	D
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.075	U	< 0.06	U	0.12	J	< 0.6	U	< 0.3	U	< 0.3	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.038	U	< 0.03	U	< 0.5	U	< 0.3	U	< 0.15	U	< 0.15	U
76-01-7	Pentachloroethane			ug/L	U	< 0.088	U	< 0.07	U	< 0.5	U	< 0.7	U	< 0.35	U	< 0.35	U
78-83-1	Isobutanol			ug/L	U	< 7.4	U	< 5.9	U	< 25	U	< 59	U	< 30	U	< 30	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.15	U	< 0.12	U	< 0.5	U	< 1.2	U	< 0.6	U	< 0.6	U
78-93-3	2-Butanone	4000		ug/L	U	< 0.35	U	< 0.28	U	< 2.5	U	31	D	31	D	14	D
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.05	U	< 0.04	U	< 0.5	U	< 0.4	U	< 0.2	U	< 0.2	U
79-01-6	Trichloroethene	3		ug/L	D	**27**	D	**22**		**280**	D	**270**	D	**26**	D	**92**	D
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.063	U	< 0.05	U	< 0.5	U	< 0.5	U	< 0.25	U	< 0.25	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 0.7	U	< 0.56	U	< 5	U	< 5.6	U	< 2.8	U	< 2.8	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.038	U	< 0.03	U	< 0.5	U	< 0.3	U	< 0.15	U	< 0.15	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.038	U	< 0.03	U	0.18	J	< 0.3	U	< 0.15	U	< 0.15	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.31	U	< 0.25	U	< 0.5	U	< 2.5	U	< 1.3	U	< 1.3	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.11	U	< 0.09	U	< 0.5	U	< 0.9	U	< 0.45	U	< 0.45	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 0.51	U	< 0.41	U	< 5	U	< 4.1	U	< 2.1	U	< 2.1	U
	Total VOCs			**ug/L**		**110.39**		**81.651**		**456.124**		**557.04**		**351.67**		**381.73**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-13	SWMU-13	SWMU-13	SWMU-13	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16
				Sys Loc Code	P-6	P-6	P-6	P-6	GW-16S	GW-16S	GW-16S	GW-16S	GW-16S	GW-16S	GW-16S	GW-16S	GW-16S
				Sys Sample Code	P-6DUP_11062014	P-6DUP_11062014	P-6_02162015	P-6_02162015	GW-16S_12182013	GW-16S_12182013	GW-16S_04102014	GW-16S_04102014	MW-16S_08062014	MW-16S_08062014	GW-16S_11052014	GW-16S_11052014	GW-16S_02122015
				Sample Date	11/06/14	11/06/14	02/16/15	02/16/15	12/18/13	12/18/13	04/10/14	04/10/14	08/06/14	08/06/14	11/05/14	11/05/14	02/12/15
				Sample Type	FD	FD	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	5.9	D	< 0.17	U	< 13	U	< 0.04	U	< 1	U	< 0.2	U	< 0.5
100-42-5	Styrene	70		ug/L	< 0.1	U	< 0.083	U	< 13	U	< 0.02	U	< 0.5	U	< 0.1	U	< 0.25
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.2	U	< 0.17	U	< 13	U	< 0.04	U	< 1	U	< 0.2	U	< 0.5
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.25	U	< 0.21	U	< 13	U	< 0.05	U	< 1.3	U	< 0.25	U	< 0.63
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.15	U	< 0.13	U	< 13	U	< 0.03	U	< 0.75	U	< 0.15	U	< 0.38
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.2	U	< 0.17	U	< 13	U	< 0.04	U	< 1	U	< 0.2	U	< 0.5
107-02-8	Acrolein		4	ug/L	< 5.2	U	< 4.3	U	< 130	U	< 1	U	< 26	U	< 5.2	U	< 13
107-05-1	Allyl Chloride			ug/L	< 0.25	U	< 0.21	U	< 13	U	< 0.05	U	< 1.3	U	< 0.25	U	< 0.63
107-06-2	1,2-Dichloroethane	0.4		ug/L	**1.9**	JD	< 0.13	U	< 13	U	0.32	J	< 0.75	U	< 0.15	U	< 0.38
107-12-0	Propionitrile			ug/L	< 7	U	< 5.8	U	< 630	U	< 1.4	U	< 35	U	< 7	U	< 18
107-13-1	Acrylonitrile			ug/L	< 1.8	U	< 1.5	U	< 130	U	< 0.36	U	< 9	U	< 1.8	U	< 4.5
108-05-4	Vinyl Acetate		88	ug/L	< 0.3	U	< 0.25	U	< 13	U	< 0.06	U	< 1.5	U	< 0.3	U	< 0.75
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 2.1	U	< 1.8	U	< 63	U	< 0.42	U	< 11	U	< 2.1	U	< 5.3
108-88-3	Toluene	600		ug/L	1.8	JD	0.49	JD	< 13	U	< 0.03	U	1.2	JD	< 0.15	U	< 0.38
108-90-7	Chlorobenzene	50		ug/L	< 0.1	U	0.27	JD	< 13	U	< 0.02	U	< 0.5	U	< 0.1	U	0.36
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 1.7	U	< 1.4	U	< 50	U	< 0.33	U	< 8.3	U	< 1.7	U	< 4.1
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.3	U	< 0.25	U	< 13	U	< 0.06	U	< 1.5	U	< 0.3	U	< 0.75
123-91-1	1,4-Dioxane	3		ug/L	< 27	U	< 23	U	< 630	U	< 5.4	U	< 140	U	< 27	U	< 68
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.2	U	< 0.17	U	< 13	U	< 0.04	U	< 1	U	< 0.2	U	< 0.5
126-98-7	Methylacrylonitrile			ug/L	< 2	U	< 1.6	U	< 130	U	< 0.39	U	< 9.8	U	< 2	U	< 4.9
127-18-4	Tetrachloroethene	0.7		ug/L	**2.4**	JD	**1.8**	JD	**9**	JD	**5.6**		**6.8**	JD	**5.3**	D	**3**
1330-20-7	Xylenes, Total	500		ug/L	17	D	< 0.13	U	< 13	U	< 0.03	U	< 0.75	U	< 0.15	U	< 0.38
156-59-2	cis-1,2-Dichloroethene	70		ug/L	46	D	**110**	D	**110**	D	**110**	D	**140**	D	**170**	D	**360**
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.25	U	0.45	JD	< 13	U	0.79		< 1.3	U	0.73	JD	1.8
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.2	U	< 0.17	U	< 13	U	< 0.04	U	< 1	U	< 0.2	U	< 0.5
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.15	U	< 0.13	U	< 13	U	< 0.03	U	< 0.75	U	< 0.15	U	< 0.38
591-78-6	2-Hexanone		40	ug/L	< 2.6	U	< 2.1	U	< 63	U	< 0.51	U	< 13	U	< 2.6	U	< 6.4
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.1	U	< 0.083	U	< 13	U	< 0.02	U	< 0.5	U	< 0.1	U	< 0.25
67-64-1	Acetone	6000		ug/L	35	D	22	D	< 63	U	2.4	J	< 11	U	9.5	JBD	< 5.5
67-66-3	Chloroform	70		ug/L	< 0.15	U	< 0.13	U	9.4	JD	8.9		7.3	JD	4.6	D	< 0.38
71-43-2	Benzene	1		ug/L	**9.2**	D	**2.2**	D	**1.6**	JD	0.76		< 0.75	U	0.52	JD	**1.5**
71-55-6	1,1,1-Trichloroethane	200		ug/L	0.54	JD	0.41	JD	< 13	U	< 0.02	U	< 0.5	U	< 0.1	U	< 0.25
74-83-9	Bromomethane		10	ug/L	< 0.55	U	< 0.46	U	< 13	U	< 0.11	U	< 2.8	U	< 0.55	U	< 1.4
74-87-3	Chloromethane	3		ug/L	< 0.55	U	< 0.46	U	< 13	U	< 0.11	U	< 2.8	U	< 0.55	U	< 1.4
74-88-4	Iodomethane			ug/L	< 0.15	U	< 0.13	U	< 13	U	< 0.03	U	< 0.75	U	< 0.15	U	< 0.38
74-95-3	Dibromomethane		70	ug/L	< 0.15	U	< 0.13	U	< 13	U	< 0.03	U	< 0.75	U	< 0.15	U	< 0.38
75-00-3	Chloroethane	3000		ug/L	< 1	U	< 0.83	U	< 13	U	< 0.2	U	< 5	U	< 1	U	< 2.5
75-01-4	Vinyl Chloride	0.03		ug/L	**120**	D	**24**	D	**5.2**	JD	**4.9**		**3.3**	JD	**4.3**	D	**95**
75-05-8	Acetonitrile			ug/L	< 0.15	U	< 0.13	U	< 13	U	< 0.03	U	< 0.75	U	< 0.15	U	< 0.38
75-09-2	Methylene Chloride	5		ug/L	0.58	JBD	< 0.083	U	1.5	JBD	0.42	JB	1.9	JBD	< 0.1	U	0.55
75-15-0	Carbon Disulfide	700		ug/L	0.2	JD	0.19	JD	< 13	U	< 0.02	U	< 0.5	U	< 0.1	U	< 0.25
75-25-2	Bromoform	4		ug/L	< 0.15	U	< 0.13	U	< 13	U	< 0.03	U	< 0.75	U	< 0.15	U	< 0.38
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.15	U	< 0.13	U	< 13	U	< 0.03	U	< 0.75	U	< 0.15	U	< 0.38
75-34-3	1,1-Dichloroethane	6		ug/L	4.2	D	4	D	2.8	JD	2.1		2.4	JD	1.9	JD	2.2
75-35-4	1,1-Dichloroethene	350*		ug/L	45	D	43	D	24	D	26		24	D	30	D	22
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.3	U	< 0.25	U	< 13	U	< 0.06	U	< 1.5	U	< 0.3	U	< 0.75
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.15	U	< 0.13	U	< 13	U	< 0.03	U	< 0.75	U	< 0.15	U	< 0.38
76-01-7	Pentachloroethane			ug/L	< 0.35	U	< 0.29	U	< 13	U	< 0.07	U	< 1.8	U	< 0.35	U	< 0.88
78-83-1	Isobutanol			ug/L	< 30	U	< 25	U	< 630	U	< 5.9	U	< 150	U	< 30	U	< 74
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.6	U	< 0.5	U	< 13	U	< 0.12	U	< 3	U	< 0.6	U	< 1.5
78-93-3	2-Butanone	4000		ug/L	18	D	< 1.2	U	< 63	U	< 0.28	U	< 7	U	< 1.4	U	< 3.5
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.2	U	< 0.17	U	< 13	U	0.14	J	< 1	U	< 0.2	U	< 0.5
79-01-6	Trichloroethene	3		ug/L	**86**	D	**54**	D	**810**	D	**740**	D	**530**	D	**460**	D	**120**
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.25	U	< 0.21	U	< 13	U	< 0.05	U	< 1.3	U	< 0.25	U	< 0.63
80-62-6	Methyl Methacrylate		25	ug/L	< 2.8	U	< 2.3	U	< 130	U	< 0.56	U	< 14	U	< 2.8	U	< 7
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.15	U	< 0.13	U	< 13	U	< 0.03	U	< 0.75	U	< 0.15	U	< 0.38
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.15	U	< 0.13	U	< 13	U	0.081	J	< 0.75	U	< 0.15	U	< 0.38
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 1.3	U	< 1	U	< 13	U	< 0.25	U	< 6.3	U	< 1.3	U	< 3.1
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.45	U	< 0.38	U	< 13	U	< 0.09	U	< 2.3	U	< 0.45	U	< 1.1
97-63-2	Ethyl Methacrylate			ug/L	< 2.1	U	< 1.7	U	< 130	U	< 0.41	U	< 10	U	< 2.1	U	< 5.1
	Total VOCs			**ug/L**	**393.72**		**262.81**		**973.5**		**902**		**716.9**		**686.85**		**606.41**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16
				Sys Loc Code	GW-16S	GW-18S	GW-18S	GW-18S	GW-18S	GW-18S	GW-18S	GW-18S	GW-18S	GW-18S	GW-18S	GW-18S	GW-18S
				Sys Sample Code	GW-16S_02122015	GW-18S_12182013	GW-18S_12182013	GW-18SDUP_12182013	GW-18SDUP_12182013	GW-18S_04102014	GW-18S_04102014	MW-18S_08062014	MW-18S_08062014	MW-18SDUP_08062014	MW-18SDUP_08062014	GW-18S_11052014	GW-18S_11052014
				Sample Date	02/12/15	12/18/13	12/18/13	12/18/13	12/18/13	04/10/14	04/10/14	08/06/14	08/06/14	08/06/14	08/06/14	11/05/14	11/05/14
				Sample Type	N	N	N	FD	FD	N	N	N	N	FD	FD	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 0.5	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 5	U	< 5	U	< 1	U	< 1	U	< 1	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.5	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 25	U	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 5	U	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.5	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 2.5	U	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U
108-88-3	Toluene	600		ug/L	U	0.045	J	< 0.5	U	< 0.03	U	0.068	J	0.062	J	< 0.03	U
108-90-7	Chlorobenzene	50		ug/L	JD	< 0.5	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 2	U	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.5	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 25	U	< 25	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 5	U	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	JD	0.6		0.51		0.13	J	0.3	J	0.31	J	0.47	J
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	D	5.2		4.1		3.3		4.3		4.3		3.1	
156-60-5	trans-1,2-Dichloroethene	100		ug/L	JD	< 0.5	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 2.5	U	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.5	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	U	2.2	J	2.2	J	1.6	J	< 0.44	U	< 0.44	U	2.8	B
67-66-3	Chloroform	70		ug/L	U	2.9		2.6		2.2		2.2		2.2		2.1	
71-43-2	Benzene	1		ug/L	JD	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.5	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	D	< 0.5	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U
75-05-8	Acetonitrile			ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	JD	0.086	JB	0.21	JB	0.074	JB	0.064	JB	0.032	JB	< 0.02	U
75-15-0	Carbon Disulfide	700		ug/L	U	< 0.5	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	0.045	J
75-25-2	Bromoform	4		ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	JD	0.28	J	0.23	J	0.19	J	0.22	J	0.23	J	0.2	J
75-35-4	1,1-Dichloroethene	350*		ug/L	D	0.88		0.78		0.65		0.6		0.58		0.99	
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.5	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.5	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 25	U	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 2.5	U	< 2.5	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	D	**27**		**21**		**14**		**14**		**15**		**17**	
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.5	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 5	U	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.5	U	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.5	U	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 5	U	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U
	Total VOCs			**ug/L**		**39.191**		**31.63**		**22**		**21.752**		**22.714**		**26.705**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16
				Sys Loc Code	GW-18S	GW-18S	GW-41SR	GW-41SR	GW-41SR	GW-41SR	IW-22	IW-22	IW-22	IW-22	IW-23	IW-23	IW-23
				Sys Sample Code	GW-18S_02122015	GW-18S_02122015	GW-41SR_11052014	GW-41SR_11052014	GW-41SR_02122015	GW-41SR_02122015	IW-22_12262013	IW-22_12262013	IW-22_02132015	IW-22_02132015	IW-23_12262013	IW-23_12262013	IW-23_02132015
				Sample Date	02/12/15	02/12/15	11/05/14	11/05/14	02/12/15	02/12/15	12/26/13	12/26/13	02/13/15	02/13/15	12/26/13	12/26/13	02/13/15
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 0.4	U	< 0.5	U	0.42	J	< 0.5	U	0.39
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 0.2	U	< 0.5	U	< 0.02	U	< 0.5	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.4	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.5	U	< 0.05	U	< 0.5	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	0.66		0.72	JD	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 0.4	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 10	U	< 5	U	< 1	U	< 5	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.5	U	< 0.05	U	< 0.5	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	**0.98**		**1.2**	JD	< 0.5	U	0.2	J	< 0.5	U	0.39
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 14	U	< 25	U	< 1.4	U	< 25	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 3.6	U	< 5	U	< 0.36	U	< 5	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 0.6	U	< 0.5	U	< 0.06	U	< 0.5	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 4.2	U	< 2.5	U	< 0.42	U	< 2.5	U	< 0.42
108-88-3	Toluene	600		ug/L	< 0.03	U	0.24	J	0.86	JD	0.35	J	3.8		0.097	JB	2.8
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	0.99		1	JD	< 0.5	U	0.062	J	< 0.5	U	0.13
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 3.3	U	< 2	U	< 0.33	U	< 2	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 0.6	U	< 0.5	U	< 0.06	U	< 0.5	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	**40**		< 54	U	< 25	U	< 5.4	U	< 25	U	**6.2**
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.4	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 3.9	U	< 5	U	< 0.39	U	< 5	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	0.56		**13**		**11**	D	< 0.5	U	0.077	J	**3.6**		0.18
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	0.15	J	< 0.3	U	< 0.5	U	0.75		< 0.5	U	0.64
156-59-2	cis-1,2-Dichloroethene	70		ug/L	4.5		**370**	D	**240**	D	0.18	J	0.48	J	2.5		1.3
156-60-5	trans-1,2-Dichloroethene	100		ug/L	0.077	J	1		1.8	JD	< 0.5	U	< 0.05	U	0.059	J	< 0.05
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	0.6		0.63	JD	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 0.3	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 5.1	U	< 2.5	U	< 0.51	U	< 2.5	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 0.2	U	< 0.5	U	< 0.02	U	< 0.5	U	< 0.02
67-64-1	Acetone	6000		ug/L	< 0.44	U	2.2	JB	< 4.4	U	620	BD	57		4.2	B	8.8
67-66-3	Chloroform	70		ug/L	2.1		3.2		3	JD	< 0.5	U	< 0.03	U	1.3		< 0.03
71-43-2	Benzene	1		ug/L	< 0.03	U	**2**		**2.6**	JD	0.047	J	0.64		0.33	J	0.8
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	9.1		8.9	D	< 0.5	U	< 0.02	U	2.9		< 0.02
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 1.1	U	< 0.5	U	< 0.11	U	< 0.5	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 1.1	U	0.16	J	< 0.11	U	< 0.5	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 0.3	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 0.3	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	1.3		2.8	JD	< 0.5	U	1		< 0.5	U	3.2
75-01-4	Vinyl Chloride	0.03		ug/L	< 0.07	U	**72**	D	**100**	D	**0.13**	J	**1.1**		**3.8**		**3.6**
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 0.3	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	0.039	J	0.15	J	0.79	JD	0.067	J	0.29	J	0.1	JB	0.28
75-15-0	Carbon Disulfide	700		ug/L	< 0.02	U	0.12	JB	< 0.2	U	< 0.5	U	0.021	J	0.095	J	0.097
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 0.3	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 0.3	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	0.23	J	**18**		**19**	D	0.15	J	0.87		5.7		1.9
75-35-4	1,1-Dichloroethene	350*		ug/L	0.8		150	D	86	D	1		0.47	J	37		1.4
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.06	U	< 0.6	U	< 0.5	U	< 0.06	U	< 0.5	U	< 0.06
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 0.3	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 0.7	U	< 0.5	U	< 0.07	U	< 0.5	U	< 0.07
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 59	U	< 25	U	< 5.9	U	< 25	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 1.2	U	< 0.5	U	< 0.12	U	< 0.5	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 0.28	U	< 2.8	U	1100	D	36		< 2.5	U	4.9
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	0.35	J	< 0.4	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	**17**		**220**	D	**150**	D	0.2	J	0.18	J	**3.3**		< 0.03
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.5	U	< 0.05	U	< 0.5	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 5.6	U	< 5	U	< 0.56	U	< 5	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.3	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	2.1		2.1	JD	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 2.5	U	< 0.5	U	< 0.25	U	< 0.5	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 0.9	U	< 0.5	U	< 0.09	U	< 0.5	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 4.1	U	< 5	U	< 0.41	U	< 5	U	< 0.41
	Total VOCs			**ug/L**	**25.306**		**908.14**		**632.4**		**1722.284**		**103.36**		**64.981**		**37.007**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16
				Sys Loc Code	IW-23	IW-25	IW-25	IW-25	IW-25	IW-26	IW-26	IW-26	IW-26	IW-27	IW-27	IW-27	IW-27
				Sys Sample Code	IW-23_02132015	IW-25_12262013	IW-25_12262013	IW-25_03042015	IW-25_03042015	IW-26_12262013	IW-26_12262013	IW-26_03042015	IW-26_03042015	IW-27_12182013	IW-27_12182013	IW-27 DUP_03042015	IW-27 DUP_03042015
				Sample Date	02/13/15	12/26/13	12/26/13	03/04/15	03/04/15	12/26/13	12/26/13	03/04/15	03/04/15	12/18/13	12/18/13	03/04/15	03/04/15
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	FD	FD
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	J	< 0.5	U	< 1	U	0.068	J	< 0.067	U	< 5.6	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.033	U	< 5.6	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 1	U	< 0.5	U	< 0.067	U	< 5.6	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 1.3	U	< 0.5	U	< 0.084	U	< 5.6	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.5	U	< 0.75	U	< 0.5	U	< 0.05	U	< 5.6	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.5	U	< 1	U	< 0.5	U	< 0.067	U	< 5.6	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 5	U	< 26	U	< 5	U	< 1.7	U	< 56	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.5	U	< 1.3	U	< 0.5	U	< 0.084	U	< 5.6	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	J	< 0.5	U	< 0.75	U	0.18	J	**0.69**	JD	< 5.6	U	< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 25	U	< 35	U	< 25	U	< 2.3	U	< 280	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 5	U	< 9	U	< 5	U	< 0.6	U	< 56	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.5	U	< 1.5	U	< 0.5	U	< 0.1	U	< 5.6	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 2.5	U	< 11	U	< 2.5	U	< 0.7	U	< 28	U	< 0.42	U
108-88-3	Toluene	600		ug/L		0.03	J	< 0.75	U	1.1		0.49	JD	< 5.6	U	< 0.03	U
108-90-7	Chlorobenzene	50		ug/L	J	< 0.5	U	1.3	JD	0.12	J	0.33	JD	< 5.6	U	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 2	U	< 8.3	U	< 2	U	< 0.55	U	< 22	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.5	U	< 1.5	U	< 0.5	U	< 0.1	U	< 5.6	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	J	< 25	U	< 140	U	< 25	U	< 9	U	< 280	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.5	U	< 1	U	< 0.5	U	< 0.067	U	< 5.6	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 5	U	< 9.8	U	< 5	U	< 0.65	U	< 56	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	J	**1.7**		**16**	D	**3.7**		**7.1**	D	**6.1**	D	0.069	J
1330-20-7	Xylenes, Total	500		ug/L		< 0.5	U	< 0.75	U	0.65		< 0.05	U	< 5.6	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L		8.7		**820**	D	1.3		11	D	**130**	D	4.7	
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	0.076	J	3.2	JD	< 0.5	U	0.15	JD	< 5.6	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.5	U	< 1	U	< 0.5	U	< 0.067	U	< 5.6	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.5	U	< 0.75	U	< 0.5	U	< 0.05	U	< 5.6	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 2.5	U	< 13	U	< 2.5	U	< 0.85	U	< 28	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.033	U	< 5.6	U	< 0.02	U
67-64-1	Acetone	6000		ug/L		5.6	B	< 11	U	5.6	B	4.8	D	25	JD	< 0.44	U
67-66-3	Chloroform	70		ug/L	U	0.32	J	11	JD	0.63		1.9	D	2.7	JD	< 0.03	U
71-43-2	Benzene	1		ug/L		0.068	J	**3.5**	JD	0.23	J	0.62	JD	0.87	JD	< 0.03	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.5	U	< 0.5	U	3.7		6.9	D	< 5.6	U	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 0.5	U	< 2.8	U	< 0.5	U	< 0.18	U	< 5.6	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.5	U	< 2.8	U	< 0.5	U	< 0.18	U	< 5.6	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.5	U	< 0.75	U	< 0.5	U	< 0.05	U	< 5.6	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.5	U	< 0.75	U	< 0.5	U	< 0.05	U	< 5.6	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L		< 0.5	U	< 5	U	< 0.5	U	< 0.33	U	< 5.6	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L		**1.5**		**230**	D	**5.4**		**20**	D	**4.4**	JD	**0.26**	J
75-05-8	Acetonitrile			ug/L	U	< 0.5	U	< 0.75	U	< 0.5	U	< 0.05	U	< 5.6	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	J	0.056	JB	< 0.5	U	0.13	JB	0.22	JD	0.66	JD	< 0.02	U
75-15-0	Carbon Disulfide	700		ug/L	J	0.072	J	< 0.5	U	0.097	J	< 0.033	U	< 5.6	U	< 0.02	U
75-25-2	Bromoform	4		ug/L	U	< 0.5	U	< 0.75	U	< 0.5	U	< 0.05	U	< 5.6	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.5	U	< 0.75	U	< 0.5	U	< 0.05	U	< 5.6	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L		0.25	J	4.1	JD	3.4		**11**	D	1.2	JD	< 0.02	U
75-35-4	1,1-Dichloroethene	350*		ug/L		1.2		29	D	32		57	D	13	D	0.34	J
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.5	U	< 1.5	U	< 0.5	U	< 0.1	U	< 5.6	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.5	U	< 0.75	U	< 0.5	U	< 0.05	U	< 5.6	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.5	U	< 1.8	U	< 0.5	U	< 0.12	U	< 5.6	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 25	U	< 150	U	< 25	U	< 9.9	U	< 280	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.5	U	< 3	U	< 0.5	U	< 0.2	U	< 5.6	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L		< 2.5	U	< 7	U	< 2.5	U	< 0.47	U	< 28	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.5	U	< 1	U	< 0.5	U	< 0.067	U	< 5.6	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	U	**53**	D	**240**	D	1.3		**11**	D	**250**	D	0.16	J
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.5	U	< 1.3	U	< 0.5	U	< 0.084	U	< 5.6	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 5	U	< 14	U	< 5	U	< 0.94	U	< 56	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.5	U	< 0.75	U	< 0.5	U	< 0.05	U	< 5.6	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.5	U	< 0.75	U	0.12	J	0.56	JD	< 5.6	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.5	U	< 6.3	U	< 0.5	U	< 0.42	U	< 5.6	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.5	U	< 2.3	U	< 0.5	U	< 0.15	U	< 5.6	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 5	U	< 10	U	< 5	U	< 0.68	U	< 56	U	< 0.41	U
	Total VOCs			**ug/L**		**72.572**		**1358.1**		**59.725**		**133.76**		**433.93**		**5.529**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16
				Sys Loc Code	IW-27	IW-27	IW-28	IW-28	IW-28	IW-28	IW-29	IW-29	IW-29	IW-29	MW-1	MW-1	MW-1
				Sys Sample Code	IW-27_03042015	IW-27_03042015	IW-28_12262013	IW-28_12262013	IW-28_03042015	IW-28_03042015	IW-29_12182013	IW-29_12182013	IW-29_03042015	IW-29_03042015	MW-1_12262013	MW-1_12262013	MW-1_04092014
				Sample Date	03/04/15	03/04/15	12/26/13	12/26/13	03/04/15	03/04/15	12/18/13	12/18/13	03/04/15	03/04/15	12/26/13	12/26/13	04/09/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.5	U	< 0.29	U	< 17	U	< 0.33	U	< 0.5	U	< 0.04
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.5	U	< 0.14	U	< 17	U	< 0.17	U	< 0.5	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.5	U	< 0.29	U	< 17	U	< 0.33	U	< 0.5	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.5	U	< 0.36	U	< 17	U	< 0.42	U	< 0.5	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	0.31	J	< 0.21	U	< 17	U	< 0.25	U	< 0.5	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.5	U	< 0.29	U	< 17	U	< 0.33	U	< 0.5	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 1	U	< 5	U	< 7.4	U	< 170	U	< 8.6	U	< 5	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.5	U	< 0.36	U	< 17	U	< 0.42	U	< 0.5	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	**1.8**		**3.1**	JD	< 17	U	< 0.25	U	< 0.5	U	0.25
107-12-0	Propionitrile			ug/L	< 1.4	U	< 25	U	< 10	U	< 830	U	< 12	U	< 25	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 5	U	< 2.6	U	< 170	U	< 3	U	< 5	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.5	U	< 0.43	U	< 17	U	< 0.5	U	< 0.5	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 2.5	U	< 3	U	< 83	U	< 3.5	U	< 2.5	U	< 0.42
108-88-3	Toluene	600		ug/L	< 0.03	U	0.067	J	< 0.21	U	< 17	U	0.69	JD	< 0.5	U	0.094
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	0.48	J	< 0.14	U	< 17	U	< 0.17	U	< 0.5	U	< 0.02
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 2	U	< 2.4	U	< 67	U	< 2.7	U	< 2	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.5	U	< 0.43	U	< 17	U	< 0.5	U	< 0.5	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	**26**		< 39	U	< 830	U	< 45	U	< 25	U	< 5.4
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.5	U	< 0.29	U	< 17	U	< 0.33	U	< 0.5	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 5	U	< 2.8	U	< 170	U	< 3.2	U	< 5	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	0.091	J	**15**		**17**	D	**15**	JD	< 0.5	U	0.19	J	0.11
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	0.38	J	< 0.21	U	< 17	U	< 0.25	U	< 0.5	U	0.27
156-59-2	cis-1,2-Dichloroethene	70		ug/L	4.7		8		39	D	**120**	D	**86**	D	0.49	J	0.61
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	0.28	J	< 0.36	U	< 17	U	0.61	JD	< 0.5	U	0.093
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	0.18	J	< 0.29	U	< 17	U	< 0.33	U	< 0.5	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	**0.42**	J	< 0.21	U	< 17	U	< 0.25	U	< 0.5	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 2.5	U	< 3.6	U	< 83	U	< 4.2	U	< 2.5	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.5	U	< 0.14	U	< 17	U	< 0.17	U	< 0.5	U	< 0.02
67-64-1	Acetone	6000		ug/L	1.2	J	16	B	< 3.1	U	< 83	U	< 3.7	U	5.1	B	2.9
67-66-3	Chloroform	70		ug/L	0.072	J	14		9.9	D	9	JD	< 0.25	U	0.23	J	0.32
71-43-2	Benzene	1		ug/L	< 0.03	U	**1.4**		**3.2**	JD	< 17	U	**1.1**	JD	0.052	J	0.41
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	19		27	D	< 17	U	< 0.17	U	< 0.5	U	< 0.02
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.5	U	< 0.79	U	< 17	U	< 0.92	U	< 0.5	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.5	U	< 0.79	U	< 17	U	< 0.92	U	< 0.5	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.5	U	< 0.21	U	< 17	U	< 0.25	U	< 0.5	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.5	U	< 0.21	U	< 17	U	< 0.25	U	< 0.5	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.5	U	< 1.4	U	< 17	U	< 1.7	U	< 0.5	U	< 0.2
75-01-4	Vinyl Chloride	0.03		ug/L	**0.27**	J	**36**		**90**	D	**10**	D	**290**	D	**0.35**	J	**12**
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.5	U	< 0.21	U	< 17	U	< 0.25	U	< 0.5	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	< 0.02	U	0.39	J	0.33	JD	**5.7**	JBD	0.44	JBD	0.17	J	0.24
75-15-0	Carbon Disulfide	700		ug/L	< 0.02	U	0.093	J	< 0.14	U	< 17	U	< 0.17	U	< 0.5	U	< 0.02
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.5	U	< 0.21	U	< 17	U	< 0.25	U	< 0.5	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.5	U	< 0.21	U	< 17	U	< 0.25	U	< 0.5	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.02	U	**18**		**35**	D	< 17	U	1.7	JD	0.24	J	0.4
75-35-4	1,1-Dichloroethene	350*		ug/L	0.35	J	77	D	220	D	21	D	4	JD	13		14
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.5	U	< 0.43	U	< 17	U	< 0.5	U	< 0.5	U	< 0.06
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.5	U	< 0.21	U	< 17	U	< 0.25	U	< 0.5	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.5	U	< 0.5	U	< 17	U	< 0.58	U	< 0.5	U	< 0.07
78-83-1	Isobutanol			ug/L	< 5.9	U	< 25	U	< 42	U	< 830	U	< 49	U	< 25	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.5	U	< 0.86	U	< 17	U	< 1	U	< 0.5	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 2.5	U	< 2	U	< 83	U	< 2.3	U	< 2.5	U	< 0.28
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.5	U	< 0.29	U	< 17	U	< 0.33	U	< 0.5	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	0.18	J	**12**		**10**	D	**820**	DE	2.6	JD	0.48	J	0.36
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.5	U	< 0.36	U	< 17	U	< 0.42	U	< 0.5	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 5	U	< 4	U	< 170	U	< 4.7	U	< 5	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.5	U	< 0.21	U	< 17	U	< 0.25	U	< 0.5	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	1.3		2.7	JD	< 17	U	< 0.25	U	< 0.5	U	0.035
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.5	U	< 1.8	U	< 17	U	< 2.1	U	< 0.5	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.5	U	< 0.64	U	< 17	U	< 0.75	U	< 0.5	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 5	U	< 2.9	U	< 170	U	< 3.4	U	< 5	U	< 0.41
	Total VOCs			**ug/L**	**6.863**		**248.1**		**457.23**		**1000.7**		**387.14**		**20.302**		**32**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16
				Sys Loc Code	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10
				Sys Sample Code	MW-1_04092014	MW-1_08062014	MW-1_08062014	MW-1_10312014	MW-1_10312014	MW-1_02122015	MW-1_02122015	MW-10_12172013	MW-10_12172013	MW-10_04082014	MW-10_04082014	MW-10 DUP_04082014	MW-10 DUP_04082014
				Sample Date	04/09/14	08/06/14	08/06/14	10/31/14	10/31/14	02/12/15	02/12/15	12/17/13	12/17/13	04/08/14	04/08/14	04/08/14	04/08/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	FD	FD
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 1	U	< 1	U	< 1	U	< 5	U	< 1	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	J	< 0.03	U	0.3	J	0.23	J	< 0.5	U	< 0.03	U	< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 1.4	U	< 1.4	U	< 1.4	U	< 25	U	< 1.4	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 0.36	U	< 0.36	U	< 0.36	U	< 5	U	< 0.36	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 0.42	U	< 0.42	U	< 0.42	U	< 2.5	U	< 0.42	U	< 0.42	U
108-88-3	Toluene	600		ug/L	J	0.031	J	0.042	J	< 0.03	U	0.052	J	0.069	J	0.073	J
108-90-7	Chlorobenzene	50		ug/L	U	0.096	J	0.1	J	0.081	J	< 0.5	U	< 0.02	U	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 0.33	U	< 0.33	U	< 0.33	U	< 2	U	< 0.33	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 5.4	U	< 5.4	U	< 5.4	U	< 25	U	< 5.4	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 0.39	U	< 0.39	U	< 0.39	U	< 5	U	< 0.39	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	J	**0.9**		**0.76**		0.53		< 0.5	U	< 0.06	U	< 0.06	U
1330-20-7	Xylenes, Total	500		ug/L	J	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L		1.5		2		2.1		0.37	J	0.65		0.69	
156-60-5	trans-1,2-Dichloroethene	100		ug/L	J	< 0.05	U	< 0.05	U	0.056	J	< 0.5	U	< 0.05	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 0.51	U	< 0.51	U	< 0.51	U	< 2.5	U	< 0.51	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U
67-64-1	Acetone	6000		ug/L		2.5		8	B	24		1.8	J	1.4	J	1.5	J
67-66-3	Chloroform	70		ug/L	J	0.32	J	0.27	J	< 0.03	U	0.055	J	0.06	J	0.066	J
71-43-2	Benzene	1		ug/L	J	0.11	J	0.17	J	0.087	J	< 0.5	U	0.034	J	< 0.03	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	0.11	J	0.43	J	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.2	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L		**0.84**		**3.7**		**0.59**		< 0.5	U	< 0.07	U	< 0.07	U
75-05-8	Acetonitrile			ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	JB	0.24	JB	0.14	J	0.18	J	0.12	JB	< 0.02	U	< 0.02	U
75-15-0	Carbon Disulfide	700		ug/L	U	0.091	J	0.53		0.042	J	< 0.5	U	0.28	J	0.28	J
75-25-2	Bromoform	4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	J	0.94		1.7		0.44	J	< 0.5	U	0.1	J	0.1	J
75-35-4	1,1-Dichloroethene	350*		ug/L		11		18		10		2.7		1.7		1.6	
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 5.9	U	< 5.9	U	< 5.9	U	< 25	U	< 5.9	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5	U	< 0.12	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 0.28	U	< 0.28	U	41		< 2.5	U	< 0.28	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	J	1.2		1.3		1.9		1.4		1.3		1.3	
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 0.56	U	< 0.56	U	< 0.56	U	< 5	U	< 0.56	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	J	0.07	J	0.14	J	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.5	U	< 0.09	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 0.41	U	< 0.41	U	< 0.41	U	< 5	U	< 0.41	U	< 0.41	U
	Total VOCs			**ug/L**		**19.948**		**37.582**		**81.236**		**6.497**		**6**		**6**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16
				Sys Loc Code	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-12	MW-12	MW-12	MW-12	MW-12
				Sys Sample Code	MW-10_07312014	MW-10_07312014	MW-10_10302014	MW-10_10302014	MW-10DUP_10302014	MW-10DUP_10302014	MW-10_02112015	MW-10_02112015	MW-12_12182013	MW-12_12182013	MW-12_04092014	MW-12_04092014	MW-12_08062014
				Sample Date	07/31/14	07/31/14	10/30/14	10/30/14	10/30/14	10/30/14	02/11/15	02/11/15	12/18/13	12/18/13	04/09/14	04/09/14	08/06/14
				Sample Type	N	N	N	N	FD	FD	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 1	U	< 1	U	< 5	U	< 1	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 25	U	< 1.4	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 5	U	< 0.36	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 2.5	U	< 0.42	U	< 0.42
108-88-3	Toluene	600		ug/L	0.037	J	0.04	J	< 0.03	U	< 0.03	U	0.12	J	0.052	J	0.41
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 2	U	< 0.33	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 25	U	< 5.4	U	< 5.4
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 5	U	< 0.39	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	0.081	J	0.14	J	0.16	J	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
156-59-2	cis-1,2-Dichloroethene	70		ug/L	0.4	J	0.25	J	0.23	J	0.51		1.4		0.31	J	0.27
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	0.051	J	< 0.5	U	< 0.05	U	< 0.05
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 2.5	U	< 0.51	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02
67-64-1	Acetone	6000		ug/L	1.2	J	3	B	2.9	B	< 0.44	U	3.4		0.7	J	1.8
67-66-3	Chloroform	70		ug/L	0.056	J	0.035	J	0.034	J	0.035	J	3.5		0.38	J	0.44
71-43-2	Benzene	1		ug/L	< 0.03	U	0.047	J	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.2	U	< 0.2
75-01-4	Vinyl Chloride	0.03		ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	0.073	JB	< 0.02	U	< 0.02	U	0.028	J	0.27	JB	0.07	JB	< 0.02
75-15-0	Carbon Disulfide	700		ug/L	< 0.02	U	0.034	JB	0.033	JB	0.12	J	< 0.5	U	0.14	J	< 0.02
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	0.11	J	0.072	J	0.073	J	0.092	J	< 0.5	U	< 0.02	U	< 0.02
75-35-4	1,1-Dichloroethene	350*		ug/L	2.8		4.1		4.1		3.3		< 0.5	U	< 0.04	U	< 0.04
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 25	U	< 5.9	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5	U	< 0.12	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 2.5	U	< 0.28	U	< 0.28
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	1.3		0.99		0.98		1.6		1.8		0.37	J	0.42
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 5	U	< 0.56	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.5	U	< 0.09	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 5	U	< 0.41	U	< 0.41
	Total VOCs			**ug/L**	**6.057**		**8.708**		**8.51**		**5.736**		**10.49**		**2**		**3.34**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	SWMU-15/16	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike
				Sys Loc Code	MW-12	MW-12	MW-12	MW-12	MW-12	GW-36S	GW-36S	GW-36S	GW-36S	GW-36S	GW-36S	GW-36S	GW-36S
				Sys Sample Code	MW-12_08062014	GW-12_11052014	GW-12_11052014	MW-12_02162015	MW-12_02162015	GW-36S_12122013	GW-36S_12122013	GW-36S_04092014	GW-36S_04092014	GW-36S DUP_04092014	GW-36S DUP_04092014	GW-36S_07302014	GW-36S_07302014
				Sample Date	08/06/14	11/05/14	11/05/14	02/16/15	02/16/15	12/12/13	12/12/13	04/09/14	04/09/14	04/09/14	04/09/14	07/30/14	07/30/14
				Sample Type	N	N	N	N	N	N	N	N	N	FD	FD	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 1	U	< 1	U	< 5	U	< 1	U	< 1	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 0.5	U	**0.56**		**0.77**		< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 1.4	U	< 1.4	U	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 0.36	U	< 0.36	U	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 0.42	U	< 0.42	U	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U
108-88-3	Toluene	600		ug/L	J	< 0.03	U	< 0.03	U	0.05	JB	0.037	J	0.043	J	0.031	J
108-90-7	Chlorobenzene	50		ug/L	U	< 0.02	U	< 0.02	U	< 0.5	U	0.035	J	0.034	J	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 0.33	U	< 0.33	U	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 5.4	U	< 5.4	U	< 25	U	< 5.4	U	< 5.4	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 0.39	U	< 0.39	U	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	0.083	J	**2.8**		**0.73**		**0.75**		0.67		**0.74**	
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	J	0.23	J	0.2	J	1		5.2		6.6		1	
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.05	U	< 0.05	U	< 0.5	U	0.068	J	0.068	J	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 0.51	U	< 0.51	U	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	J	3.7	B	< 0.44	U	2.6	B	0.47	J	< 0.44	U	1.8	J
67-66-3	Chloroform	70		ug/L	J	0.21	J	0.21	J	1		1.5		1.4		1	
71-43-2	Benzene	1		ug/L	U	< 0.03	U	< 0.03	U	0.045	JB	0.11	J	0.13	J	< 0.03	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.02	U	< 0.02	U	0.57		0.76		0.7		0.52	
74-83-9	Bromomethane		10	ug/L	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.11	U	< 0.11	U	< 0.5	U	0.13	J	< 0.11	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 0.07	U	< 0.07	U	**1.2**		**1.2**		**1.2**		**1.2**	
75-05-8	Acetonitrile			ug/L	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	U	< 0.02	U	< 0.02	U	0.046	JB	< 0.02	U	< 0.02	U	0.26	JB
75-15-0	Carbon Disulfide	700		ug/L	U	0.1	J	0.03	J	< 0.5	U	< 0.02	U	< 0.02	U	0.26	J
75-25-2	Bromoform	4		ug/L	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	U	< 0.02	U	< 0.02	U	1.2		1.6		1.5		1.3	
75-35-4	1,1-Dichloroethene	350*		ug/L	U	< 0.04	U	< 0.04	U	12		16		14		12	
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.06	U	< 0.06	U	0.55		0.25	J	0.25	J	0.22	J
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 5.9	U	< 5.9	U	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.12	U	< 0.12	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 0.28	U	< 0.28	U	< 2.5	U	< 0.28	U	< 0.28	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.04	U	< 0.04	U	0.095	J	< 0.04	U	< 0.04	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	J	0.42	J	0.33	J	**4.6**		**8.4**		**7.4**		**3.8**	
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 0.56	U	< 0.56	U	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.03	U	< 0.03	U	0.05	J	0.056	J	0.058	J	0.059	J
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.09	U	< 0.09	U	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 0.41	U	< 0.41	U	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U
	Total VOCs			**ug/L**		**4.743**		**3.57**		**25.736**		**37**		**35**		**24.19**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike
				Sys Loc Code	GW-36S	GW-36S	GW-36S	GW-36S	GW-48S	GW-48S	GW-48S	GW-48S	GW-48S	GW-48S	GW-48S	GW-48S	GW-48S
				Sys Sample Code	GW-36S_10302014	GW-36S_10302014	GW-36S_02112015	GW-36S_02112015	GW-48S_12122013	GW-48S_12122013	GW-48S_04082014	GW-48S_04082014	GW-48S_07312014	GW-48S_07312014	GW-48S_11032014	GW-48S_11032014	GW-48S_02132015
				Sample Date	10/30/14	10/30/14	02/11/15	02/11/15	12/12/13	12/12/13	04/08/14	04/08/14	07/31/14	07/31/14	11/03/14	11/03/14	02/13/15
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 5	U	< 1	U	< 1	U	< 1	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42
108-88-3	Toluene	600		ug/L	0.048	J	< 0.03	U	0.084	JB	0.054	J	< 0.03	U	0.031	J	< 0.03
108-90-7	Chlorobenzene	50		ug/L	0.031	J	0.022	J	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 5.4	U	< 25	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	**0.84**		**0.8**		0.55		0.21	J	0.59		0.68		**2.7**
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
156-59-2	cis-1,2-Dichloroethene	70		ug/L	1.1		1.5		2.2		1.8		2.1		2		2.4
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
67-64-1	Acetone	6000		ug/L	3.4	B	< 0.44	U	3.2	B	0.74	J	2	J	3.8	B	< 0.44
67-66-3	Chloroform	70		ug/L	0.86		0.5		1.3		1.2		1.7		1.4		1.1
71-43-2	Benzene	1		ug/L	< 0.03	U	0.069	J	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
71-55-6	1,1,1-Trichloroethane	200		ug/L	0.29	J	0.16	J	0.054	J	0.05	J	< 0.02	U	0.058	J	0.064
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.2	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2
75-01-4	Vinyl Chloride	0.03		ug/L	**0.84**		**0.45**	J	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	0.16	J	0.099	J	< 0.5	U	< 0.02	U	0.092	JB	< 0.02	U	0.051
75-15-0	Carbon Disulfide	700		ug/L	0.057	J	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	0.11	J	< 0.02
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	0.92		0.55		0.63		0.59		0.74		0.69		0.64
75-35-4	1,1-Dichloroethene	350*		ug/L	13		5.5		18		13		19		24		13
75-69-4	Trichlorofluoromethane	2000		ug/L	0.13	J	< 0.06	U	0.5	J	< 0.06	U	0.19	J	0.19	J	0.093
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 0.28	U	< 2.5	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	**4.2**		**4.2**		**14**		**11**		**15**		**15**		**12**
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	0.051	J	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41
	Total VOCs			**ug/L**	**25.927**		**13.85**		**40.518**		**29**		**41.412**		**47.959**		

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike
				Sys Loc Code	GW-48S	IW-30	IW-30	IW-30	IW-30	IW-30	IW-30	IW-31	IW-31	IW-31	IW-31	IW-32	IW-32
				Sys Sample Code	GW-48S_02132015	IW-30_12132013	IW-30_12132013	IW-30_07312014	IW-30_07312014	IW-30_02132015	IW-30_02132015	IW-31_12122013	IW-31_12122013	IW-31_02132015	IW-31_02132015	IW-32_12122013	IW-32_12122013
				Sample Date	02/13/15	12/13/13	12/13/13	07/31/14	07/31/14	02/13/15	02/13/15	12/12/13	12/12/13	02/13/15	02/13/15	12/12/13	12/12/13
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 130	U	< 6.7	U	< 0.67	U	< 0.5	U	< 0.04	U	< 0.5	U
100-42-5	Styrene	70		ug/L	U	< 130	U	< 3.3	U	< 0.33	U	< 0.5	U	< 0.02	U	< 0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 130	U	< 6.7	U	< 0.67	U	< 0.5	U	< 0.04	U	< 0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 130	U	< 8.3	U	< 0.83	U	< 0.5	U	< 0.05	U	< 0.5	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 130	U	< 6.7	U	< 0.67	U	< 0.5	U	< 0.04	U	< 0.5	U
107-02-8	Acrolein		4	ug/L	U	< 1300	U	< 170	U	< 17	U	< 5	U	< 1	U	< 5	U
107-05-1	Allyl Chloride			ug/L	U	< 130	U	< 8.3	U	< 0.83	U	< 0.5	U	< 0.05	U	< 0.5	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
107-12-0	Propionitrile			ug/L	U	< 6300	U	< 230	U	< 23	U	< 25	U	< 1.4	U	< 25	U
107-13-1	Acrylonitrile			ug/L	U	< 1300	U	< 60	U	< 6	U	< 5	U	< 0.36	U	< 5	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 130	U	< 10	U	< 1	U	< 0.5	U	< 0.06	U	< 0.5	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 630	U	< 70	U	< 7	U	< 2.5	U	< 0.42	U	< 2.5	U
108-88-3	Toluene	600		ug/L	U	< 130	U	< 5	U	8.9	D	0.046	JB	< 0.03	U	0.091	JB
108-90-7	Chlorobenzene	50		ug/L	U	< 130	U	< 3.3	U	< 0.33	U	< 0.5	U	< 0.02	U	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 500	U	< 55	U	< 5.5	U	< 2	U	< 0.33	U	< 2	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 130	U	< 10	U	< 1	U	< 0.5	U	< 0.06	U	< 0.5	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 6300	U	< 900	U	< 90	U	< 25	U	< 5.4	U	< 25	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 130	U	< 6.7	U	< 0.67	U	< 0.5	U	< 0.04	U	< 0.5	U
126-98-7	Methylacrylonitrile			ug/L	U	< 1300	U	< 65	U	< 6.5	U	< 5	U	< 0.39	U	< 5	U
127-18-4	Tetrachloroethene	0.7		ug/L		< 130	U	< 10	U	**1.2**	JD	**0.71**		0.27	J	0.1	J
1330-20-7	Xylenes, Total	500		ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L		< 130	U	< 5	U	3.2	JD	1.3		0.66		0.44	J
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 130	U	< 8.3	U	< 0.83	U	< 0.5	U	< 0.05	U	< 0.5	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 130	U	< 6.7	U	< 0.67	U	< 0.5	U	< 0.04	U	< 0.5	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
591-78-6	2-Hexanone		40	ug/L	U	< 630	U	< 85	U	< 8.5	U	< 2.5	U	< 0.51	U	< 2.5	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 130	U	< 3.3	U	< 0.33	U	< 0.5	U	< 0.02	U	< 0.5	U
67-64-1	Acetone	6000		ug/L	U	**6600**	D	2300	D	540	D	2.8	B	1.2	J	3.5	B
67-66-3	Chloroform	70		ug/L		< 130	U	< 5	U	< 0.5	U	0.77		0.15	J	0.25	J
71-43-2	Benzene	1		ug/L	U	< 130	U	< 5	U	< 0.5	U	0.045	J	< 0.03	U	0.041	J
71-55-6	1,1,1-Trichloroethane	200		ug/L	J	< 130	U	< 3.3	U	< 0.33	U	0.42	J	0.1	J	< 0.5	U
74-83-9	Bromomethane		10	ug/L	U	< 130	U	< 18	U	< 1.8	U	< 0.5	U	< 0.11	U	< 0.5	U
74-87-3	Chloromethane	3		ug/L	U	< 130	U	< 18	U	< 1.8	U	< 0.5	U	< 0.11	U	< 0.5	U
74-88-4	Iodomethane			ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
74-95-3	Dibromomethane		70	ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
75-00-3	Chloroethane	3000		ug/L	U	< 130	U	< 33	U	< 3.3	U	< 0.5	U	< 0.2	U	< 0.5	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 130	U	< 12	U	< 1.2	U	**0.76**		**0.25**	J	< 0.5	U
75-05-8	Acetonitrile			ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
75-09-2	Methylene Chloride	5		ug/L	J	< 130	U	**14**	JBD	1.3	JD	0.11	JB	0.092	J	< 0.5	U
75-15-0	Carbon Disulfide	700		ug/L	U	< 130	U	< 3.3	U	0.54	JD	< 0.5	U	< 0.02	U	0.41	J
75-25-2	Bromoform	4		ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
75-34-3	1,1-Dichloroethane	6		ug/L		< 130	U	< 3.3	U	< 0.33	U	0.88		0.26	J	< 0.5	U
75-35-4	1,1-Dichloroethene	350*		ug/L		< 130	U	< 6.7	U	3.4	JD	9		2.2		0.76	
75-69-4	Trichlorofluoromethane	2000		ug/L	J	< 130	U	< 10	U	< 1	U	0.47	J	< 0.06	U	< 0.5	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
76-01-7	Pentachloroethane			ug/L	U	< 130	U	< 12	U	< 1.2	U	< 0.5	U	< 0.07	U	< 0.5	U
78-83-1	Isobutanol			ug/L	U	< 6300	U	< 980	U	< 98	U	< 25	U	< 5.9	U	< 25	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 130	U	< 20	U	< 2	U	< 0.5	U	< 0.12	U	< 0.5	U
78-93-3	2-Butanone	4000		ug/L	U	**48000**	D	**20000**	D	2500	D	< 2.5	U	< 0.28	U	< 2.5	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 130	U	< 6.7	U	< 0.67	U	< 0.5	U	< 0.04	U	< 0.5	U
79-01-6	Trichloroethene	3		ug/L		**23**	JD	**23**	JD	**6.4**	JD	**5.2**		**1**		1.7	
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 130	U	< 8.3	U	< 0.83	U	< 0.5	U	< 0.05	U	< 0.5	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 1300	U	< 93	U	< 9.3	U	< 5	U	< 0.56	U	< 5	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 130	U	< 5	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.5	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 130	U	< 42	U	< 4.2	U	< 0.5	U	< 0.25	U	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 130	U	< 15	U	< 1.5	U	< 0.5	U	< 0.09	U	< 0.5	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 1300	U	< 68	U	< 6.8	U	< 5	U	< 0.41	U	< 5	U
	Total VOCs			**ug/L**		**54623**		**22337**		**3064.94**		**22.511**		**6.182**		**7.292**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike
				Sys Loc Code	IW-32	IW-32	MW-B111	MW-B111	MW-B111	MW-B111	MW-B111	MW-B111	MW-B111	MW-B111	MW-B111	MW-B111	MW-B111
				Sys Sample Code	IW-32_02112015	IW-32_02112015	MW-B111_12122013	MW-B111_12122013	MW-B111DUP_12122013	MW-B111DUP_12122013	MW-B111_04072014	MW-B111_04072014	MW-B111_07302014	MW-B111_07302014	MW-B111_10292014	MW-B111_10292014	MW-B111 DUP_02112015
				Sample Date	02/11/15	02/11/15	12/12/13	12/12/13	12/12/13	12/12/13	04/07/14	04/07/14	07/30/14	07/30/14	10/29/14	10/29/14	02/11/15
				Sample Type	N	N	N	N	FD	FD	N	N	N	N	N	N	FD
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	0.65		< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.5	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.5	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 1	U	< 5	U	< 5	U	< 1	U	< 1	U	< 1	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.5	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	< 0.5	U	< 0.5	U	0.098	J	< 0.03	U	< 0.03	U	< 0.03
107-12-0	Propionitrile			ug/L	< 1.4	U	< 25	U	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 5	U	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.5	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 2.5	U	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42
108-88-3	Toluene	600		ug/L	1.2		0.06	JB	0.059	JB	0.071	J	0.043	J	0.054	J	< 0.03
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	< 0.5	U	< 0.5	U	0.029	J	0.029	J	< 0.02	U	0.037
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 2	U	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.5	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 25	U	< 25	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 5	U	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	0.26	J	0.61		0.45	J	0.31	J	0.6		**0.7**		**1.3**
1330-20-7	Xylenes, Total	500		ug/L	1.1		< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
156-59-2	cis-1,2-Dichloroethene	70		ug/L	0.071	J	1		0.81		0.84		0.96		0.91		2.5
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	< 0.5	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 2.5	U	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.5	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
67-64-1	Acetone	6000		ug/L	7		2.7	B	3.4	B	1.1	J	2.2	J	6.6	B	< 0.44
67-66-3	Chloroform	70		ug/L	< 0.03	U	1.4		1.2		0.94		1.1		1.1		0.96
71-43-2	Benzene	1		ug/L	0.52		0.063	J	0.052	J	0.087	J	< 0.03	U	0.082	J	0.12
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	0.29	J	0.23	J	0.35	J	0.39	J	0.35	J	0.4
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.5	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.5	U	< 0.5	U	0.12	J	< 0.11	U	< 0.11	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.5	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2
75-01-4	Vinyl Chloride	0.03		ug/L	< 0.07	U	**0.5**	J	**0.33**	J	**0.51**		**0.69**		**0.72**		**0.81**
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	0.2	J	< 0.5	U	0.021	JB	< 0.02	U	0.14	JB	0.034	J	0.091
75-15-0	Carbon Disulfide	700		ug/L	0.14	J	< 0.5	U	< 0.5	U	< 0.02	U	< 0.02	U	0.04	J	< 0.02
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.02	U	1		0.8		1		1.2		1.1		1.2
75-35-4	1,1-Dichloroethene	350*		ug/L	0.099	J	13		10		9.9		12		15		12
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	0.47	J	0.45	J	0.12	J	0.13	J	0.12	J	0.069
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.5	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07
78-83-1	Isobutanol			ug/L	< 5.9	U	< 25	U	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	8.1		< 2.5	U	< 2.5	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.5	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	0.14	J	**4.7**		**4.2**		**3.6**		**3.7**		**3.9**		**6.5**
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.5	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 5	U	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.5	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 0.5	U	< 0.5	U	< 0.03	U	0.031	J	< 0.03	U	< 0.03
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.5	U	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.5	U	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 5	U	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41
	Total VOCs			**ug/L**	**19.48**		**25.793**		**22.002**		**19**		**23.213**		**30.71**		**25.987**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6 Strike	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6
				Sys Loc Code	MW-B111	MW-B111	MW-B111	GW-32S	GW-32S	GW-32S	GW-32S	GW-32S	GW-32S	GW-32S	GW-32S	GW-32S	GW-32S
				Sys Sample Code	MW-B111 DUP_02112015	MW-B111_02112015	MW-B111_02112015	GW-32S_12122013	GW-32S_12122013	GW-32S_04072014	GW-32S_04072014	GW-32S_07302014	GW-32S_07302014	GW-32S_10302014	GW-32S_10302014	GW-32S_02112015	GW-32S_02112015
				Sample Date	02/11/15	02/11/15	02/11/15	12/12/13	12/12/13	04/07/14	04/07/14	07/30/14	07/30/14	10/30/14	10/30/14	02/11/15	02/11/15
				Sample Type	FD	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 1	U	< 5	U	< 1	U	< 1	U	< 1	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.03	U	< 0.5	U	0.13	J	0.17	J	0.15	J	0.19	J
107-12-0	Propionitrile			ug/L	U	< 1.4	U	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 0.36	U	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 0.42	U	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U
108-88-3	Toluene	600		ug/L	U	< 0.03	U	0.045	J	0.063	J	< 0.03	U	0.045	J	0.031	J
108-90-7	Chlorobenzene	50		ug/L	J	0.035	J	< 0.5	U	0.035	J	< 0.02	U	0.043	J	0.059	J
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 0.33	U	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 5.4	U	< 25	U	< 5.4	U	< 5.4	U	< 5.4	U	**5.6**	J
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 0.39	U	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L		**1.4**		**2**		**1.3**		**2.6**		**3.1**		**4.6**	
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L		2.5		4.2		3.9		4.2		5		7.8	
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	0.083	J
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 0.51	U	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	U	< 0.44	U	2.7	B	0.68	J	0.71	J	3.8	B	< 0.44	U
67-66-3	Chloroform	70		ug/L		0.97		1.7		1.4		1.8		1.8		1.9	
71-43-2	Benzene	1		ug/L	J	0.12	J	0.096	J	0.09	J	0.1	J	0.12	J	0.17	J
71-55-6	1,1,1-Trichloroethane	200		ug/L	J	0.41	J	0.53		0.49	J	0.66		0.67		0.69	
74-83-9	Bromomethane		10	ug/L	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.2	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L		**0.8**		**0.63**		**0.64**		**0.86**		**1.2**		**1.4**	
75-05-8	Acetonitrile			ug/L	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	J	0.093	J	< 0.5	U	< 0.02	U	0.19	JB	0.12	J	0.2	J
75-15-0	Carbon Disulfide	700		ug/L	U	< 0.02	U	< 0.5	U	< 0.02	U	0.29	J	0.11	J	0.031	J
75-25-2	Bromoform	4		ug/L	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L		1.2		1.4		1.2		1.7		1.7		1.9	
75-35-4	1,1-Dichloroethene	350*		ug/L		11		17		12		19		26		21	
75-69-4	Trichlorofluoromethane	2000		ug/L	J	0.066	J	0.5		0.13	J	0.17	J	0.18	J	0.14	J
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 5.9	U	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.12	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 0.28	U	< 2.5	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L		**6.6**		**19**		**19**		**21**		**27**		**27**	
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 0.56	U	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.03	U	< 0.5	U	< 0.03	U	0.059	J	0.075	J	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.25	U	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.09	U	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 0.41	U	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U
	Total VOCs			**ug/L**		**25.194**		**49.801**		**41**		**53.509**		**71.113**		**72.794**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6
				Sys Loc Code	GW-6	GW-6	GW-6	GW-6	GW-6	GW-6	GW-6	GW-6	GW-6	GW-6	GW-6I	GW-6I	GW-6I
				Sys Sample Code	GW-6_12112013	GW-6_12112013	GW-6_04072014	GW-6_04072014	GW-6_07302014	GW-6_07302014	GW-6_10302014	GW-6_10302014	GW-6_02112015	GW-6_02112015	GW-6I_12112013	GW-6I_12112013	GW-6I_04072014
				Sample Date	12/11/13	12/11/13	04/07/14	04/07/14	07/30/14	07/30/14	10/30/14	10/30/14	02/11/15	02/11/15	12/11/13	12/11/13	04/07/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04
100-42-5	Styrene	70		ug/L	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 5	U	< 1	U	< 1	U	< 1	U	< 1	U	< 5	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.5	U	0.19	J	0.17	J	0.19	J	0.16	J	< 0.5	U	< 0.03
107-12-0	Propionitrile			ug/L	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 25	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 5	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 2.5	U	< 0.42
108-88-3	Toluene	600		ug/L	0.037	JB	0.45	J	0.082	J	0.54		0.17	J	0.042	J	0.13
108-90-7	Chlorobenzene	50		ug/L	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	0.046	J	< 0.5	U	< 0.02
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 2	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 25	U	**7.7**	J	< 5.4	U	< 5.4	U	**6.3**	J	< 25	U	< 5.4
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 5	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	**4.3**		**1.4**		**1.3**		0.4	J	**1.1**		< 0.5	U	< 0.06
1330-20-7	Xylenes, Total	500		ug/L	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	0.12
156-59-2	cis-1,2-Dichloroethene	70		ug/L	11		12		22		36		18		< 0.5	U	0.12
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.5	U	< 0.05	U	0.064	J	< 0.05	U	0.13	J	< 0.5	U	< 0.05
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 2.5	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02
67-64-1	Acetone	6000		ug/L	2.3	J	8.1		2.3	J	5.2	B	0.94	J	< 2.5	U	2.4
67-66-3	Chloroform	70		ug/L	3.2		1.3		0.7		< 0.03	U	0.38	J	< 0.5	U	< 0.03
71-43-2	Benzene	1		ug/L	0.14	J	0.2	J	0.14	J	0.16	J	0.17	J	< 0.5	U	< 0.03
71-55-6	1,1,1-Trichloroethane	200		ug/L	0.71		0.12	J	0.15	J	< 0.02	U	0.1	J	< 0.5	U	< 0.02
74-83-9	Bromomethane		10	ug/L	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.2
75-01-4	Vinyl Chloride	0.03		ug/L	**1.5**		< 0.07	U	**2.9**		**5**		**5.1**		< 0.5	U	< 0.07
75-05-8	Acetonitrile			ug/L	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	0.095	JB	0.14	J	0.66	B	0.91		0.13	J	< 0.5	U	< 0.02
75-15-0	Carbon Disulfide	700		ug/L	< 0.5	U	0.41	J	1.3		0.39	J	0.036	J	< 0.5	U	0.11
75-25-2	Bromoform	4		ug/L	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	2.1		2		1.8		1.5		1.5		< 0.5	U	< 0.02
75-35-4	1,1-Dichloroethene	350*		ug/L	30		15		19		24		14		< 0.5	U	< 0.04
75-69-4	Trichlorofluoromethane	2000		ug/L	0.58		< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07
78-83-1	Isobutanol			ug/L	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 25	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	< 2.5	U	17		< 0.28	U	< 0.28	U	< 0.28	U	< 2.5	U	< 0.28
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	**47**	D	**19**		**10**		1.9		**8.3**		< 0.5	U	0.2
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 5	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.5	U	0.069	J	0.065	J	0.089	J	< 0.03	U	< 0.5	U	< 0.03
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.5	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 5	U	< 0.41
	Total VOCs			**ug/L**	**102.962**		**85**		**62.631**		**76.279**		**56.562**		**0.042**		**3**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6
				Sys Loc Code	GW-6I	GW-6I	GW-6I	GW-6I	GW-6I	GW-6I	GW-6I	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7
				Sys Sample Code	GW-6I_04072014	GW-6I_07302014	GW-6I_07302014	GW-6I_10302014	GW-6I_10302014	GW-6I_02112015	GW-6I_02112015	GW-7_12052013	GW-7_12052013	GW-7_04102014	GW-7_04102014	GW-7_08052014	GW-7_08052014
				Sample Date	04/07/14	07/30/14	07/30/14	10/30/14	10/30/14	02/11/15	02/11/15	12/05/13	12/05/13	04/10/14	04/10/14	08/05/14	08/05/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 1	U	< 1	U	< 1	U	< 5	U	< 1	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 1.4	U	< 1.4	U	< 1.4	U	< 25	U	< 1.4	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 0.36	U	< 0.36	U	< 0.36	U	< 5	U	< 0.36	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 0.42	U	< 0.42	U	< 0.42	U	< 2.5	U	< 0.42	U	< 0.42	U
108-88-3	Toluene	600		ug/L	J	0.035	J	0.043	J	< 0.03	U	0.034	J	< 0.03	U	< 0.03	U
108-90-7	Chlorobenzene	50		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 0.33	U	< 0.33	U	< 0.33	U	< 2	U	< 0.33	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 5.4	U	< 5.4	U	< 5.4	U	< 25	U	< 5.4	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 0.39	U	< 0.39	U	< 0.39	U	< 5	U	< 0.39	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	< 0.06	U	0.13	J	< 0.06	U	0.18	J	0.082	J	< 0.06	U
1330-20-7	Xylenes, Total	500		ug/L	J	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	J	0.039	J	0.083	J	< 0.03	U	0.56		0.38	J	0.36	J
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 0.51	U	< 0.51	U	< 0.51	U	< 2.5	U	< 0.51	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	J	5.9		4.6	B	< 0.44	U	< 2.5	U	< 0.44	U	1.8	J
67-66-3	Chloroform	70		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	0.093	J	0.095	J	< 0.03	U
71-43-2	Benzene	1		ug/L	U	0.23	J	0.19	J	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.2	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07	U
75-05-8	Acetonitrile			ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	0.52	B	< 0.02	U	0.32	JB
75-15-0	Carbon Disulfide	700		ug/L	J	0.87		0.27	J	0.03	J	< 0.5	U	< 0.02	U	< 0.02	U
75-25-2	Bromoform	4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	0.073	J	< 0.02	U
75-35-4	1,1-Dichloroethene	350*		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	1.1		0.73		0.64	
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 5.9	U	< 5.9	U	< 5.9	U	< 25	U	< 5.9	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5	U	< 0.12	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 0.28	U	< 0.28	U	< 0.28	U	< 2.5	U	< 0.28	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	J	< 0.03	U	< 0.03	U	< 0.03	U	2.1		1.6		1	
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 0.56	U	< 0.56	U	< 0.56	U	< 5	U	< 0.56	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.5	U	< 0.09	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 0.41	U	< 0.41	U	< 0.41	U	< 5	U	< 0.41	U	< 0.41	U
	Total VOCs			**ug/L**		**7.074**		**5.316**		**0.03**		**4.587**		**3**		**4.12**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6
				Sys Loc Code	GW-7	GW-7	GW-7	GW-7	GW-8	GW-8	GW-8	GW-8	GW-8	GW-8	GW-8	GW-8	GW-8
				Sys Sample Code	GW-7_11032014	GW-7_11032014	GW-7_02232015	GW-7_02232015	GW-8_12112013	GW-8_12112013	GW-8_04072014	GW-8_04072014	GW-8_07302014	GW-8_07302014	GW-8_10302014	GW-8_10302014	GW-8_02112015
				Sample Date	11/03/14	11/03/14	02/23/15	02/23/15	12/11/13	12/11/13	04/07/14	04/07/14	07/30/14	07/30/14	10/30/14	10/30/14	02/11/15
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 5	U	< 1	U	< 1	U	< 1	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42
108-88-3	Toluene	600		ug/L	< 0.03	U	< 0.03	U	0.071	JB	0.079	J	0.049	J	< 0.03	U	< 0.03
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 5.4	U	< 25	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	0.19	J	0.075	J	< 0.5	U	< 0.06	U	0.075	J	0.21	J	< 0.06
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
156-59-2	cis-1,2-Dichloroethene	70		ug/L	0.33	J	0.5	J	< 0.5	U	0.15	J	0.16	J	0.13	J	0.14
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
67-64-1	Acetone	6000		ug/L	2.9	B	< 0.44	U	2.7		1.6	J	1.2	J	2.5	JB	< 0.44
67-66-3	Chloroform	70		ug/L	0.031	J	< 0.03	U	< 0.5	U	0.052	J	< 0.03	U	< 0.03	U	< 0.03
71-43-2	Benzene	1		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.2	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2
75-01-4	Vinyl Chloride	0.03		ug/L	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	0.047	JB	< 0.02	U	< 0.02
75-15-0	Carbon Disulfide	700		ug/L	0.021	JB	< 0.02	U	< 0.5	U	0.038	J	0.37	J	0.032	JB	< 0.02
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.02	U	< 0.02	U	< 0.5	U	0.072	J	0.089	J	0.058	J	0.065
75-35-4	1,1-Dichloroethene	350*		ug/L	0.89		0.79		0.5	J	0.45	J	0.5		0.48	J	0.36
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 0.28	U	< 2.5	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	0.81		1		0.4	J	0.52		0.37	J	0.32	J	0.35
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41
	Total VOCs			**ug/L**	**5.172**		**2.365**		**3.671**		**3**		**2.86**		**3.73**		**0.915**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6
				Sys Loc Code	GW-8	IW-33	IW-33	IW-33	IW-33	IW-34	IW-34	IW-34	IW-34	IW-35	IW-35	IW-35	IW-35
				Sys Sample Code	GW-8 02112015	IW-33 12112013	IW-33 12112013	IW-33 02112015	IW-33 02112015	IW-34 12112013	IW-34 12112013	IW-34 02112015	IW-34 02112015	IW-35 12112013	IW-35 12112013	IW-35 02112015	IW-35 02112015
				Sample Date	02/11/15	12/11/13	12/11/13	02/11/15	02/11/15	12/11/13	12/11/13	02/11/15	02/11/15	12/11/13	12/11/13	02/11/15	02/11/15
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.5	U	< 0.04	U	< 0.5	U	0.27	J	< 0.5	U	0.083	J
100-42-5	Styrene	70		ug/L	U	< 0.5	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.5	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.5	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 5	U	< 1	U	< 5	U	< 1	U	< 5	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.5	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.5	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.5	U	0.28	J	< 0.5	U	**0.44**	J	< 0.5	U	< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 25	U	< 1.4	U	< 25	U	< 1.4	U	< 25	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 5	U	< 0.36	U	< 5	U	< 0.36	U	< 5	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.5	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.5	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 2.5	U	< 0.42	U	< 2.5	U	< 0.42	U	< 2.5	U	< 0.42	U
108-88-3	Toluene	600		ug/L	U	< 0.5	U	1.8		0.052	JB	29		< 0.5	U	0.29	J
108-90-7	Chlorobenzene	50		ug/L	U	0.039	J	0.038	J	< 0.5	U	0.049	J	< 0.5	U	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 2	U	< 0.33	U	< 2	U	< 0.33	U	< 2	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.5	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.5	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 25	U	< 5.4	U	< 25	U	< 5.4	U	< 25	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 5	U	< 0.39	U	< 5	U	< 0.39	U	< 5	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	**3.7**		**1.3**		**2.1**		**1.3**		**2.3**		**1**	
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.5	U	< 0.03	U	< 0.5	U	0.37	J	< 0.5	U	0.16	J
156-59-2	cis-1,2-Dichloroethene	70		ug/L	J	8.2		6.3		6.3		11		4.3		6.9	
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.5	U	0.44	J	< 0.5	U	0.077	J	< 0.5	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 2.5	U	< 0.51	U	< 2.5	U	< 0.51	U	< 2.5	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.5	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.5	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	U	< 2.5	U	16		1.9	J	23		< 2.5	U	2.8	
67-66-3	Chloroform	70		ug/L	U	2.7		3.3		2.6		1.4		1.7		< 0.03	U
71-43-2	Benzene	1		ug/L	U	0.14	J	0.15	J	0.085	J	0.51		0.046	J	0.13	J
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	0.75		0.093	J	0.18	J	< 0.02	U	0.36	J	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 0.5	U	0.86		< 0.5	U	< 0.11	U	< 0.5	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.5	U	**6.7**		< 0.5	U	**8**		< 0.5	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.5	U	0.27	J	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.5	U	2.3		< 0.5	U	5.5		< 0.5	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	**1.2**		**0.39**	J	**0.32**	J	**0.58**		**0.3**	J	**0.51**	
75-05-8	Acetonitrile			ug/L	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	U	< 0.5	U	1.4		< 0.5	U	2.4		< 0.5	U	0.25	J
75-15-0	Carbon Disulfide	700		ug/L	U	< 0.5	U	2.9		< 0.5	U	0.52		< 0.5	U	0.04	J
75-25-2	Bromoform	4		ug/L	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	J	2		0.71		0.85		0.87		0.96		0.49	J
75-35-4	1,1-Dichloroethene	350*		ug/L	J	23		1.4		12		6.7		14		3	
75-69-4	Trichlorofluoromethane	2000		ug/L	U	0.51		< 0.06	U	0.4	J	< 0.06	U	0.45	J	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.5	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.5	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 25	U	< 5.9	U	< 25	U	< 5.9	U	< 25	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.5	U	< 0.12	U	< 0.5	U	< 0.12	U	< 0.5	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 2.5	U	6.5		< 2.5	U	11		< 2.5	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.5	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	J	**38**		**5.1**		**28**		2.8		**22**		0.56	
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.5	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.5	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 5	U	< 0.56	U	< 5	U	< 0.56	U	< 5	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.5	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.5	U	< 0.25	U	< 0.5	U	< 0.25	U	< 0.5	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.5	U	< 0.09	U	< 0.5	U	< 0.09	U	< 0.5	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 5	U	< 0.41	U	< 5	U	< 0.41	U	< 5	U	< 0.41	U
	Total VOCs			**ug/L**		**80.239**		**58.231**		**54.787**		**105.786**		**46.416**		**16.213**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6
				Sys Loc Code	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-B107
				Sys Sample Code	MW-11_12122013	MW-11_12122013	MW-11_04072014	MW-11_04072014	MW-11_07302014	MW-11_07302014	MW-11_10302014	MW-11_10302014	MW-11 DUP_02112015	MW-11 DUP_02112015	MW-11_02112015	MW-11_02112015	MW-B107_12132013
				Sample Date	12/12/13	12/12/13	04/07/14	04/07/14	07/30/14	07/30/14	10/30/14	10/30/14	02/11/15	02/11/15	02/11/15	02/11/15	12/13/13
				Sample Type	N	N	N	N	N	N	N	N	FD	FD	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.63	U	< 0.067	U	< 0.059	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5
100-42-5	Styrene	70		ug/L	< 0.63	U	< 0.033	U	< 0.029	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.63	U	< 0.067	U	< 0.059	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.63	U	< 0.084	U	< 0.074	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.63	U	< 0.05	U	< 0.044	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.63	U	< 0.067	U	< 0.059	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5
107-02-8	Acrolein		4	ug/L	< 6.3	U	< 1.7	U	< 1.5	U	< 1	U	< 1	U	< 1	U	< 5
107-05-1	Allyl Chloride			ug/L	< 0.63	U	< 0.084	U	< 0.074	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.63	U	0.18	JD	0.2	JD	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
107-12-0	Propionitrile			ug/L	< 31	U	< 2.3	U	< 2.1	U	< 1.4	U	< 1.4	U	< 1.4	U	< 25
107-13-1	Acrylonitrile			ug/L	< 6.3	U	< 0.6	U	< 0.53	U	< 0.36	U	< 0.36	U	< 0.36	U	< 5
108-05-4	Vinyl Acetate		88	ug/L	< 0.63	U	< 0.1	U	< 0.088	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 3.1	U	< 0.7	U	< 0.62	U	< 0.42	U	< 0.42	U	< 0.42	U	< 2.5
108-88-3	Toluene	600		ug/L	0.058	JD	0.12	JD	0.045	JD	0.044	J	< 0.03	U	< 0.03	U	0.053
108-90-7	Chlorobenzene	50		ug/L	< 0.63	U	< 0.033	U	0.055	JD	0.053	J	0.055	J	0.054	J	< 0.5
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 2.5	U	< 0.55	U	< 0.49	U	< 0.33	U	< 0.33	U	< 0.33	U	< 2
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.63	U	< 0.1	U	< 0.088	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5
123-91-1	1,4-Dioxane	3		ug/L	< 31	U	< 9	U	< 7.9	U	< 5.4	U	< 5.4	U	< 5.4	U	< 25
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.63	U	< 0.067	U	< 0.059	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5
126-98-7	Methylacrylonitrile			ug/L	< 6.3	U	< 0.65	U	< 0.57	U	< 0.39	U	< 0.39	U	< 0.39	U	< 5
127-18-4	Tetrachloroethene	0.7		ug/L	**2.5**	D	**1.6**	D	**3**	D	**3.2**		**3.4**		**3.4**		< 0.5
1330-20-7	Xylenes, Total	500		ug/L	< 0.63	U	< 0.05	U	< 0.044	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
156-59-2	cis-1,2-Dichloroethene	70		ug/L	9.2	D	9.4	D	9	D	7.1		9.1		9.1		1.4
156-60-5	trans-1,2-Dichloroethene	100		ug/L	0.087	JD	0.11	JD	0.13	JD	0.089	J	0.14	J	0.14	J	< 0.5
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.63	U	< 0.067	U	< 0.059	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.63	U	< 0.05	U	< 0.044	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
591-78-6	2-Hexanone		40	ug/L	< 3.1	U	< 0.85	U	< 0.75	U	< 0.51	U	< 0.51	U	< 0.51	U	< 2.5
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.63	U	< 0.033	U	< 0.029	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5
67-64-1	Acetone	6000		ug/L	< 3.1	U	1.7	JD	2.3	JD	3.5	B	< 0.44	U	< 0.44	U	7.8
67-66-3	Chloroform	70		ug/L	2.7	D	3	D	2.5	D	1.5		1.7		1.7		< 0.5
71-43-2	Benzene	1		ug/L	0.25	JD	0.31	JD	< 0.044	U	0.22	J	0.3	J	0.3	J	0.066
71-55-6	1,1,1-Trichloroethane	200		ug/L	0.26	JD	0.34	JD	0.37	JD	0.28	J	0.31	J	0.32	J	< 0.5
74-83-9	Bromomethane		10	ug/L	< 0.63	U	< 0.18	U	< 0.16	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5
74-87-3	Chloromethane	3		ug/L	< 0.63	U	< 0.18	U	< 0.16	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5
74-88-4	Iodomethane			ug/L	< 0.63	U	< 0.05	U	< 0.044	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
74-95-3	Dibromomethane		70	ug/L	< 0.63	U	< 0.05	U	< 0.044	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
75-00-3	Chloroethane	3000		ug/L	< 0.63	U	< 0.33	U	< 0.29	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5
75-01-4	Vinyl Chloride	0.03		ug/L	**0.78**	D	**0.81**	JD	**0.94**	D	**0.82**		**0.8**		**0.78**		< 0.5
75-05-8	Acetonitrile			ug/L	< 0.63	U	< 0.05	U	< 0.044	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
75-09-2	Methylene Chloride	5		ug/L	0.097	JD	< 0.033	U	0.35	JBD	0.057	J	0.17	J	0.17	J	< 0.5
75-15-0	Carbon Disulfide	700		ug/L	< 0.63	U	0.089	JD	< 0.029	U	0.025	JB	< 0.02	U	< 0.02	U	< 0.5
75-25-2	Bromoform	4		ug/L	< 0.63	U	< 0.05	U	< 0.044	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.63	U	< 0.05	U	< 0.044	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
75-34-3	1,1-Dichloroethane	6		ug/L	1.4	D	1.6	D	1.6	D	1.3		1.6		1.6		0.25
75-35-4	1,1-Dichloroethene	350*		ug/L	31	D	31	D	31	D	33		31		30		1.2
75-69-4	Trichlorofluoromethane	2000		ug/L	0.57	JD	0.15	JD	0.17	JD	0.14	J	0.12	J	0.12	J	< 0.5
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.63	U	< 0.05	U	< 0.044	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
76-01-7	Pentachloroethane			ug/L	< 0.63	U	< 0.12	U	< 0.1	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5
78-83-1	Isobutanol			ug/L	< 31	U	< 9.9	U	< 8.7	U	< 5.9	U	< 5.9	U	< 5.9	U	< 25
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.63	U	< 0.2	U	< 0.18	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5
78-93-3	2-Butanone	4000		ug/L	< 3.1	U	< 0.47	U	< 0.41	U	< 0.28	U	< 0.28	U	< 0.28	U	< 2.5
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.63	U	< 0.067	U	< 0.059	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5
79-01-6	Trichloroethene	3		ug/L	**42**	D	**45**	D	**41**	D	**39**		**36**		**36**		0.31
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.63	U	< 0.084	U	< 0.074	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5
80-62-6	Methyl Methacrylate		25	ug/L	< 6.3	U	< 0.94	U	< 0.82	U	< 0.56	U	< 0.56	U	< 0.56	U	< 5
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.63	U	< 0.05	U	< 0.044	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.63	U	< 0.05	U	< 0.044	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.63	U	< 0.42	U	< 0.37	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.63	U	< 0.15	U	< 0.13	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.5
97-63-2	Ethyl Methacrylate			ug/L	< 6.3	U	< 0.68	U	< 0.6	U	< 0.41	U	< 0.41	U	< 0.41	U	< 5
	Total VOCs			**ug/L**	**90.902**		**95**		**92.66**		**90.328**		**84.695**		**83.684**		**11.079**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC GW-6	AOC W-1	AOC W-1
				Sys Loc Code	MW-B107	MW-B107	MW-B107	MW-B107	MW-B107	MW-B107	MW-B107	MW-B107	MW-B107	MW-B107	MW-B107	GW-40I	GW-40I
				Sys Sample Code	MW-B107_12132013	MW-B107DUP_12132013	MW-B107DUP_12132013	MW-B107_04072014	MW-B107_04072014	MW-B107_07302014	MW-B107_07302014	MW-B107_10292014	MW-B107_10292014	MW-B107_02112015	MW-B107_02112015	GW-40I_12062013	GW-40I_12062013
				Sample Date	12/13/13	12/13/13	12/13/13	04/07/14	04/07/14	07/30/14	07/30/14	10/29/14	10/29/14	02/11/15	02/11/15	12/06/13	12/06/13
				Sample Type	N	FD	FD	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
100-42-5	Styrene	70		ug/L	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
107-02-8	Acrolein		4	ug/L	U	< 5	U	< 1	U	< 1	U	< 1	U	< 1	U	< 5	U
107-05-1	Allyl Chloride			ug/L	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
107-12-0	Propionitrile			ug/L	U	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 25	U
107-13-1	Acrylonitrile			ug/L	U	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 5	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 2.5	U
108-88-3	Toluene	600		ug/L	JB	0.05	JB	0.068	J	0.04	J	0.037	J	< 0.03	U	0.036	J
108-90-7	Chlorobenzene	50		ug/L	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 2	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 25	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 25	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
126-98-7	Methylacrylonitrile			ug/L	U	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 5	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	**1.8**		< 0.5	U
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L		1.3		0.93		0.9		0.89		1		< 0.5	U
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
591-78-6	2-Hexanone		40	ug/L	U	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 2.5	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U
67-64-1	Acetone	6000		ug/L	B	3.5	B	1.3	J	0.97	J	5	B	< 0.44	U	< 2.5	U
67-66-3	Chloroform	70		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	0.14	J
71-43-2	Benzene	1		ug/L	J	0.059	J	0.049	J	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U
74-83-9	Bromomethane		10	ug/L	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U
74-87-3	Chloromethane	3		ug/L	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U
74-88-4	Iodomethane			ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U
75-05-8	Acetonitrile			ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
75-09-2	Methylene Chloride	5		ug/L	U	< 0.5	U	< 0.02	U	0.053	JB	< 0.02	U	< 0.02	U	0.51	B
75-15-0	Carbon Disulfide	700		ug/L	U	< 0.5	U	< 0.02	U	0.3	J	0.059	J	< 0.02	U	< 0.5	U
75-25-2	Bromoform	4		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
75-34-3	1,1-Dichloroethane	6		ug/L	J	< 0.5	U	0.2	J	0.21	J	0.21	J	0.19	J	< 0.5	U
75-35-4	1,1-Dichloroethene	350*		ug/L		1.1		0.69		0.86		1.3		0.92		< 0.5	U
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
76-01-7	Pentachloroethane			ug/L	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U
78-83-1	Isobutanol			ug/L	U	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 25	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5	U
78-93-3	2-Butanone	4000		ug/L	U	< 2.5	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 2.5	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U
79-01-6	Trichloroethene	3		ug/L	J	0.3	J	0.35	J	0.6		0.47	J	0.51		< 0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 5	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.5	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 5	U
	Total VOCs			**ug/L**		**6.309**		**4**		**3.933**		**7.966**		**4.42**		**0.686**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1
				Sys Loc Code	GW-40I	GW-40I	GW-40I	GW-40I	GW-40I	GW-40I	GW-40I	GW-40I	GW-49I	GW-49I	GW-49I	GW-49I	GW-49I
				Sys Sample Code	GW-40I_04102014	GW-40I_04102014	GW-40I_08052014	GW-40I_08052014	GW-40I_11032014	GW-40I_11032014	GW-40I_02232015	GW-40I_02232015	GW-49I_12062013	GW-49I_12062013	GW-49I_04102014	GW-49I_04102014	GW-49I_08052014
				Sample Date	04/10/14	04/10/14	08/05/14	08/05/14	11/03/14	11/03/14	02/23/15	02/23/15	12/06/13	12/06/13	04/10/14	04/10/14	08/05/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 1	U	< 1	U	< 5	U	< 1	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 25	U	< 1.4	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 5	U	< 0.36	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 2.5	U	< 0.42	U	< 0.42
108-88-3	Toluene	600		ug/L	0.073	JB	< 0.03	U	0.035	J	< 0.03	U	0.035	J	0.059	JB	< 0.03
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 2	U	< 0.33	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 25	U	< 5.4	U	< 5.4
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 5	U	< 0.39	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	< 0.06	U	< 0.06	U	0.13	J	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
156-59-2	cis-1,2-Dichloroethene	70		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	0.12	J	< 0.5	U	0.05	J	< 0.03
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 2.5	U	< 0.51	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02
67-64-1	Acetone	6000		ug/L	1.8	J	1.3	J	4.1	B	< 0.44	U	< 2.5	U	2	J	< 0.44
67-66-3	Chloroform	70		ug/L	< 0.03	U	< 0.03	U	0.054	J	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
71-43-2	Benzene	1		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.5	U	< 0.11	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.5	U	< 0.2	U	< 0.2
75-01-4	Vinyl Chloride	0.03		ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U	2.6		< 0.07
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	0.076	JB	0.47	JB	< 0.02	U	< 0.02	U	0.44	JB	0.086	JB	0.41
75-15-0	Carbon Disulfide	700		ug/L	0.14	J	< 0.02	U	0.13	JB	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.5	U	< 0.02	U	< 0.02
75-35-4	1,1-Dichloroethene	350*		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.5	U	< 0.06	U	< 0.06
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.5	U	< 0.07	U	< 0.07
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 25	U	< 5.9	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.5	U	< 0.12	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 2.5	U	< 0.28	U	< 0.28
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.5	U	< 0.04	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.5	U	< 0.05	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 5	U	< 0.56	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.5	U	< 0.03	U	< 0.03
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.5	U	< 0.09	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 5	U	< 0.41	U	< 0.41
	Total VOCs			**ug/L**	**2**		**1.77**		**4.449**		**0.12**		**0.475**		**5**		**0.41**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1
				Sys Loc Code	GW-49I	GW-49I	GW-49I	GW-49I	GW-49I	IW-36	IW-36	IW-36	IW-36	MW-9	MW-9	MW-9	MW-9
				Sys Sample Code	GW-49I_08052014	GW-49I_11032014	GW-49I_11032014	GW-49I_02232015	GW-49I_02232015	IW-36_12162013	IW-36_12162013	IW-36_02122015	IW-36_02122015	MW-9_12162013	MW-9_12162013	MW-9_04112014	MW-9_04112014
				Sample Date	08/05/14	11/03/14	11/03/14	02/23/15	02/23/15	12/16/13	12/16/13	02/12/15	02/12/15	12/16/13	12/16/13	04/11/14	04/11/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.04	U	< 0.04	U	< 1.3	U	< 0.13	U	< 0.5	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 0.02	U	< 0.02	U	< 1.3	U	< 0.063	U	< 0.5	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 1.3	U	< 0.13	U	< 0.5	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.05	U	< 0.05	U	< 1.3	U	< 0.16	U	< 0.5	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.04	U	< 0.04	U	< 1.3	U	< 0.13	U	< 0.5	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 1	U	< 1	U	< 13	U	< 3.2	U	< 5	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.05	U	< 0.05	U	< 1.3	U	< 0.16	U	< 0.5	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 1.4	U	< 1.4	U	< 63	U	< 4.4	U	< 25	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 0.36	U	< 0.36	U	< 13	U	< 1.1	U	< 5	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.06	U	< 0.06	U	< 1.3	U	< 0.19	U	< 0.5	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 0.42	U	< 0.42	U	< 6.3	U	< 1.3	U	< 2.5	U	< 0.42	U
108-88-3	Toluene	600		ug/L	U	< 0.03	U	0.044	J	0.2	JD	0.1	JD	0.044	J	0.077	JB
108-90-7	Chlorobenzene	50		ug/L	U	< 0.02	U	< 0.02	U	< 1.3	U	< 0.063	U	< 0.5	U	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 0.33	U	< 0.33	U	< 5	U	< 1	U	< 2	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.06	U	< 0.06	U	< 1.3	U	< 0.19	U	< 0.5	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 5.4	U	< 5.4	U	< 63	U	< 17	U	< 25	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 1.3	U	< 0.13	U	< 0.5	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 0.39	U	< 0.39	U	< 13	U	< 1.2	U	< 5	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	0.12	J	0.63		**2.7**	D	**1.6**	D	< 0.5	U	< 0.06	U
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	U	< 0.03	U	< 0.03	U	10	D	**81**	D	< 0.5	U	< 0.03	U
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.05	U	< 0.05	U	< 1.3	U	0.5	JD	< 0.5	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.04	U	< 0.04	U	< 1.3	U	< 0.13	U	< 0.5	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 0.51	U	< 0.51	U	< 6.3	U	< 1.6	U	< 2.5	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.02	U	< 0.02	U	< 1.3	U	< 0.063	U	< 0.5	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	U	2.5	B	< 0.44	U	4.5	JD	< 1.4	U	1.4	J	3	
67-66-3	Chloroform	70		ug/L	U	< 0.03	U	< 0.03	U	2.1	D	1.6	D	< 0.5	U	< 0.03	U
71-43-2	Benzene	1		ug/L	U	< 0.03	U	0.054	J	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.02	U	< 0.02	U	< 1.3	U	< 0.063	U	< 0.5	U	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 0.11	U	< 0.11	U	< 1.3	U	< 0.34	U	< 0.5	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.11	U	< 0.11	U	< 1.3	U	< 0.34	U	< 0.5	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.2	U	< 0.2	U	< 1.3	U	< 0.63	U	< 0.5	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 0.07	U	**0.14**	J	< 1.3	U	< 0.22	U	< 0.5	U	< 0.07	U
75-05-8	Acetonitrile			ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	JB	< 0.02	U	< 0.02	U	0.14	JBD	0.32	JD	< 0.5	U	0.081	JB
75-15-0	Carbon Disulfide	700		ug/L	U	0.042	JB	< 0.02	U	< 1.3	U	0.14	JD	< 0.5	U	0.18	J
75-25-2	Bromoform	4		ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	U	< 0.02	U	< 0.02	U	0.42	JD	0.65	JD	< 0.5	U	< 0.02	U
75-35-4	1,1-Dichloroethene	350*		ug/L	U	< 0.04	U	< 0.04	U	5.6	D	8.1	D	< 0.5	U	< 0.04	U
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.06	U	< 0.06	U	< 1.3	U	< 0.19	U	< 0.5	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.07	U	< 0.07	U	< 1.3	U	< 0.22	U	< 0.5	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 5.9	U	< 5.9	U	< 63	U	< 18	U	< 25	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.12	U	< 0.12	U	< 1.3	U	< 0.38	U	< 0.5	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 0.28	U	< 0.28	U	< 6.3	U	< 0.88	U	< 2.5	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.04	U	< 0.04	U	< 1.3	U	< 0.13	U	< 0.5	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	U	< 0.03	U	< 0.03	U	**86**	D	**29**	D	0.33	J	< 0.03	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.05	U	< 0.05	U	< 1.3	U	< 0.16	U	< 0.5	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 0.56	U	< 0.56	U	< 13	U	< 1.8	U	< 5	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.03	U	< 0.03	U	< 1.3	U	< 0.094	U	< 0.5	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.25	U	< 0.25	U	< 1.3	U	< 0.78	U	< 0.5	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.09	U	< 0.09	U	< 1.3	U	< 0.28	U	< 0.5	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 0.41	U	< 0.41	U	< 13	U	< 1.3	U	< 5	U	< 0.41	U
	Total VOCs			**ug/L**		**2.662**		**0.868**		**111.66**		**123.01**		**1.774**		**3**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1	AOC W-1
				Sys Loc Code	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	W-1	W-1	W-1	W-1	W-1	W-1	W-1
				Sys Sample Code	MW-9_08052014	MW-9_08052014	MW-9_11032014	MW-9_11032014	MW-9_02122015	MW-9_02122015	W-1_12162013	W-1_12162013	W-1_04102014	W-1_04102014	W-1_08052014	W-1_08052014	W-1_11032014
				Sample Date	08/05/14	08/05/14	11/03/14	11/03/14	02/12/15	02/12/15	12/16/13	12/16/13	04/10/14	04/10/14	08/05/14	08/05/14	11/03/14
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 2.5	U	< 0.25	U	< 0.2	U	< 0.2
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 2.5	U	< 0.13	U	< 0.1	U	< 0.1
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 2.5	U	< 0.25	U	< 0.2	U	< 0.2
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 2.5	U	< 0.31	U	< 0.25	U	< 0.25
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 2.5	U	< 0.25	U	< 0.2	U	< 0.2
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 1	U	< 25	U	< 6.4	U	< 5.2	U	< 5.2
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 2.5	U	< 0.31	U	< 0.25	U	< 0.25
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 1.4	U	< 130	U	< 8.8	U	< 7	U	< 7
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 0.36	U	< 25	U	< 2.3	U	< 1.8	U	< 1.8
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 2.5	U	< 0.38	U	< 0.3	U	< 0.3
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 0.42	U	< 13	U	< 2.6	U	< 2.1	U	< 2.1
108-88-3	Toluene	600		ug/L	< 0.03	U	< 0.03	U	0.031	J	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 2.5	U	< 0.13	U	< 0.1	U	< 0.1
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 0.33	U	< 10	U	< 2.1	U	< 1.7	U	< 1.7
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 2.5	U	< 0.38	U	< 0.3	U	< 0.3
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 5.4	U	< 5.4	U	< 130	U	< 34	U	< 27	U	< 27
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 2.5	U	< 0.25	U	< 0.2	U	< 0.2
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 0.39	U	< 25	U	< 2.4	U	< 2	U	< 2
127-18-4	Tetrachloroethene	0.7		ug/L	< 0.06	U	0.14	J	< 0.06	U	**6.2**	D	**3.5**	D	**6.3**	D	**6.1**
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
156-59-2	cis-1,2-Dichloroethene	70		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	22	D	20	D	21	D	22
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	0.29	JD	< 0.31	U	< 0.25	U	0.42
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 2.5	U	< 0.25	U	< 0.2	U	< 0.2
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 0.51	U	< 13	U	< 3.2	U	< 2.6	U	< 2.6
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 2.5	U	< 0.13	U	< 0.1	U	< 0.1
67-64-1	Acetone	6000		ug/L	1.5	J	2.2	JB	2.4	J	3.5	JD	< 2.8	U	< 2.2	U	13
67-66-3	Chloroform	70		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	2.1	JD	1.8	JD	2	JD	2.3
71-43-2	Benzene	1		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 2.5	U	< 0.13	U	< 0.1	U	< 0.1
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 2.5	U	< 0.69	U	< 0.55	U	< 0.55
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 2.5	U	< 0.69	U	< 0.55	U	< 0.55
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.2	U	< 0.2	U	< 2.5	U	< 1.3	U	< 1	U	< 1
75-01-4	Vinyl Chloride	0.03		ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 2.5	U	< 0.44	U	< 0.35	U	< 0.35
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
75-09-2	Methylene Chloride	5		ug/L	0.39	JB	< 0.02	U	< 0.02	U	0.62	JBD	0.58	JBD	2.8	BD	0.27
75-15-0	Carbon Disulfide	700		ug/L	< 0.02	U	0.2	JB	0.16	J	< 2.5	U	< 0.13	U	< 0.1	U	0.3
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	0.85	JD	0.97	JD	1.1	JD	0.98
75-35-4	1,1-Dichloroethene	350*		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	11	D	16	D	13	D	18
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 2.5	U	< 0.38	U	< 0.3	U	< 0.3
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 2.5	U	< 0.44	U	< 0.35	U	< 0.35
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 5.9	U	< 130	U	< 37	U	< 30	U	< 30
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 0.12	U	< 2.5	U	< 0.75	U	< 0.6	U	< 0.6
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 0.28	U	< 0.28	U	< 13	U	< 1.8	U	< 1.4	U	< 1.4
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 2.5	U	< 0.25	U	< 0.2	U	< 0.2
79-01-6	Trichloroethene	3		ug/L	< 0.03	U	0.098	J	< 0.03	U	**170**	D	**200**	D	**190**	D	**190**
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 2.5	U	< 0.31	U	< 0.25	U	< 0.25
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 0.56	U	< 25	U	< 3.5	U	< 2.8	U	< 2.8
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 2.5	U	< 0.19	U	< 0.15	U	< 0.15
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 0.25	U	< 2.5	U	< 1.6	U	< 1.3	U	< 1.3
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 0.09	U	< 2.5	U	< 0.56	U	< 0.45	U	< 0.45
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 0.41	U	< 25	U	< 2.6	U	< 2.1	U	< 2.1
	Total VOCs			**ug/L**	**1.89**		**2.638**		**2.591**		**216.56**		**243**		**236.2**		**253.37**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	AOC W-1	AOC W-1	AOC W-1	SWMU-4	SWMU-4	SWMU-4	SWMU-4	SWMU-4	SWMU-4	SWMU-4	SWMU-4	SWMU-4	SWMU-4
				Sys Loc Code	W-1	W-1	W-1	GW-53S	GW-53S	GW-53S	GW-53S	GW-53S	GW-53S	GW-53S	GW-53S	GW-53S	GW-53S
				Sys Sample Code	W-1_11032014	W-1_02122015	W-1_02122015	GW-53S_12202013	GW-53S_12202013	GW-53S_04102014	GW-53S_04102014	GW-53S_07312014	GW-53S_07312014	GW-53S_11052014	GW-53S_11052014	GW-53S_02122015	GW-53S_02122015
				Sample Date	11/03/14	02/12/15	02/12/15	12/20/13	12/20/13	04/10/14	04/10/14	07/31/14	07/31/14	11/05/14	11/05/14	02/12/15	02/12/15
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.17	U	< 0.5	U	0.099	J	0.82		0.092	J	0.18	J
100-42-5	Styrene	70		ug/L	U	< 0.083	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.17	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.21	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.13	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	0.12	J
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.17	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 4.3	U	< 5	U	< 1	U	< 1	U	< 1	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.21	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.13	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 5.8	U	< 25	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 1.5	U	< 5	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.25	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 1.8	U	< 2.5	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U
108-88-3	Toluene	600		ug/L	U	< 0.13	U	0.037	J	0.037	J	0.069	J	0.06	J	< 0.03	U
108-90-7	Chlorobenzene	50		ug/L	U	< 0.083	U	0.078	J	6.2		19		2.1		2.4	
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 1.4	U	< 2	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.25	U	< 0.5	U	< 0.06	U	< 0.06	U	0.082	J	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 23	U	< 25	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.17	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 1.6	U	< 5	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	D	**5.5**	D	< 0.5	U	< 0.06	U	0.069	J	0.13	J	**1.7**	
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.13	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	D	20	D	0.18	J	0.069	J	0.11	J	0.13	J	0.094	J
156-60-5	trans-1,2-Dichloroethene	100		ug/L	JD	0.41	JD	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.17	U	< 0.5	U	< 0.04	U	< 0.04	U	0.043	J	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.13	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 2.1	U	< 2.5	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.083	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	BD	< 1.8	U	3.3		3.4		3.9		4.2	B	3.3	
67-66-3	Chloroform	70		ug/L	JD	1.3	JD	0.068	J	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
71-43-2	Benzene	1		ug/L	U	< 0.13	U	< 0.5	U	**1.2**		**3.9**		0.14	J	0.63	
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.083	U	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 0.46	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.46	U	< 0.5	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.13	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.13	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.83	U	< 0.5	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 0.29	U	< 0.5	U	< 0.07	U	**0.23**	J	< 0.07	U	< 0.07	U
75-05-8	Acetonitrile			ug/L	U	< 0.13	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	JD	< 0.083	U	< 0.5	U	< 0.02	U	0.046	JB	< 0.02	U	< 0.02	U
75-15-0	Carbon Disulfide	700		ug/L	JD	< 0.083	U	< 0.5	U	< 0.02	U	0.3	J	0.12	JB	< 0.02	U
75-25-2	Bromoform	4		ug/L	U	< 0.13	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.13	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	JD	0.8	JD	< 0.5	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
75-35-4	1,1-Dichloroethene	350*		ug/L	D	10	D	< 0.5	U	< 0.04	U	< 0.04	U	0.12	J	< 0.04	U
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.25	U	< 0.5	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.13	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.29	U	< 0.5	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 25	U	< 25	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.5	U	< 0.5	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 1.2	U	< 2.5	U	< 0.28	U	3.2		< 0.28	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.17	U	< 0.5	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	D	**110**	D	0.25	J	< 0.03	U	< 0.03	U	0.23	J	0.19	J
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.21	U	< 0.5	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 2.3	U	< 5	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.13	U	< 0.5	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.13	U	< 0.5	U	0.064	J	0.13	J	0.12	J	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 1	U	< 0.5	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.38	U	< 0.5	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 1.7	U	< 5	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U
	Total VOCs			**ug/L**		**148.01**		**3.913**		**11**		**31.774**		**7.567**		**8.614**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks
				Sys Loc Code	Decon Water	Decon Water	Q1 Field Blank 1	Q1 Field Blank 1	Q1 Field Blank 2	Q1 Field Blank 2	Q1 Field Blank 3	Q1 Field Blank 3	Q1 Field Blank 4	Q1 Field Blank 4	Q1 Trip Blank 1	Q1 Trip Blank 1	Q1 Trip Blank 2
				Sys Sample Code	DECON WATER_01032014	DECON WATER_01032014	FB-1_12262013	FB-1_12262013	FB-2_12262013	FB-2_12262013	FB-3_12162013	FB-3_12162013	FB-4_12162013	FB-4_12162013	TB120513_12052013	TB120513_12052013	TB-121113_12112013
				Sample Date	01/03/14	01/03/14	12/26/13	12/26/13	12/26/13	12/26/13	12/16/13	12/16/13	12/16/13	12/16/13	12/05/13	12/05/13	12/11/13
				Sample Type	N	N	FB	FB	FB	FB	FB	FB	FB	FB	TB	TB	TB
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
100-42-5	Styrene	70		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
107-02-8	Acrolein		4	ug/L	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5
107-05-1	Allyl Chloride			ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.5	U	**0.49**	J	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
107-12-0	Propionitrile			ug/L	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25
107-13-1	Acrylonitrile			ug/L	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5
108-05-4	Vinyl Acetate		88	ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5
108-88-3	Toluene	600		ug/L	2.2	B	0.044	J	< 0.5	U	0.04	J	0.043	J	< 0.5	U	< 0.5
108-90-7	Chlorobenzene	50		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 2	U	< 2	U	< 2	U	< 2	U	< 2	U	< 2	U	< 2
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
123-91-1	1,4-Dioxane	3		ug/L	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
126-98-7	Methylacrylonitrile			ug/L	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5
127-18-4	Tetrachloroethene	0.7		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
1330-20-7	Xylenes, Total	500		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
156-59-2	cis-1,2-Dichloroethene	70		ug/L	1.5		0.64		< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
591-78-6	2-Hexanone		40	ug/L	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
67-64-1	Acetone	6000		ug/L	12		3.9		2.2	JB	2.6		3.4		0.97	J	< 2.5
67-66-3	Chloroform	70		ug/L	0.12	J	0.14	J	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
71-43-2	Benzene	1		ug/L	< 0.5	U	0.05	J	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
74-83-9	Bromomethane		10	ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
74-87-3	Chloromethane	3		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
74-88-4	Iodomethane			ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
74-95-3	Dibromomethane		70	ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
75-00-3	Chloroethane	3000		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
75-01-4	Vinyl Chloride	0.03		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
75-05-8	Acetonitrile			ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
75-09-2	Methylene Chloride	5		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	0.091	JB	< 0.5	U	0.062	J	< 0.5
75-15-0	Carbon Disulfide	700		ug/L	0.097	J	0.042	J	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
75-25-2	Bromoform	4		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
75-35-4	1,1-Dichloroethene	350*		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
76-01-7	Pentachloroethane			ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
78-83-1	Isobutanol			ug/L	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
78-93-3	2-Butanone	4000		ug/L	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
79-01-6	Trichloroethene	3		ug/L	0.83		2.7		< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
80-62-6	Methyl Methacrylate		25	ug/L	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5
97-63-2	Ethyl Methacrylate			ug/L	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5
	Total VOCs			**ug/L**	**16.747**		**8.006**		**2.2**		**2.731**		**3.443**		**1.032**		**0**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks
				Sys Loc Code	Q1 Trip Blank 2	Q1 Trip Blank 3	Q1 Trip Blank 3	Q1 Trip Blank 4	Q1 Trip Blank 4	Q1 Trip Blank 5	Q1 Trip Blank 5	Q1 Trip Blank 6	Q1 Trip Blank 6	Q1 Trip Blank 7	Q1 Trip Blank 7	Q1 Trip Blank 8	Q1 Trip Blank 8
				Sys Sample Code	TB-121113_12112013	TB121713_12172013	TB121713_12172013	TB121913_12192013	TB121913_12192013	TB122013_12202013	TB122013_12202013	TB122613_12262013	TB122613_12262013	TRIP BLANK_01032014	TRIP BLANK_01032014	TRIP BLANK_01172014	TRIP BLANK_01172014
				Sample Date	12/11/13	12/17/13	12/17/13	12/19/13	12/19/13	12/20/13	12/20/13	12/26/13	12/26/13	01/03/14	01/03/14	01/17/14	01/17/14
				Sample Type	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
100-42-5	Styrene	70		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
107-02-8	Acrolein		4	ug/L	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U
107-05-1	Allyl Chloride			ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
107-12-0	Propionitrile			ug/L	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
107-13-1	Acrylonitrile			ug/L	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U
108-88-3	Toluene	600		ug/L	U	0.034	J	< 0.5	U	0.033	J	0.045	JB	0.035	JB	0.05	J
108-90-7	Chlorobenzene	50		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 2	U	< 2	U	< 2	U	< 2	U	< 2	U	< 0.5	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 0.5	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
126-98-7	Methylacrylonitrile			ug/L	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 0.5	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 5	U
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	U	< 0.5	U	< 0.5	U	1.6		< 0.5	U	< 0.5	U	< 0.5	U
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 25	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 5	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
591-78-6	2-Hexanone		40	ug/L	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
67-64-1	Acetone	6000		ug/L	U	3.9	B	2	JB	3.1	B	19		18		< 2.5	U
67-66-3	Chloroform	70		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
71-43-2	Benzene	1		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
74-83-9	Bromomethane		10	ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
74-87-3	Chloromethane	3		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
74-88-4	Iodomethane			ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
75-05-8	Acetonitrile			ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
75-09-2	Methylene Chloride	5		ug/L	U	< 0.5	U	< 0.5	U	0.062	J	< 0.5	U	< 0.5	U	0.14	JB
75-15-0	Carbon Disulfide	700		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
75-25-2	Bromoform	4		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
75-34-3	1,1-Dichloroethane	6		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
75-35-4	1,1-Dichloroethene	350*		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
76-01-7	Pentachloroethane			ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
78-83-1	Isobutanol			ug/L	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U	< 25	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
78-93-3	2-Butanone	4000		ug/L	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U	< 2.5	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
79-01-6	Trichloroethene	3		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U	< 5	U
	Total VOCs			**ug/L**		**3.934**		**2**		**4.795**		**19.045**		**18.035**		**0.19**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks
				Sys Loc Code	Q2 Field Blank 1	Q2 Field Blank 1	Q2 Field Blank 2	Q2 Field Blank 2	Q2 Field Blank 3	Q2 Field Blank 3	Q2 Trip Blank 1	Q2 Trip Blank 1	Q2 Trip Blank 2	Q2 Trip Blank 2	Q3 Field Blank 1	Q3 Field Blank 1	Q3 Field Blank 2
				Sys Sample Code	FB-1_04112014	FB-1_04112014	FB-2_04112014	FB-2_04112014	FB-3_04112014	FB-3_04112014	TRIP BLANK_04082014	TRIP BLANK_04082014	TRIP BLANK2_04112014	TRIP BLANK2_04112014	FB-1_08072014	FB-1_08072014	FB-2_08062014
				Sample Date	04/11/14	04/11/14	04/11/14	04/11/14	04/11/14	04/11/14	04/08/14	04/08/14	04/11/14	04/11/14	08/07/14	08/07/14	08/06/14
				Sample Type	FB	FB	FB	FB	FB	FB	TB	TB	TB	TB	TB	TB	FB
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 1	U	< 1	U	< 1	U	< 1	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42
108-88-3	Toluene	600		ug/L	0.15	JB	0.13	JB	0.12	J	0.036	J	0.031	JB	0.33	J	0.093
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
156-59-2	cis-1,2-Dichloroethene	70		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
67-64-1	Acetone	6000		ug/L	1.5	J	1.7	J	< 0.44	U	< 0.44	U	0.99	J	< 0.44	U	1.4
67-66-3	Chloroform	70		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
71-43-2	Benzene	1		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2
75-01-4	Vinyl Chloride	0.03		ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	0.082	JB	0.088	JB	< 0.02	U	< 0.02	U	0.098	JB	0.12	JB	0.067
75-15-0	Carbon Disulfide	700		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
75-35-4	1,1-Dichloroethene	350*		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41
	Total VOCs			**ug/L**	**2**		**2**		**0**		**0**		**1**		**0.45**		**1.56**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks
				Sys Loc Code	Q3 Field Blank 2	Q3 Trip Blank 1	Q3 Trip Blank 1	Q3 Trip Blank 2	Q3 Trip Blank 2	Q3 Trip Blank 3	Q3 Trip Blank 3	Q3 Trip Blank 4	Q3 Trip Blank 4	Q4 Field Blank 1	Q4 Field Blank 1	Q4 Field Blank 2	Q4 Field Blank 2
				Sys Sample Code	FB-2_08062014	TRIP BLANK1_07302014	TRIP BLANK1_07302014	TRIP BLANK2_08052014	TRIP BLANK2_08052014	TRIP BLANK3_08062014	TRIP BLANK3_08062014	TRIP BLANK4_08072014	TRIP BLANK4_08072014	FB-1_11052014	FB-1_11052014	FB-2_11062014	FB-2_11062014
				Sample Date	08/06/14	07/30/14	07/30/14	08/05/14	08/05/14	08/06/14	08/06/14	08/07/14	08/07/14	11/05/14	11/05/14	11/06/14	11/06/14
				Sample Type	FB	TB	TB	TB	TB	TB	TB	TB	TB	FB	FB	FB	FB
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 1	U	< 1	U	< 1	U	< 1	U	< 1	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U
108-88-3	Toluene	600		ug/L	J	0.036	J	< 0.03	U	0.049	J	0.043	J	0.14	J	0.04	J
108-90-7	Chlorobenzene	50		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	J	< 0.44	U	1.5	J	3.9		1.9	J	2.1	JB	< 0.44	U
67-66-3	Chloroform	70		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
71-43-2	Benzene	1		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U
75-05-8	Acetonitrile			ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	JB	0.066	JB	0.16	JB	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
75-15-0	Carbon Disulfide	700		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
75-25-2	Bromoform	4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
75-35-4	1,1-Dichloroethene	350*		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U
	Total VOCs			**ug/L**		**0.102**		**1.66**		**3.949**		**1.943**		**2.24**		**0.04**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks
				Sys Loc Code	Q4 Field Blank 3	Q4 Field Blank 3	Q4 Trip Blank 1	Q4 Trip Blank 1	Q4 Trip Blank 2	Q4 Trip Blank 2	Q4 Trip Blank 3	Q4 Trip Blank 3	Q5 Field Blank 1	Q5 Field Blank 1	Q5 Field Blank 2	Q5 Field Blank 2	Q5 Field Blank 3
				Sys Sample Code	FB-3_11062014	FB-3_11062014	TB-1_10302014	TB-1_10302014	TB-2_11042014	TB-2_11042014	TB-3_11062014	TB-3_11062014	FB-1_02132015	FB-1_02132015	FB-2_02132015	FB-2_02132015	FB-3_03022015
				Sample Date	11/06/14	11/06/14	10/30/14	10/30/14	11/04/14	11/04/14	11/06/14	11/06/14	02/13/15	02/13/15	02/13/15	02/13/15	03/02/15
				Sample Type	FB	FB	FB	FB	TB	TB	TB	TB	FB	FB	FB	FB	FB
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
107-02-8	Acrolein		4	ug/L	< 1	U	< 1	U	< 1	U	< 1	U	< 1	U	< 1	U	< 1
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
107-12-0	Propionitrile			ug/L	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42
108-88-3	Toluene	600		ug/L	0.061	J	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	0.089
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39
127-18-4	Tetrachloroethene	0.7		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
156-59-2	cis-1,2-Dichloroethene	70		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
67-64-1	Acetone	6000		ug/L	3.3	B	2.9	B	< 0.44	U	1.8	JB	< 0.44	U	< 0.44	U	< 0.44
67-66-3	Chloroform	70		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
71-43-2	Benzene	1		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2
75-01-4	Vinyl Chloride	0.03		ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-09-2	Methylene Chloride	5		ug/L	< 0.02	U	< 0.02	U	0.073	JB	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
75-15-0	Carbon Disulfide	700		ug/L	0.035	JB	< 0.02	U	0.038	J	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02
75-35-4	1,1-Dichloroethene	350*		ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07
78-83-1	Isobutanol			ug/L	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04
79-01-6	Trichloroethene	3		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	0.39
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41
	Total VOCs			**ug/L**	**3.396**		**2.9**		**0.111**		**1.8**		**0**		**0**		**0.479**

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks	Blanks
				Sys Loc Code	Q5 Field Blank 3	Q5 Field Blank 4	Q5 Field Blank 4	Q5 Trip Blank 1	Q5 Trip Blank 1	Q5 Trip Blank 2	Q5 Trip Blank 2	Q5 Trip Blank 3	Q5 Trip Blank 3	Q5 Trip Blank 4	Q5 Trip Blank 4	Q5 Trip Blank 5	Q5 Trip Blank 5
				Sys Sample Code	FB-3_03022015	FB-4_03042015	FB-4_03042015	TRIP BLANK 1_02092015	TRIP BLANK 1_02092015	TRIP BLANK 2_02092015	TRIP BLANK 2_02092015	TRIP BLANK 3_02092015	TRIP BLANK 3_02092015	TRIP BLANK-4_02162015	TRIP BLANK-4_02162015	TRIP BLANK_02232015	TRIP BLANK_02232015
				Sample Date	03/02/15	03/04/15	03/04/15	02/09/15	02/09/15	02/09/15	02/09/15	02/09/15	02/09/15	02/16/15	02/16/15	02/23/15	02/23/15
				Sample Type	FB	FB	FB	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
100-42-5	Styrene	70		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
107-02-8	Acrolein		4	ug/L	U	< 1	U	< 1	U	< 1	U	< 1	U	< 1	U	< 1	U
107-05-1	Allyl Chloride			ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
107-12-0	Propionitrile			ug/L	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U	< 1.4	U
107-13-1	Acrylonitrile			ug/L	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U	< 0.36	U
108-05-4	Vinyl Acetate		88	ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U	< 0.42	U
108-88-3	Toluene	600		ug/L	JB	0.038	J	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	0.064	J
108-90-7	Chlorobenzene	50		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U	< 0.33	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
123-91-1	1,4-Dioxane	3		ug/L	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U	< 5.4	U
124-48-1	Dibromochloromethane	0.4		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
126-98-7	Methylacrylonitrile			ug/L	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U	< 0.39	U
127-18-4	Tetrachloroethene	0.7		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
1330-20-7	Xylenes, Total	500		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
156-59-2	cis-1,2-Dichloroethene	70		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
156-60-5	trans-1,2-Dichloroethene	100		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
541-73-1	1,3-Dichlorobenzene	200		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
591-78-6	2-Hexanone		40	ug/L	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U	< 0.51	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
67-64-1	Acetone	6000		ug/L	U	< 0.44	U	< 0.44	U	< 0.44	U	< 0.44	U	< 0.44	U	< 0.44	U
67-66-3	Chloroform	70		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
71-43-2	Benzene	1		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
71-55-6	1,1,1-Trichloroethane	200		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
74-83-9	Bromomethane		10	ug/L	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
74-87-3	Chloromethane	3		ug/L	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U	< 0.11	U
74-88-4	Iodomethane			ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
74-95-3	Dibromomethane		70	ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-00-3	Chloroethane	3000		ug/L	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
75-01-4	Vinyl Chloride	0.03		ug/L	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U
75-05-8	Acetonitrile			ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-09-2	Methylene Chloride	5		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	0.06	J
75-15-0	Carbon Disulfide	700		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
75-25-2	Bromoform	4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-27-4	Bromodichloromethane	0.6		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
75-34-3	1,1-Dichloroethane	6		ug/L	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U
75-35-4	1,1-Dichloroethene	350*		ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
75-69-4	Trichlorofluoromethane	2000		ug/L	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U	< 0.06	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
76-01-7	Pentachloroethane			ug/L	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U	< 0.07	U
78-83-1	Isobutanol			ug/L	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U	< 5.9	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.12	U
78-93-3	2-Butanone	4000		ug/L	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U	< 0.28	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U	< 0.04	U
79-01-6	Trichloroethene	3		ug/L	JB	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	0.27	J
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U
80-62-6	Methyl Methacrylate		25	ug/L	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U	< 0.56	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U	< 0.03	U
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.25	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U	< 0.09	U
97-63-2	Ethyl Methacrylate			ug/L	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U	< 0.41	U
	Total VOCs			**ug/L**		**0.038**		**0**		**0**		**0**		**0**		**0.394**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - VOCs
GlaxoSmithKline, Research Triangle Park, NC
South Campus, North Complex

				Sample Area	Blanks	Blanks	Blanks	Blanks
				Sys Loc Code	Q5 Trip Blank 6	Q5 Trip Blank 6	SVE Drum	SVE Drum
				Sys Sample Code	TRIP BLANK_03022015	TRIP BLANK_03022015	SVE DRUM_01172014	SVE DRUM_01172014
				Sample Date	03/02/15	03/02/15	01/17/14	01/17/14
				Sample Type	TB	TB	N	N
CAS_RN	CHEMICAL_NAME	NC2L Standard	IMAC Standard	Result Units	Result	Qualifier	Result	Qualifier
100-41-4	Ethylbenzene	600		ug/L	< 0.04	U	2.6	
100-42-5	Styrene	70		ug/L	< 0.02	U	< 0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.4		ug/L	< 0.04	U	< 0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.4		ug/L	< 0.05	U	< 0.5	U
106-46-7	1,4-Dichlorobenzene	6		ug/L	< 0.03	U	< 0.5	U
106-93-4	1,2-Dibromoethane	0.02		ug/L	< 0.04	U	< 0.5	U
107-02-8	Acrolein		4	ug/L	< 1	U	< 5	U
107-05-1	Allyl Chloride			ug/L	< 0.05	U	< 0.5	U
107-06-2	1,2-Dichloroethane	0.4		ug/L	< 0.03	U	**79**	D
107-12-0	Propionitrile			ug/L	< 1.4	U	< 25	U
107-13-1	Acrylonitrile			ug/L	< 0.36	U	< 5	U
108-05-4	Vinyl Acetate		88	ug/L	< 0.06	U	< 0.5	U
108-10-1	4-Methyl-2-pentanone		100	ug/L	< 0.42	U	< 2.5	U
108-88-3	Toluene	600		ug/L	0.036	JB	37	
108-90-7	Chlorobenzene	50		ug/L	< 0.02	U	0.74	
110-57-6	trans-1,4-Dichloro-2-butene			ug/L	< 0.33	U	< 2	U
120-82-1	1,2,4-Trichlorobenzene	70		ug/L	< 0.06	U	< 0.5	U
123-91-1	1,4-Dioxane	3		ug/L	< 5.4	U	**42**	
124-48-1	Dibromochloromethane	0.4		ug/L	< 0.04	U	< 0.5	U
126-98-7	Methylacrylonitrile			ug/L	< 0.39	U	< 5	U
127-18-4	Tetrachloroethene	0.7		ug/L	< 0.06	U	**1.4**	
1330-20-7	Xylenes, Total	500		ug/L	< 0.03	U	**22**	
156-59-2	cis-1,2-Dichloroethene	70		ug/L	< 0.03	U		
156-60-5	trans-1,2-Dichloroethene	100		ug/L	< 0.05	U	5.2	
541-73-1	1,3-Dichlorobenzene	200		ug/L	< 0.04	U	< 0.5	U
56-23-5	Carbon Tetrachloride	0.3		ug/L	< 0.03	U	< 0.5	U
591-78-6	2-Hexanone		40	ug/L	< 0.51	U	< 2.5	U
630-20-6	1,1,1,2-Tetrachloroethane		1	ug/L	< 0.02	U	< 0.5	U
67-64-1	Acetone	6000		ug/L	< 0.44	U	2.5	
67-66-3	Chloroform	70		ug/L	< 0.03	U	47	D
71-43-2	Benzene	1		ug/L	< 0.03	U	**6.4**	
71-55-6	1,1,1-Trichloroethane	200		ug/L	< 0.02	U	< 0.5	U
74-83-9	Bromomethane		10	ug/L	< 0.11	U	< 0.5	U
74-87-3	Chloromethane	3		ug/L	< 0.11	U	< 0.5	U
74-88-4	Iodomethane			ug/L	< 0.03	U	< 0.5	U
74-95-3	Dibromomethane		70	ug/L	< 0.03	U	< 0.5	U
75-00-3	Chloroethane	3000		ug/L	< 0.2	U	< 0.5	U
75-01-4	Vinyl Chloride	0.03		ug/L	< 0.07	U	**0.8**	
75-05-8	Acetonitrile			ug/L	< 0.03	U	< 0.5	U
75-09-2	Methylene Chloride	5		ug/L	< 0.02	U	2	B
75-15-0	Carbon Disulfide	700		ug/L	< 0.02	U	< 0.5	U
75-25-2	Bromoform	4		ug/L	< 0.03	U	< 0.5	U
75-27-4	Bromodichloromethane	0.6		ug/L	< 0.03	U	< 0.5	U
75-34-3	1,1-Dichloroethane	6		ug/L	< 0.02	U	5.9	
75-35-4	1,1-Dichloroethene	350*		ug/L	< 0.04	U	4.1	
75-69-4	Trichlorofluoromethane	2000		ug/L	< 0.06	U	< 0.5	U
75-71-8	Dichlorodifluoromethane	1000		ug/L	< 0.03	U	< 0.5	U
76-01-7	Pentachloroethane			ug/L	< 0.07	U	< 0.5	U
78-83-1	Isobutanol			ug/L	< 5.9	U	< 25	U
78-87-5	1,2-Dichloropropane	0.6		ug/L	< 0.12	U	< 0.5	U
78-93-3	2-Butanone	4000		ug/L	< 0.28	U	< 2.5	U
79-00-5	1,1,2-Trichloroethane		0.6	ug/L	< 0.04	U	**0.62**	
79-01-6	Trichloroethene	3		ug/L	< 0.03	U	**110**	D
79-34-5	1,1,2,2-Tetrachloroethane	0.2		ug/L	< 0.05	U	**1.7**	
80-62-6	Methyl Methacrylate		25	ug/L	< 0.56	U	< 5	U
87-68-3	Hexachlorobutadiene	0.4		ug/L	< 0.03	U	< 0.5	U
95-50-1	1,2-Dichlorobenzene	20		ug/L	< 0.03	U	0.093	J
96-12-8	1,2-Dibromo-3-chloropropane	0.04		ug/L	< 0.25	U	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.005		ug/L	< 0.09	U	< 0.5	U
97-63-2	Ethyl Methacrylate			ug/L	< 0.41	U	< 5	U
	Total VOCs			**ug/L**	**0.036**		**371.053**	

* = 1,1-Dichloroethene was adopted by the Environmental Management Commission in accordance with 15A NCAC 02L .0202 (f) and is above the Federal MCL. Where a private drinking water well or public water system is impacted by 1,1-DCE, the applicable standard is 7 ug/L, in accordance with 15A NCAC 02L .0202.

Appendix D-2
Year 1 Monitoring Event Results - Total Iron
GlaxoSmithKline, RTP, NC
South Campus, North Complex

		SAMPLE AREA	SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13	
		SYS_LOC_CODE	BNP-4		GW-1A		GW-1A		GW-1A		GW-1A		GW-1A		GW-1A-D		GW-1A-D		GW-1A-D		GW-1A-D		GW-1A-D	
		SYS_SAMPLE_CODE	BNP-4_02232015		GW-1A_02132015		GW-1A_04082014		GW-1A_07312014		GW-1A_11042014		GW-1A_12202013		GW-1A-D_02132015		GW-1A-D_04092014		GW-1A-D_07312014		GW-1A-D_11042014		GW-1AD_12202013	
		SAMPLE_DATE	02/23/15		02/13/15		04/08/14		07/31/14		11/04/14		12/20/13		02/13/15		04/09/14		07/31/14		11/04/14		12/20/13	
		SAMPLE_TYPE_CODE	N		N		N		N		N		N		N		N		N		N		N	
CAS_RN	CHEMICAL_NAME	RESULT_UNIT	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers
7439-89-6	Iron	ug/L	50800		3390		1270		2160		2310		811		10400		918		1060		1120		551	

Appendix D-2
Year 1 Monitoring Event Results - Total Iron
GlaxoSmithKline, RTP, NC
South Campus, North Complex

		SAMPLE AREA	SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13	
		SYS_LOC_CODE	GW-20S		GW-22S		GW-30I		GW-30I		GW-30I		GW-30I		GW-30S		GW-30S		GW-30S		GW-30S		GW-12S	
		SYS_SAMPLE_CODE	GW-20S_02252015		GW-22S_02232015		GW-30I_02232015		GW-30I_09182014		GW-30I_11042014		GW-30I_12062013		GW-30S_02232015		GW-30S_09182014		GW-30S_11042014		GW-30S_12062013		GW-12S_02162015	
		SAMPLE_DATE	02/25/15		02/23/15		02/23/15		09/18/14		11/04/14		12/06/13		02/23/15		09/18/14		11/04/14		12/06/13		02/16/15	
		SAMPLE_TYPE_CODE	N		N		N		N		N		N		N		N		N		N		N	
CAS_RN	CHEMICAL_NAME	RESULT_UNIT	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers
7439-89-6	Iron	ug/L	2530		4620		158	J	1860		916		2010		84.2	J	269		80.1	J	159	J	280	

Appendix D-2
Year 1 Monitoring Event Results - Total Iron
GlaxoSmithKline, RTP, NC
South Campus, North Complex

		SAMPLE AREA	SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13	
		SYS_LOC_CODE	GW-12S		GW-4		GW-4		GW-4		GW-4I		GW-4I		GW-4I		IW-12		IW-12D		IW-14		IW-16	
		SYS_SAMPLE_CODE	GW-12S_12182013		GW-4_02252015		GW-4_12192013		GW-4DUP_02252015		GW-4I_02252015		GW-4I_12192013		GW-4IDUP_12192013		IW-12_02252015		IW-12D_03022015		IW-14_02252015		IW-16_02252015	
		SAMPLE_DATE	12/18/13		02/25/15		12/19/13		02/25/15		02/25/15		12/19/13		12/19/13		02/25/15		03/02/15		02/25/15		02/25/15	
		SAMPLE_TYPE_CODE	N		N		N		FD		N		N		FD		N		N		N		N	
CAS_RN	CHEMICAL_NAME	RESULT_UNIT	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers
7439-89-6	Iron	ug/L	*< 69.4*	U	240		78.6	J	259		3690		117	J	120	J	1690		12900		6240		6730	

Appendix D-2
Year 1 Monitoring Event Results - Total Iron
GlaxoSmithKline, RTP, NC
South Campus, North Complex

		SAMPLE AREA	SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-13		SWMU-15/16		SWMU-15/16		SWMU-15/16		SWMU-15/16	
		SYS_LOC_CODE	IW-18		MW-13		MW-13		MW-13		MW-13		MW-13		P-6		GW-16S		GW-16S		GW-18S		GW-18S	
		SYS_SAMPLE_CODE	IW-18_02252015		MW-13_02232015		MW-13_04082014		MW-13_08052014		MW-13_11042014		MW-13_12052013		P-6_02162015		GW-16S_02122015		GW-16S_12182013		GW-18S_02122015		GW-18S_04102014	
		SAMPLE_DATE	02/25/15		02/23/15		04/08/14		08/05/14		11/04/14		12/05/13		02/16/15		02/12/15		12/18/13		02/12/15		04/10/14	
		SAMPLE_TYPE_CODE	N		N		N		N		N		N		N		N		N		N		N	
CAS_RN	CHEMICAL_NAME	RESULT_UNIT	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers
7439-89-6	Iron	ug/L	12800		1050		229		*< 69.4*	U	1350		539		2270		10600		*< 69.4*	U	783		774	

Appendix D-2
Year 1 Monitoring Event Results - Total Iron
GlaxoSmithKline, RTP, NC
South Campus, North Complex

		SAMPLE AREA	SWMU-15/16		SWMU-15/16		SWMU-15/16		SWMU-15/16		SWMU-15/16		SWMU-15/16		SWMU-15/16		SWMU-15/16		SWMU-15/16		SWMU-15/16		SWMU-15/16	
		SYS_LOC_CODE	GW-18S		GW-18S		GW-18S		GW-18S		GW-18S		GW-41SR		MW-10		MW-10		MW-10		MW-10		MW-10	
		SYS_SAMPLE_CODE	GW-18S_11052014		GW-18S_12182013		GW-18SDUP_12182013		MW-18S_08062014		MW-18SDUP_08062014		GW-41SR_02122015		MW-10 DUP_04082014		MW-10_02112015		MW-10_04082014		MW-10_07312014		MW-10_10302014	
		SAMPLE_DATE	11/05/14		12/18/13		12/18/13		08/06/14		08/06/14		02/12/15		04/08/14		02/11/15		04/08/14		07/31/14		10/30/14	
		SAMPLE_TYPE_CODE	N		N		FD		N		FD		N		FD		N		N		N		N	
CAS_RN	CHEMICAL_NAME	RESULT_UNIT	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers
7439-89-6	Iron	ug/L	1100		1020		1950		2290		2070		2750		558		471		665 664		388		85.1	J

Appendix D-2
Year 1 Monitoring Event Results - Total Iron
GlaxoSmithKline, RTP, NC
South Campus, North Complex

		SAMPLE AREA	SWMU-15/16		SWMU-15/16		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6	
		SYS_LOC_CODE	MW-10		MW-10		GW-32S		GW-32S		GW-6		GW-6		GW-7		GW-7		GW-7		GW-7		GW-7	
		SYS_SAMPLE_CODE	MW-10_12172013		MW-10DUP_10302014		GW-32S_02112015		GW-32S_12122013		GW-6_02112015		GW-6_12112013		GW-7_02232015		GW-7_04102014		GW-7_08052014		GW-7_11032014		GW-7_12052013	
		SAMPLE_DATE	12/17/13		10/30/14		02/11/15		12/12/13		02/11/15		12/11/13		02/23/15		04/10/14		08/05/14		11/03/14		12/05/13	
		SAMPLE_TYPE_CODE	N		FD		N		N		N		N		N		N		N		N		N	
CAS_RN	CHEMICAL_NAME	RESULT_UNIT	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers
7439-89-6	Iron	ug/L	243		70.2	J	442		492		1530		*< 69.4*	U	1110		245		766		2690		*< 69.4*	U

Appendix D-2
Year 1 Monitoring Event Results - Total Iron
GlaxoSmithKline, RTP, NC
South Campus, North Complex

		SAMPLE AREA	AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6	
		SYS_LOC_CODE	GW-8		GW-8		GW-8		GW-8		GW-8		MW-11		MW-11		MW-11		MW-11		MW-11		MW-11	
		SYS_SAMPLE_CODE	GW-8_02112015		GW-8_04072014		GW-8_07302014		GW-8_10302014		GW-8_12112013		MW-11 DUP_02112015		MW-11_02112015		MW-11_04072014		MW-11_07302014		MW-11_10302014		MW-11_12122013	
		SAMPLE_DATE	02/11/15		04/07/14		07/30/14		10/30/14		12/11/13		02/11/15		02/11/15		04/07/14		07/30/14		10/30/14		12/12/13	
		SAMPLE_TYPE_CODE	N		N		N		N		N		FD		N		N		N		N		N	
CAS_RN	CHEMICAL_NAME	RESULT_UNIT	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers
7439-89-6	Iron	ug/L	1740		635		846		1110		*< 69.4*	U	401		359		5590		1460		1320		1810	

Appendix D-2
Year 1 Monitoring Event Results - Total Iron
GlaxoSmithKline, RTP, NC
South Campus, North Complex

		SAMPLE AREA	AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6		AOC GW-6 Strike		AOC GW-6 Strike		AOC W-1		AOC W-1		AOC W-1		AOC W-1	
		SYS_LOC_CODE	MW-12		MW-12		MW-12		MW-12		MW-12		GW-36S		GW-36S		GW-40I		GW-40I		GW-40I		GW-40I	
		SYS_SAMPLE_CODE	GW-12_11052014		MW-12_02162015		MW-12_04092014		MW-12_08062014		MW-12_12182013		GW-36S_02112015		GW-36S_12122013		GW-40I_02232015		GW-40I_04102014		GW-40I_08052014		GW-40I_11032014	
		SAMPLE_DATE	11/05/14		02/16/15		04/09/14		08/06/14		12/18/13		02/11/15		12/12/13		02/23/15		04/10/14		08/05/14		11/03/14	
		SAMPLE_TYPE_CODE	N		N		N		N		N		N		N		N		N		N		N	
CAS_RN	CHEMICAL_NAME	RESULT_UNIT	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers
7439-89-6	Iron	ug/L	11900		3480		10500		32300		4400		12000		4570		696		1130		4000		2560	

Appendix D-2
Year 1 Monitoring Event Results - Total Iron
GlaxoSmithKline, RTP, NC
South Campus, North Complex

		SAMPLE AREA	AOC W-1		AOC-W1		AOC-W1		AOC-W1		AOC-W1		AOC-W1		AOC-W1		AOC-W1		AOC-W1		AOC-W1		AOC-W1	
		SYS_LOC_CODE	GW-40I		GW-49I		GW-49I		GW-49I		GW-49I		GW-49I		MW-9		MW-9		MW-9		MW-9		MW-9	
		SYS_SAMPLE_CODE	GW-40I_12062013		GW-49I_02232015		GW-49I_04102014		GW-49I_08052014		GW-49I_11032014		GW-49I_12062013		MW-9_02122015		MW-9_04112014		MW-9_08052014		MW-9_11032014		MW-9_12162013	
		SAMPLE_DATE	12/06/13		02/23/15		04/10/14		08/05/14		11/03/14		12/06/13		02/12/15		04/11/14		08/05/14		11/03/14		12/16/13	
		SAMPLE_TYPE_CODE	N		N		N		N		N		N		N		N		N		N		N	
CAS_RN	CHEMICAL_NAME	RESULT_UNIT	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers
7439-89-6	Iron	ug/L	359		322		783		760		880		884		3590		9900		8090		26400		779	

Appendix D-2
Year 1 Monitoring Event Results - Total Iron
GlaxoSmithKline, RTP, NC
South Campus, North Complex

		SAMPLE AREA	AOC-W1		AOC W-1		AOC W-1		SWMU-4		SWMU-4	
		SYS_LOC_CODE	IW-36		W-1		W-1		GW-53S		GW-53S	
		SYS_SAMPLE_CODE	IW-36_02122015		W-1_02122015		W-1_12162013		GW-53S_02122015		GW-53S_12202013	
		SAMPLE_DATE	02/12/15		02/12/15		12/16/13		02/12/15		12/20/13	
		SAMPLE_TYPE_CODE	N		N		N		N		N	
CAS_RN	CHEMICAL_NAME	RESULT_UNIT	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers	Result	Qualifiers
7439-89-6	Iron	ug/L	13500		4280		*< 69.4*	U	13300		40400	

APPENDIX G

SAMPLING METHODOLOGY

APPENDIX G

SAMPLING METHODOLOGY

The following describes the sampling equipment and procedures used by Golder during groundwater remediation sampling events. Additional details can be found on sampling logs provided in Appendix F.

G-1 Groundwater Elevation Measurements

Prior to collecting groundwater samples, Golder personnel collected static depth-to-groundwater and total well depth measurements from the Site monitoring wells and injection wells if also sampled. In accordance with Golder's Health and Safety Plan (Revision 2 dated November 27, 2013), for wells within the SWMU-13 area that have historically had high volatile organic compound (VOC) detections and VOC vapors, the head space at each well was analyzed using a factory calibrated photoionization detector (PID) with an 11.7 eV lamp. The PID was field-calibrated at the start of each day and field-checked again later in the day, especially during high humidity and rainy days. During sampling activities in the SWMU-13 area, field personnel dressed in Level C PPE with half-face respirators and continuously monitored their breathing zones with the PID throughout the sample purge. Once vapors decreased below the defined action level (5 ppm), field personnel could continue sampling without the respirator but continuously monitored the breathing zone for any changes. For sampling activities in remaining site areas, field personnel wore Level D clothing and PPE.

Depth-to-water measurements were obtained from the monitoring, compliance, and injection wells to the nearest 0.01 foot using an electronic water level indicator prior to purging the wells. The historical groundwater level elevations are presented in Tables 7-1 and 7-2. The static water elevations were calculated from the depth-to-water measurements and top of casing elevations.

G-2 Groundwater Sampling

After collection of water levels, field personnel collected groundwater samples from Site monitoring wells. The water level in the monitoring wells was gauged before, during, and after purging the wells. Field measurements for pH, specific conductivity, temperature, dissolved oxygen (DO), and oxidation reduction potential (ORP) were recorded at 3- to 5-minute intervals, depending on the purge rate. In general, the purge rate for each well was matched to the yield of the monitoring well, as determined by continuously monitoring the depth to groundwater, up to a maximum purge rate of 500 milliliters per minute. Purging was continued until stabilization was indicated by the water quality parameters using a multi-parameter water quality meter (YSI 556 Pro Plus or other similar device). Turbidity measurements were collected using a turbidity meter (Hach 2100Q or other similar device). Water quality meters were calibrated prior to the start of each field day. Field measurements of ferrous iron were collected using a Hach Ferrous Iron

field Kit. Groundwater sampling was conducted in general accordance with the US EPA's *Low-Flow (Minimal Drawdown) Sampling Procedures* (April 1996) low-flow purge and sample techniques guidance documents. Injection wells not sampled using low-flow techniques were purged using a disposable polyethylene bailer. A volume of approximately 5 gallons of water was removed from each well and containerized before field parameter readings were taken. A multi-parameter water quality meter capable of taking downhole readings was used to collect field parameters at all bailed injection wells.

Prior to sampling, the laboratory-supplied sample containers were prepared. Each sample container was labeled with the sample identification number, sampling personnel, date and time of sample collection, project name (and/or number), and requested chemical analyses. Samples were collected directly from the dedicated tubing discharge into the laboratory-supplied containers. Samples were then placed in a cooler on ice and transported via courier to the North Carolina certified laboratory for analysis.

Purge water from sampling activities was containerized in 5-gallon buckets and transferred into 55-gallon drums at the SWMU-13 containment pad. The drums were labeled as "purged groundwater for re-injection" and pumped through the SWMU-13 groundwater remediation system for treatment. Water used for decontamination was also containerized and transferred into a labeled 55-gallon drum at the SWMU-13 containment pad to be sampled for characterization and disposal. Decontamination water that was reported to be below the NC2L groundwater standards was discharged to the ground surface. Analytical results and disposal records are presented in Appendix C.

G-3 Laboratory and Field Quality Assurance/Quality Control

In accordance with the CMS Work Plan Sampling and Analysis Plan (SAP), for each group of twenty (20) samples, one (1) field duplicate, one (1) matrix spike/matrix spike duplicate, and one (1) field/equipment blank were collected. Additionally, one (1) VOC trip blank accompanied each sample cooler containing samples for VOC analysis. These QA/QC samples were collected for each Site area as applicable.

For laboratory QA/QC, method blanks were analyzed for each analytical method. Matrix spikes and matrix spike duplicates (MS/MSD) were also analyzed for QA/QC purposes. The results of these analysis are included in Appendix E.

APPENDIX H

DATA TREND PLOTS

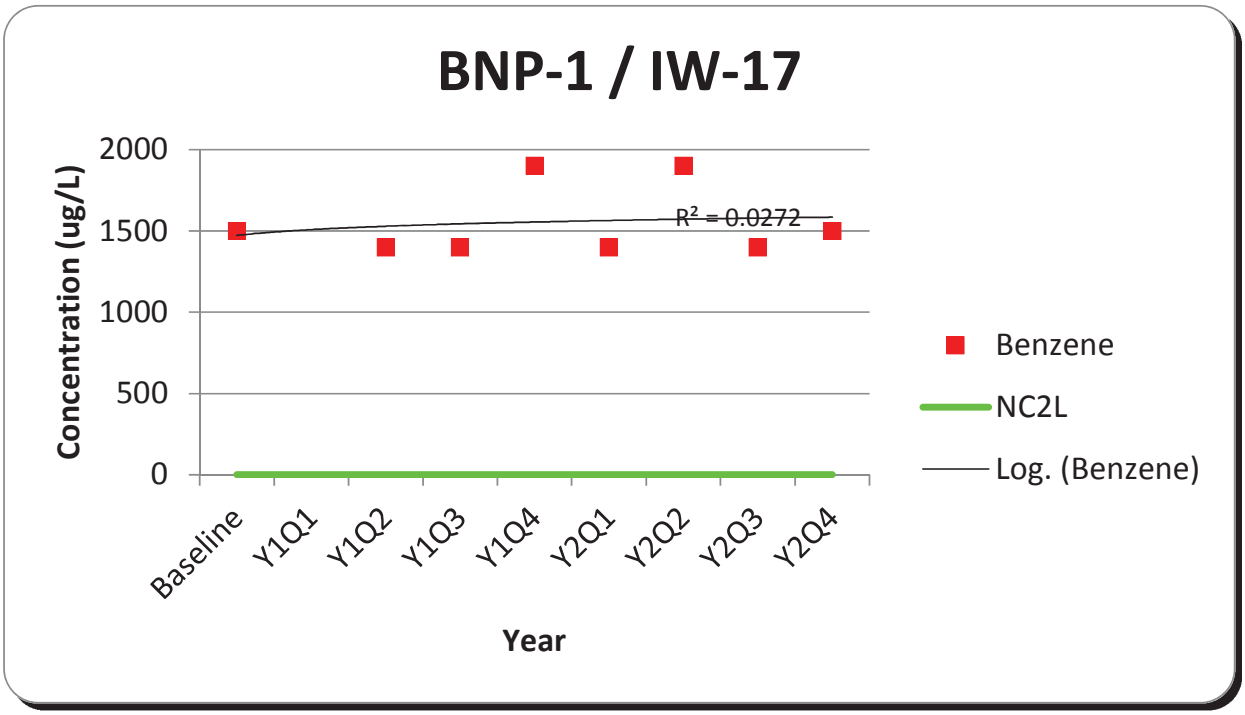
APPENDIX H

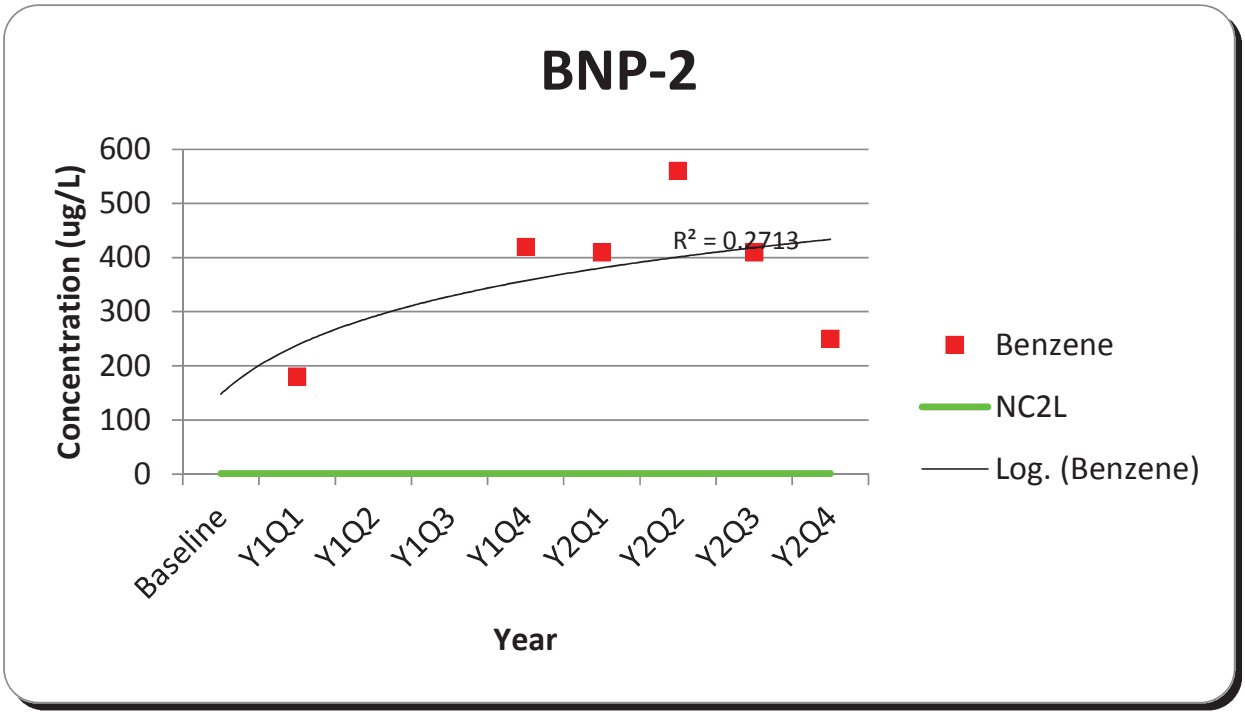
DATA TREND PLOTS

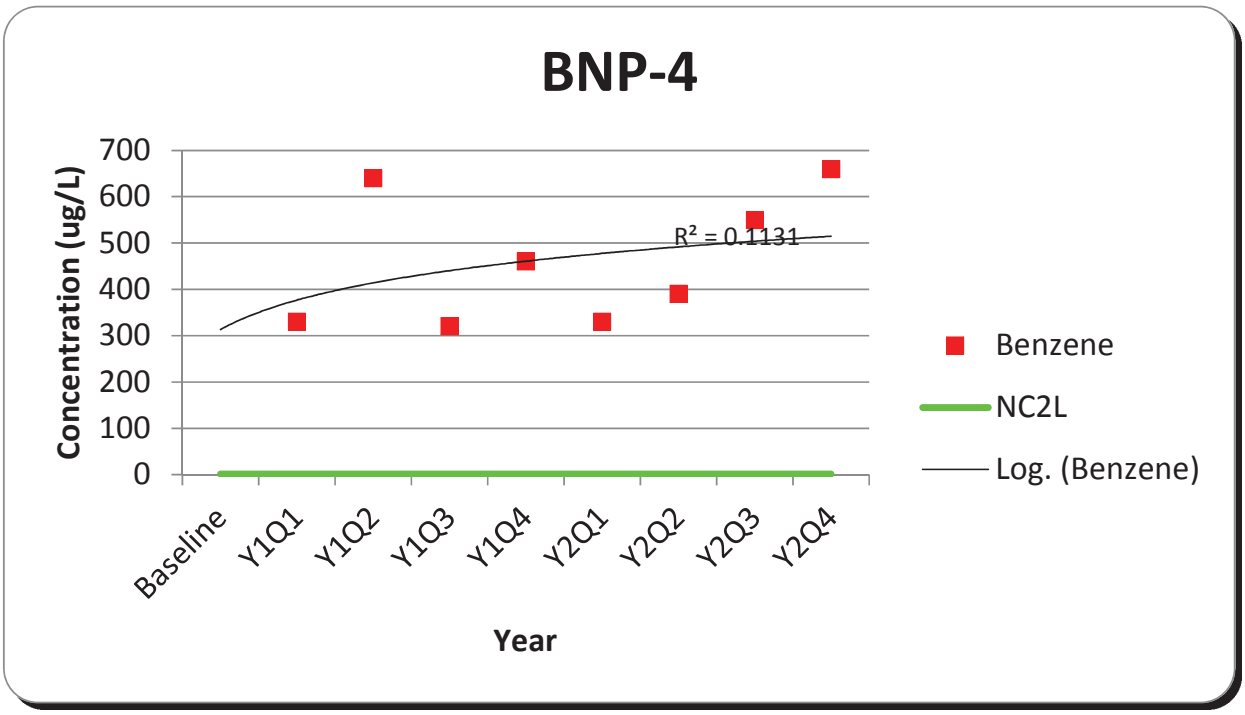
H-1

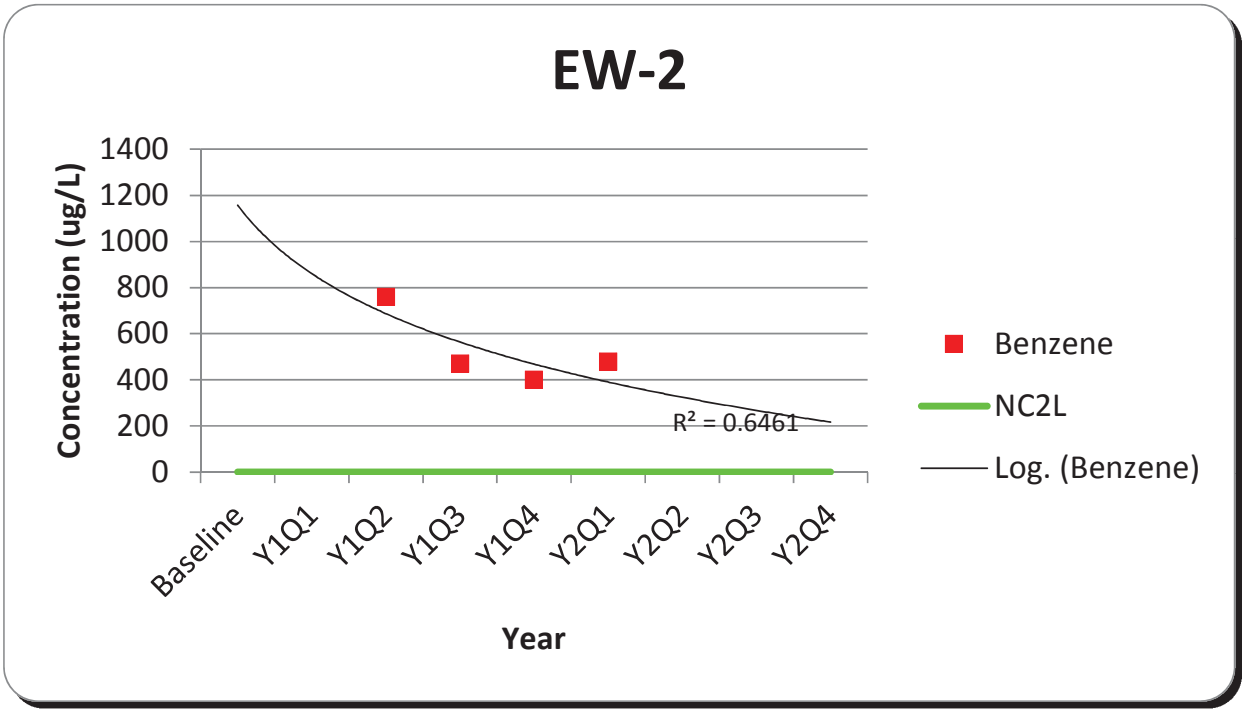
BENZENE TRENDS

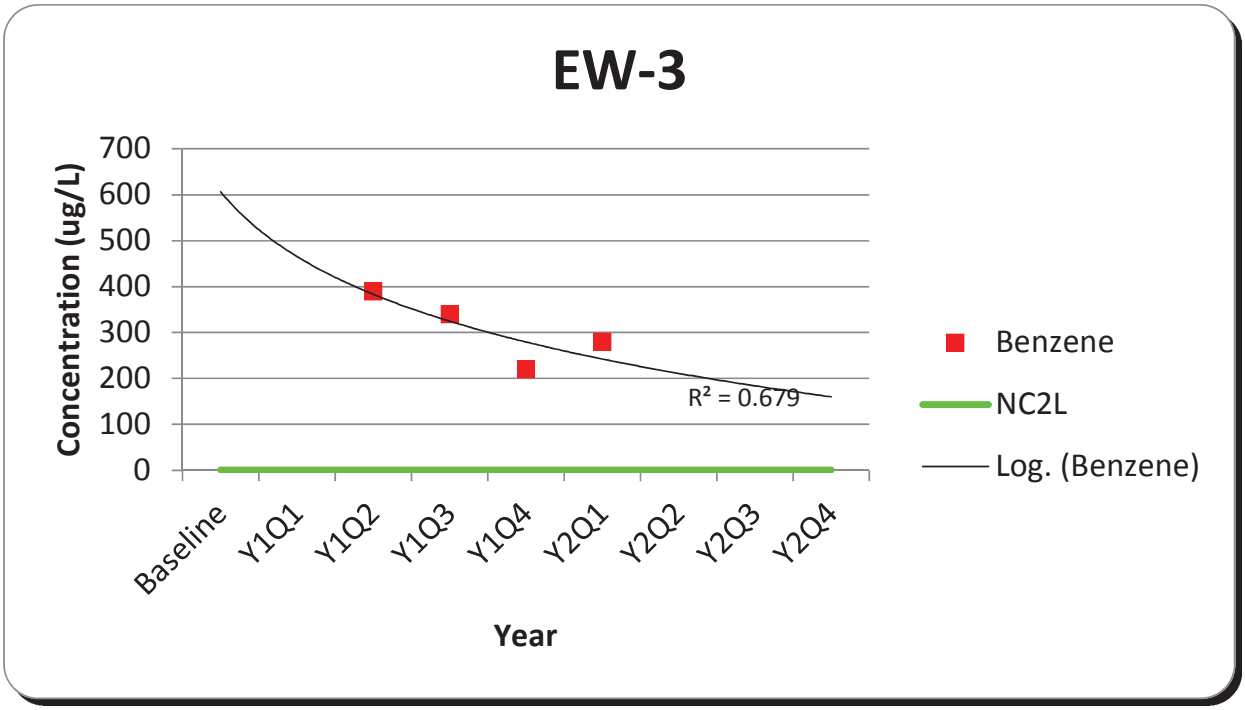
SWMU-13 SHALLOW

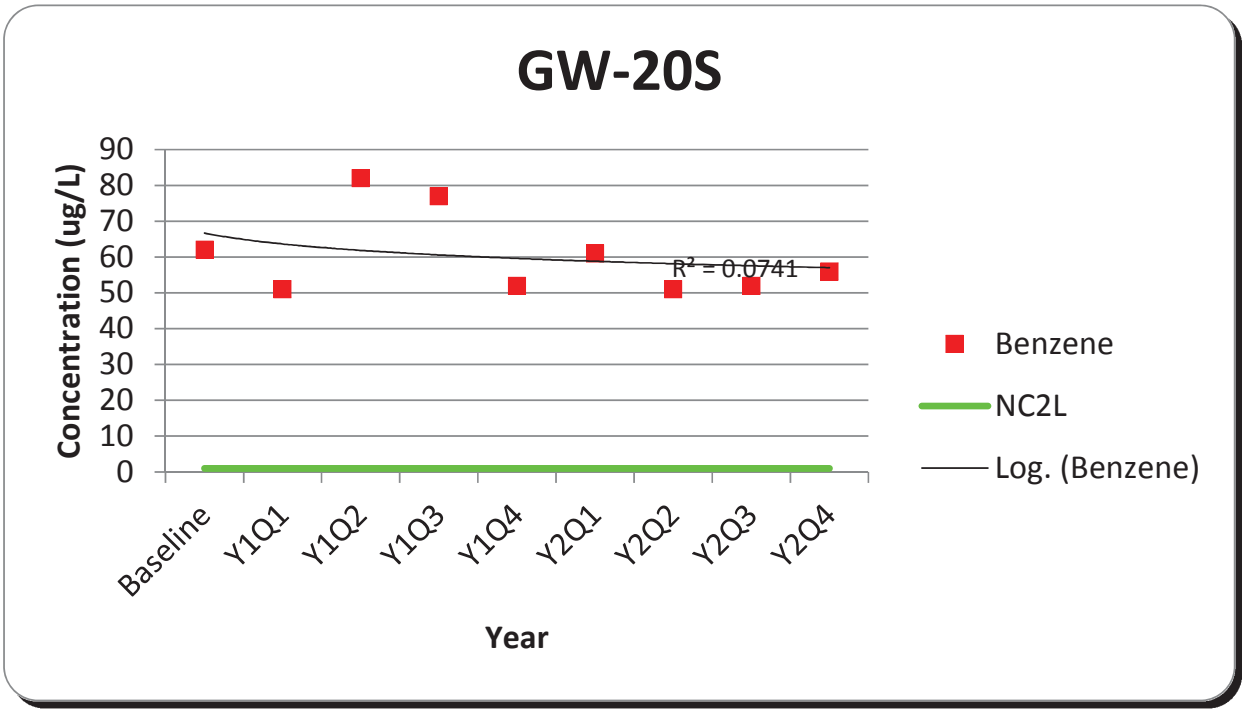

BNP-1 / IW-17
Concentration (ug/L)
2000
1500
1000
500
0
R² = 0.0272
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

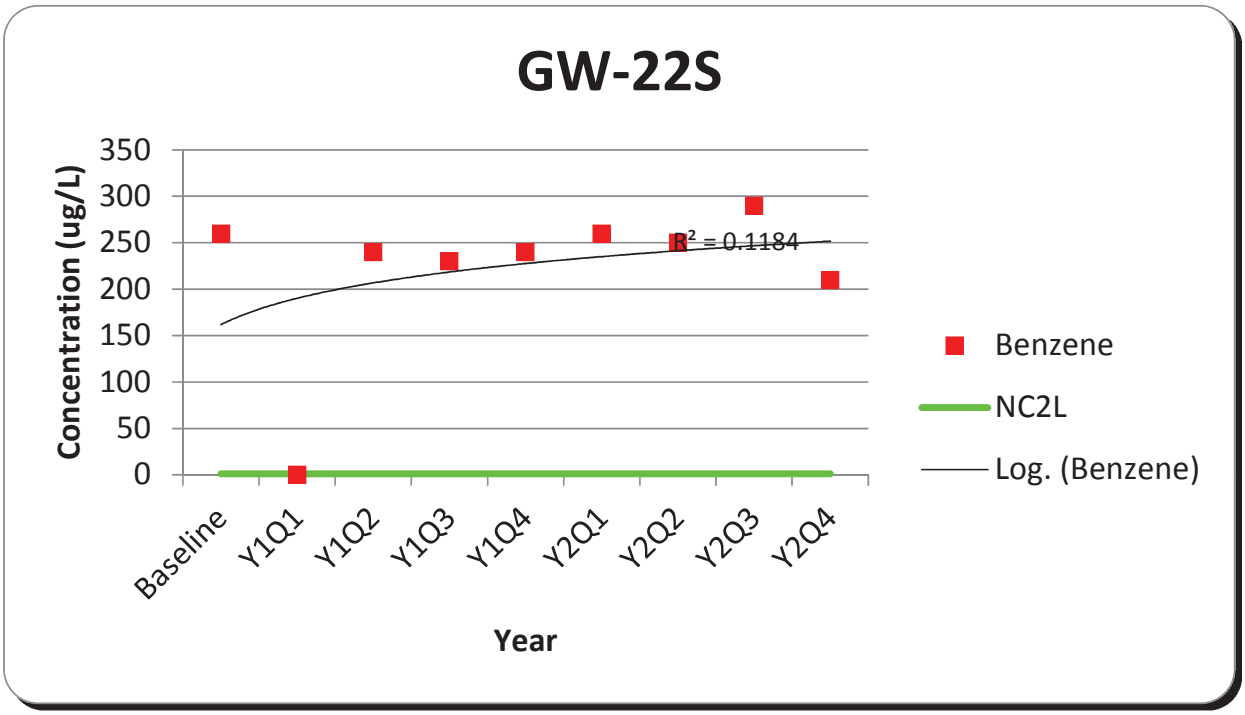

BNP-2
Concentration (ug/L)
600
500
400
300
200
100
0
R² = 0.2713
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

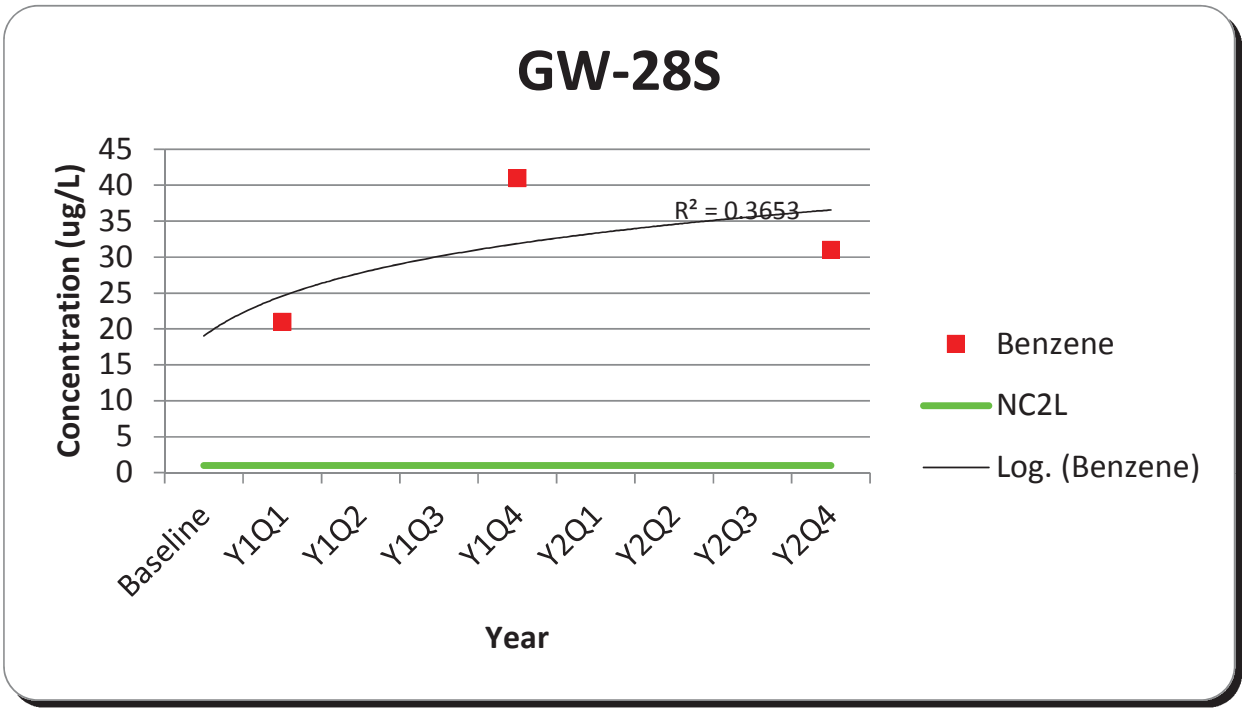

BNP-4
Concentration (ug/L)
700
600
500
400
300
200
100
0
R² = 0.1131
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

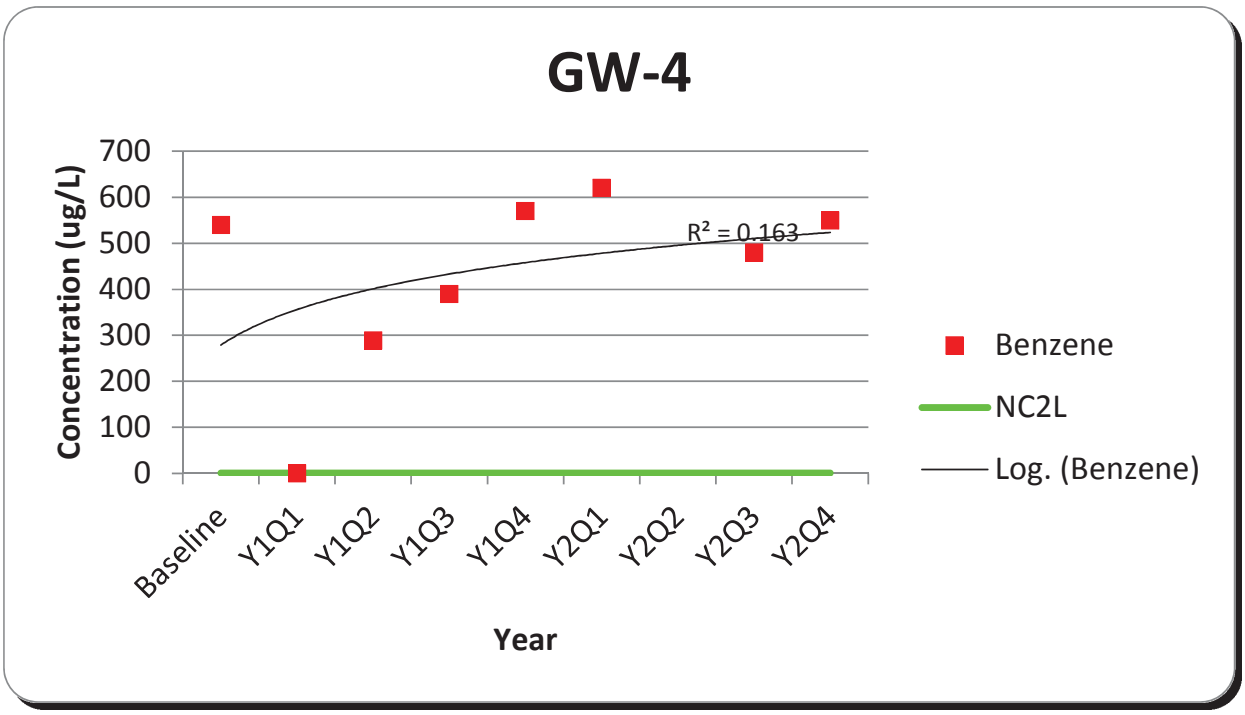

EW-2
Concentration (ug/L)
1400
1200
1000
800
600
400
200
0
R² = 0.6461
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

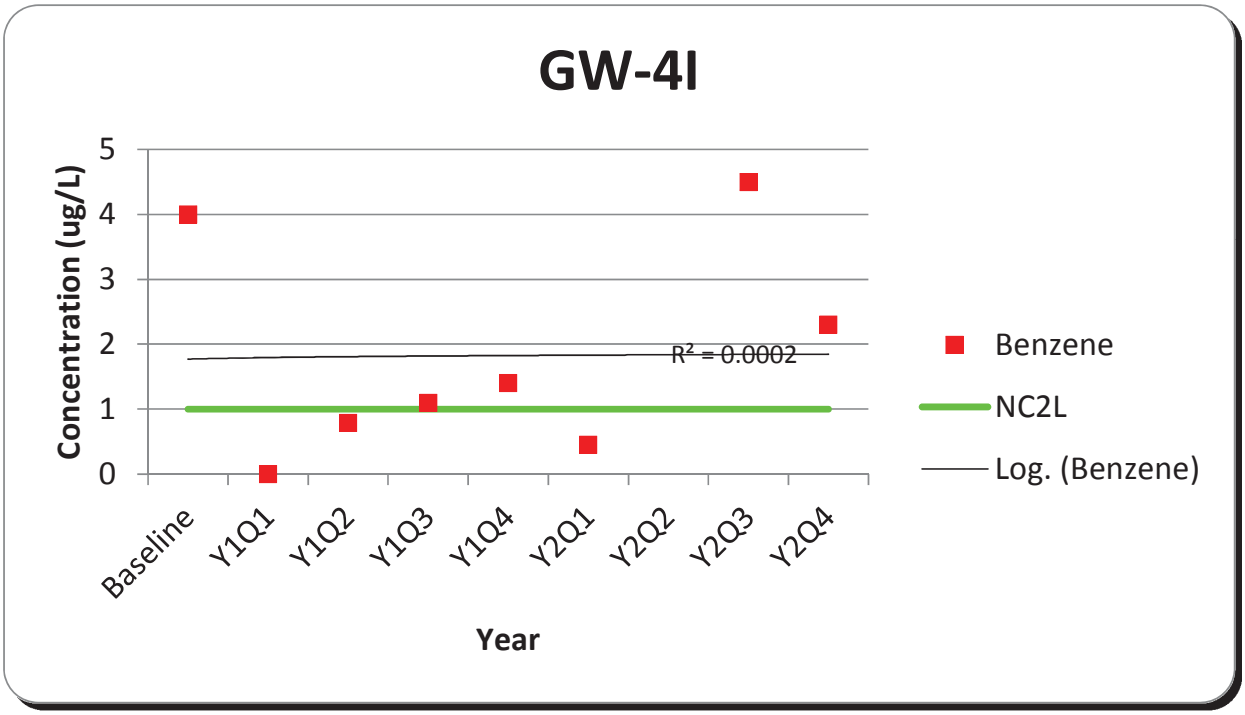

EW-3
Concentration (ug/L)
700
600
500
400
300
200
100
0
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
R² = 0.679
Benzene
NC2L
Log. (Benzene)

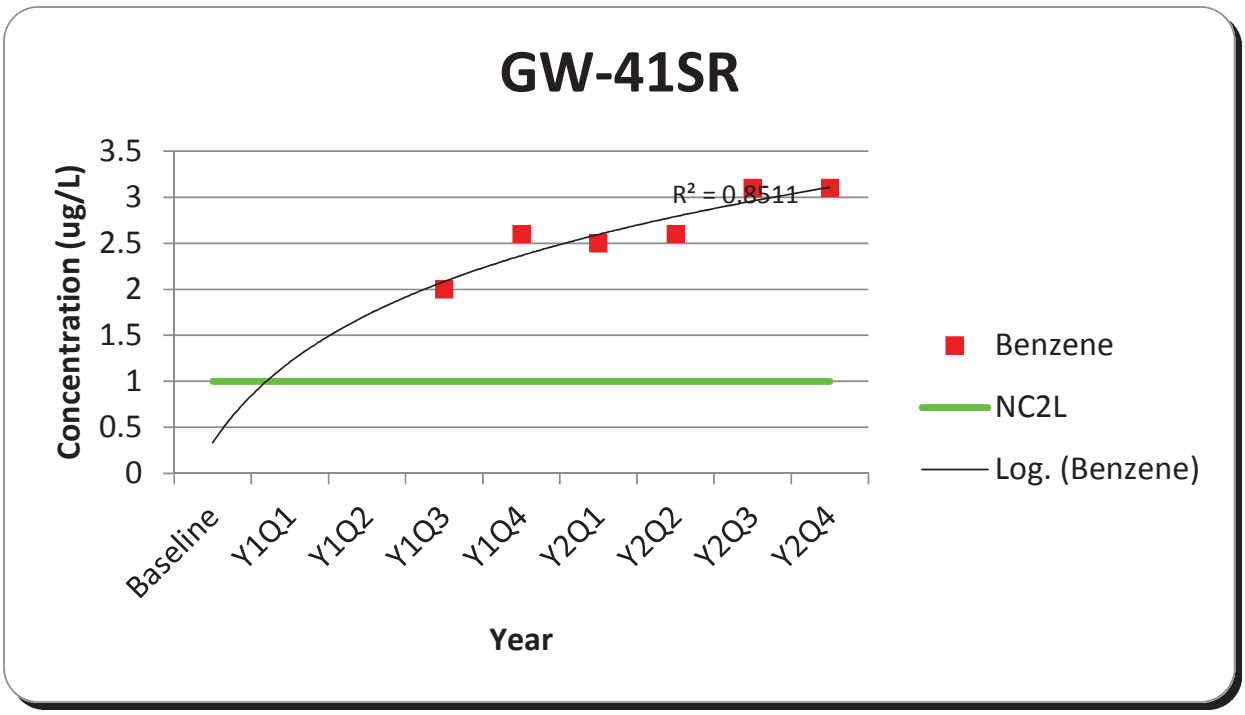

GW-20S
Concentration (ug/L)
90
80
70
60
50
40
30
20
10
0
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
R² = 0.0741
Benzene
NC2L
Log. (Benzene)

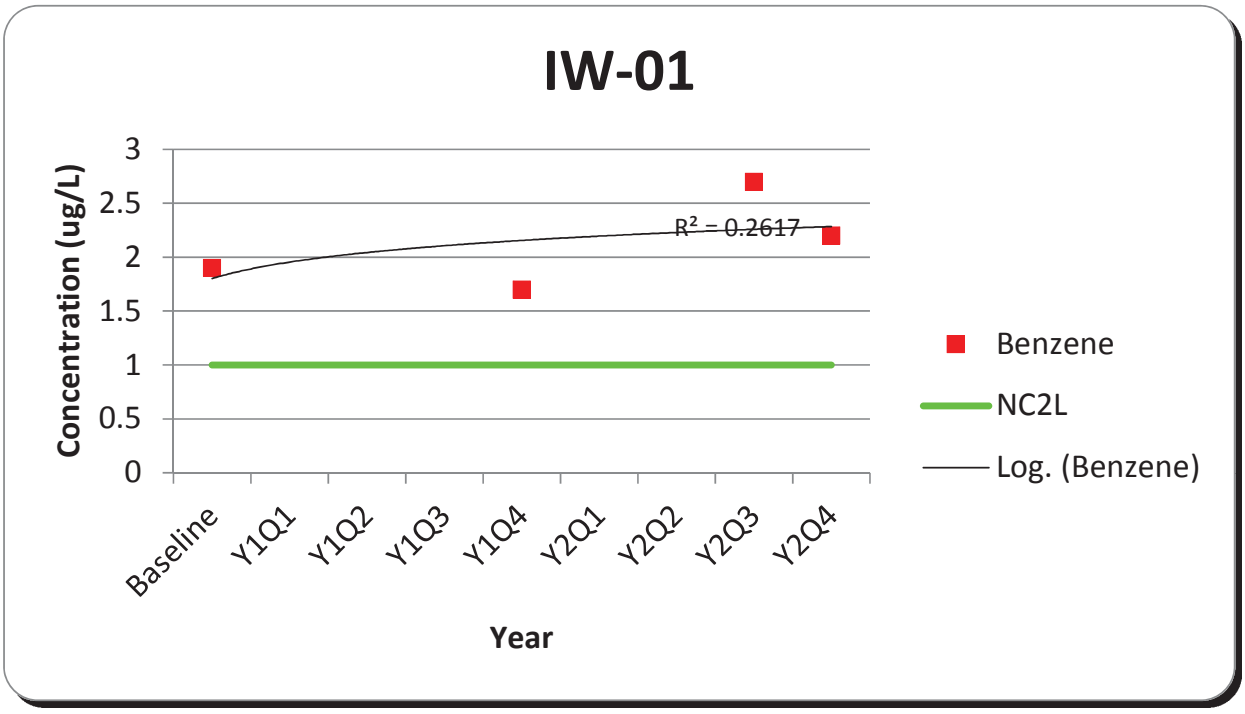

GW-22S
Concentration (ug/L)
350
300
250
200
150
100
50
0
R² = 0.1184
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

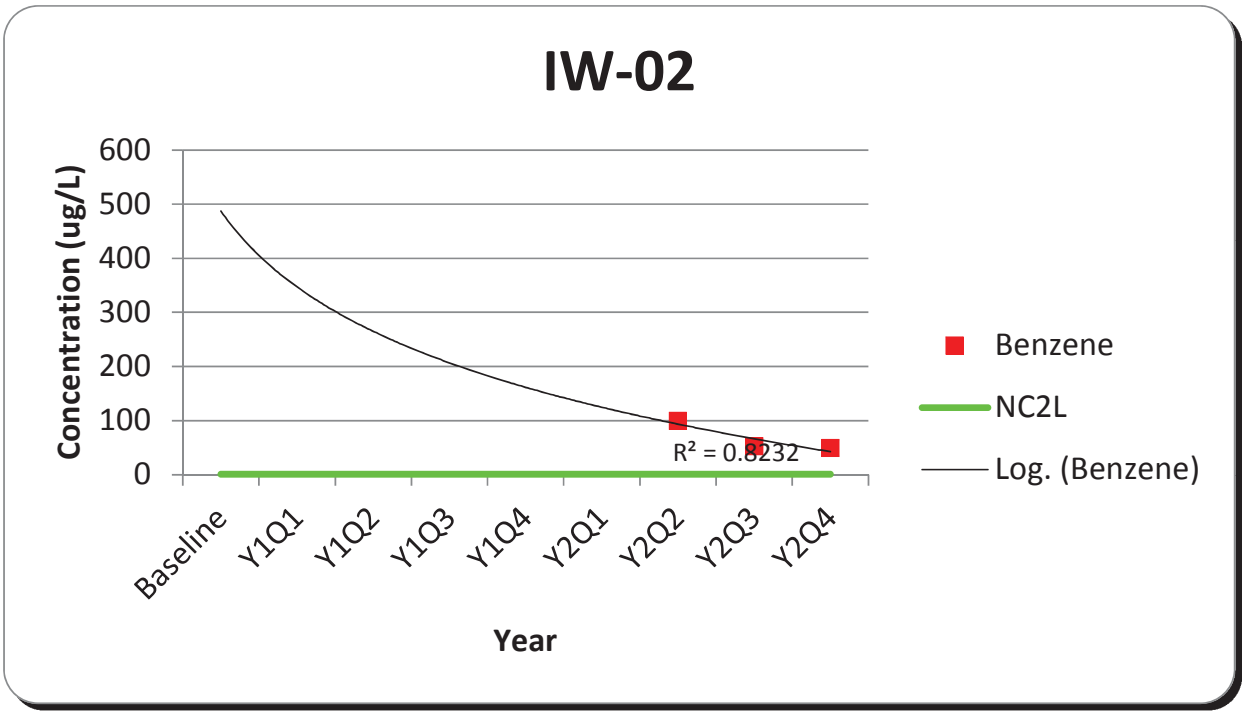

GW-28S
Concentration (ug/L)
45
40
35
30
25
20
15
10
5
0
R² = 0.3653
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

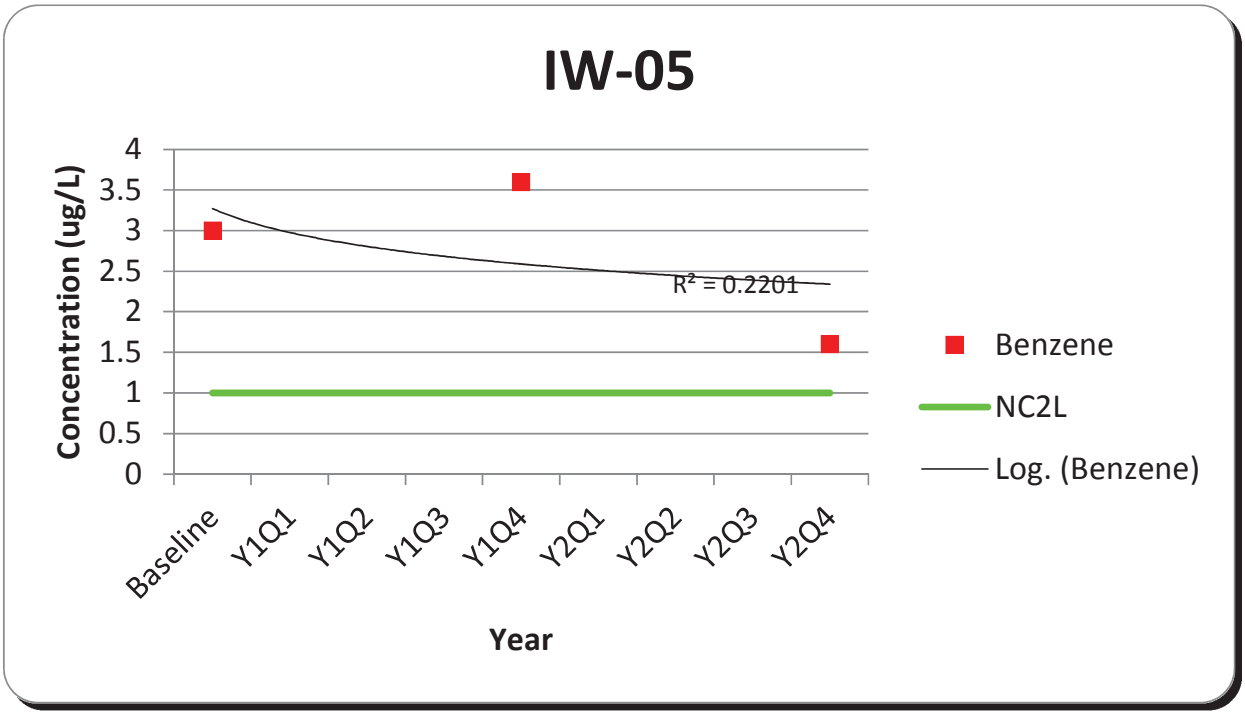

GW-4
Concentration (ug/L)
700
600
500
400
300
200
100
0
R² = 0.163
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

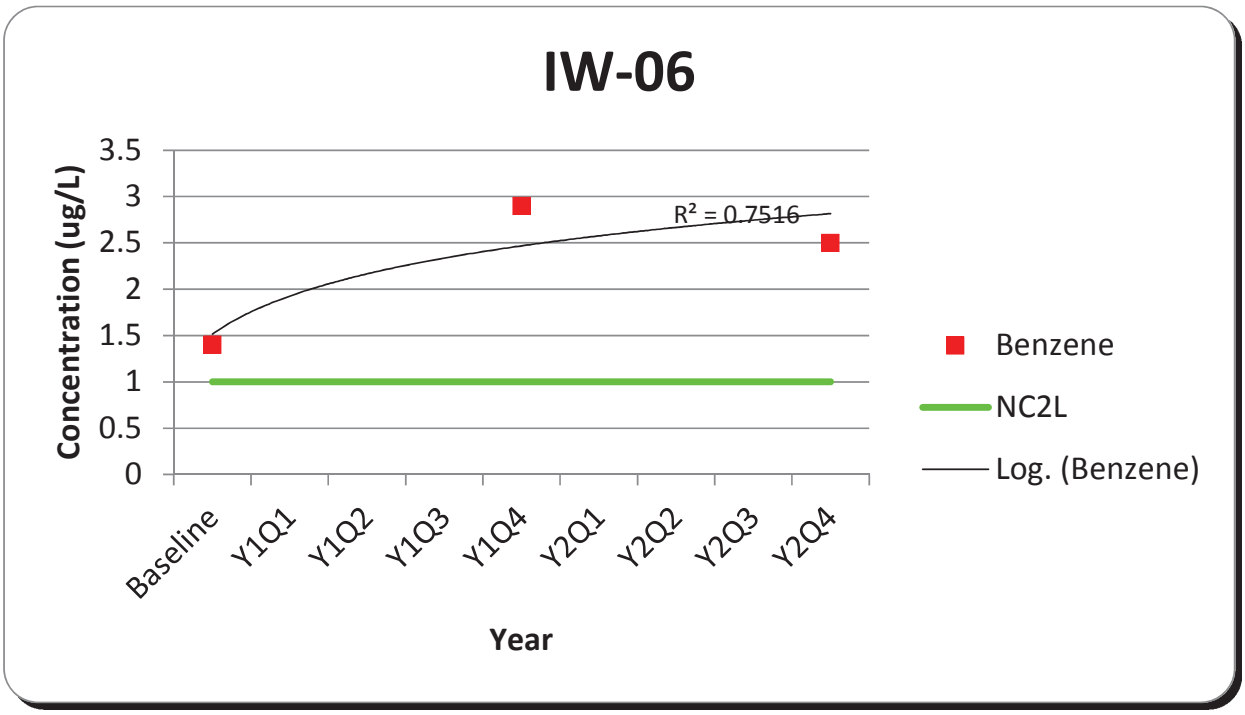

GW-4I
Concentration (ug/L)
5
4
3
2
1
0
R² = 0.0002
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

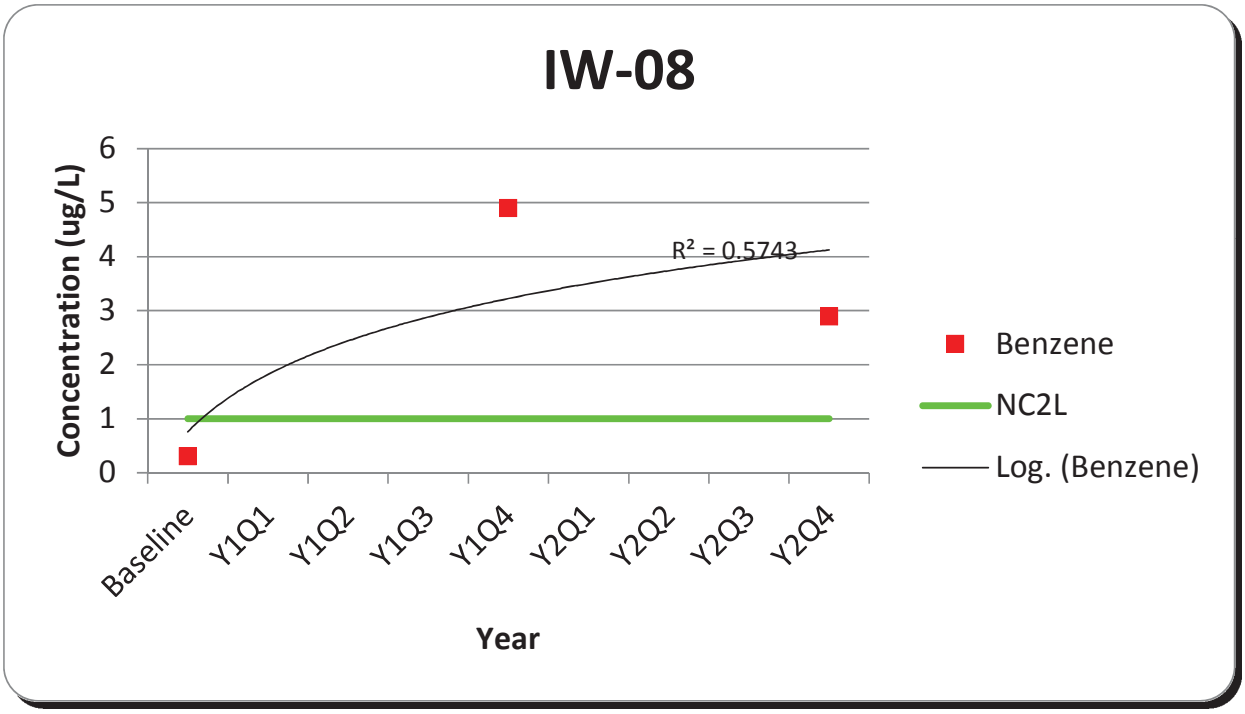

GW-41SR
Concentration (ug/L)
3.5
3
2.5
2
1.5
1
0.5
0
R² = 0.8511
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

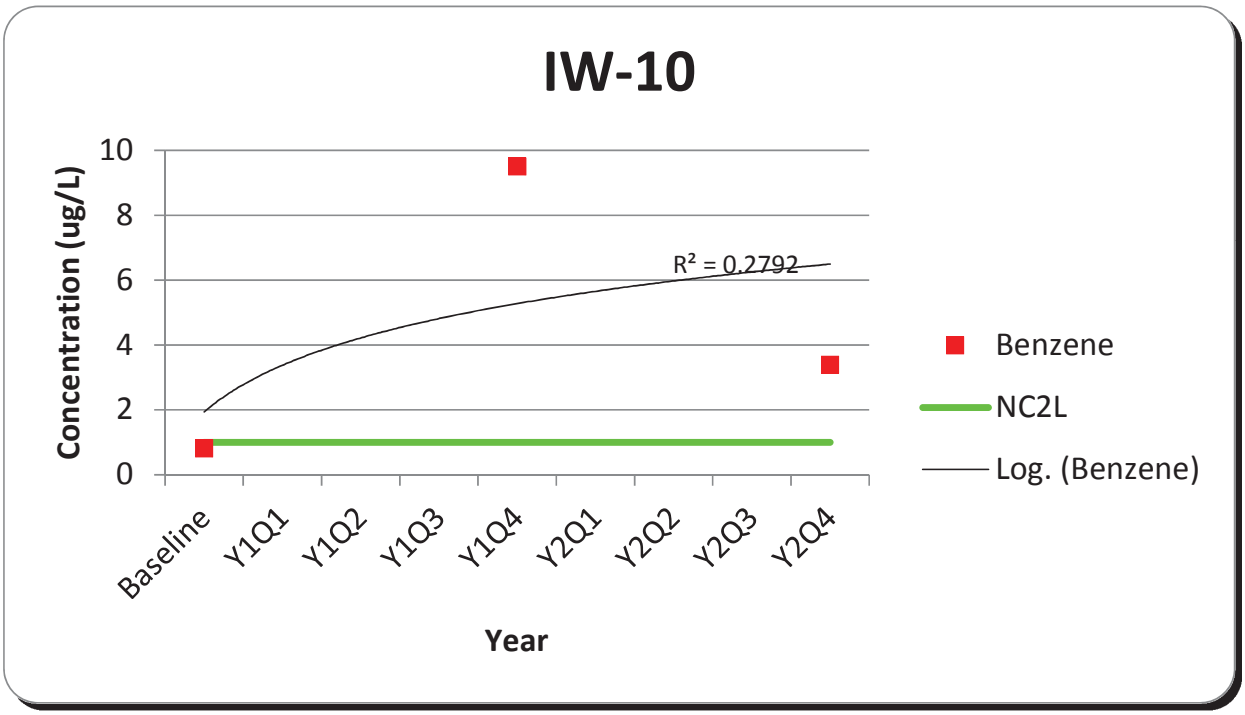

IW-01
Concentration (ug/L)
3
2.5
2
1.5
1
0.5
0
R² = 0.2617
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

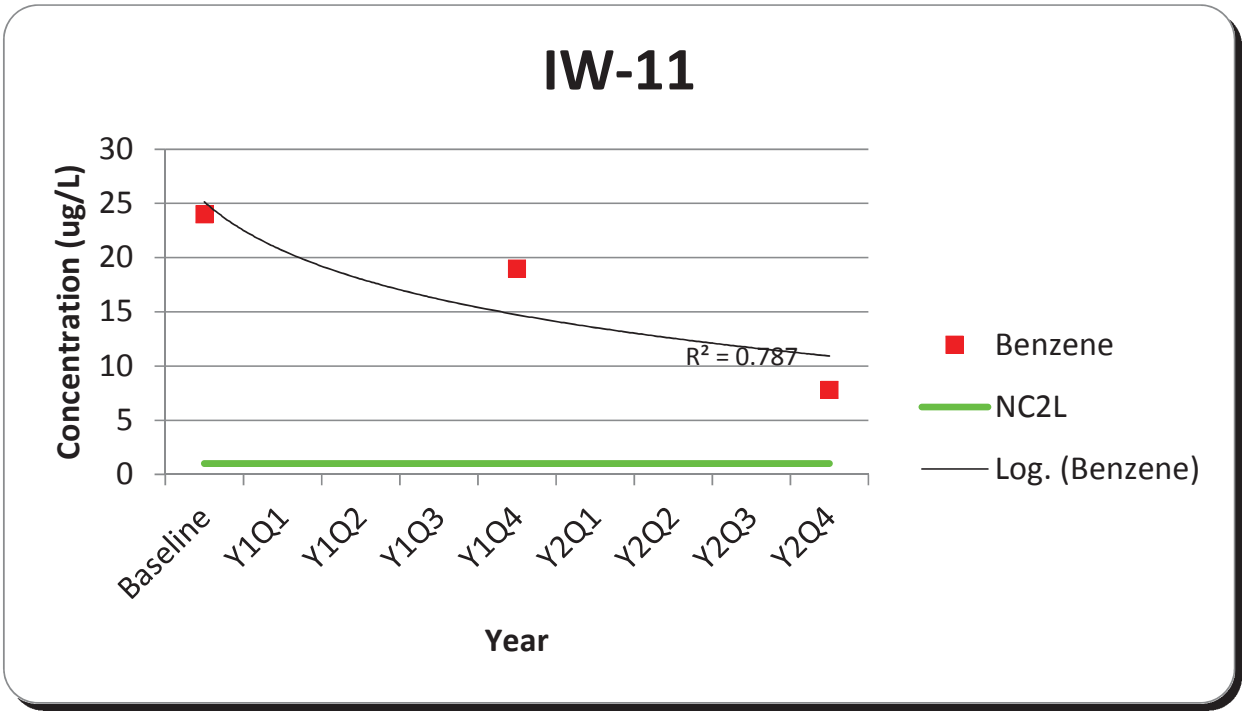

IW-02
Concentration (ug/L)
600
500
400
300
200
100
0
R² = 0.8232
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

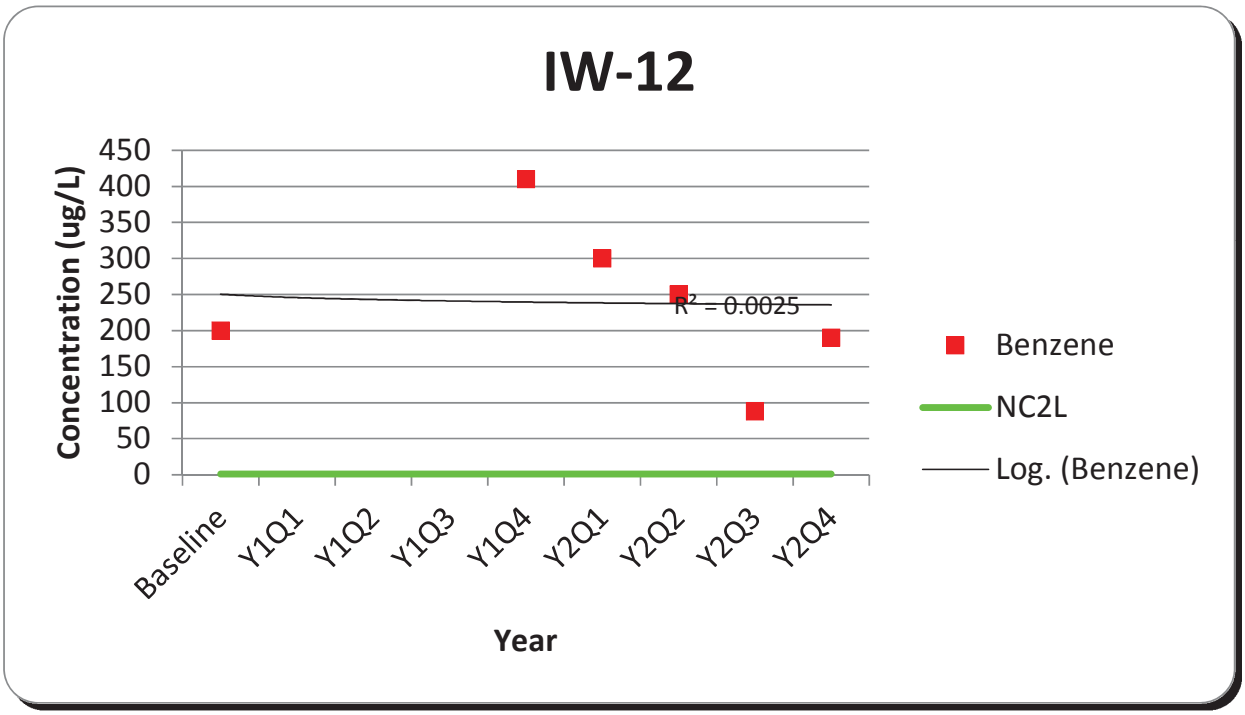

IW-05
Concentration (ug/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
R² = 0.2201
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

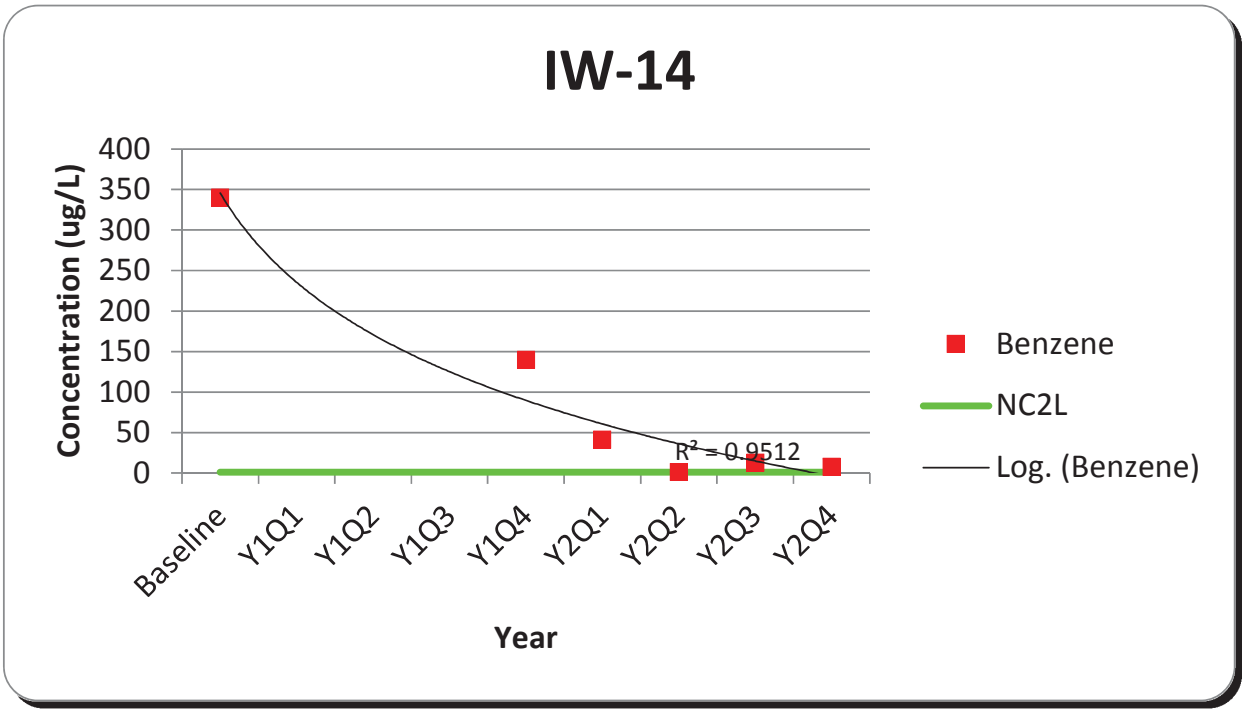

IW-06
Concentration (ug/L)
3.5
3
2.5
2
1.5
1
0.5
0
R² = 0.7516
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

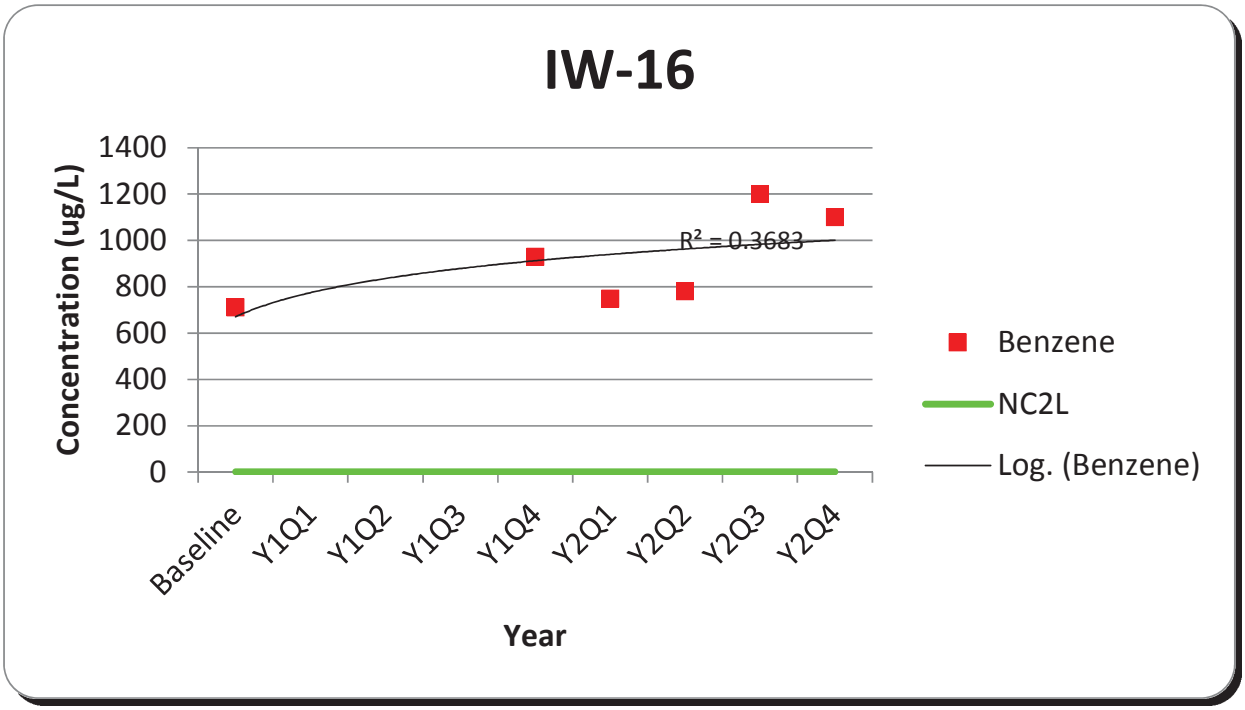

IW-08
Concentration (ug/L)
6
5
4
3
2
1
0
R² = 0.5743
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

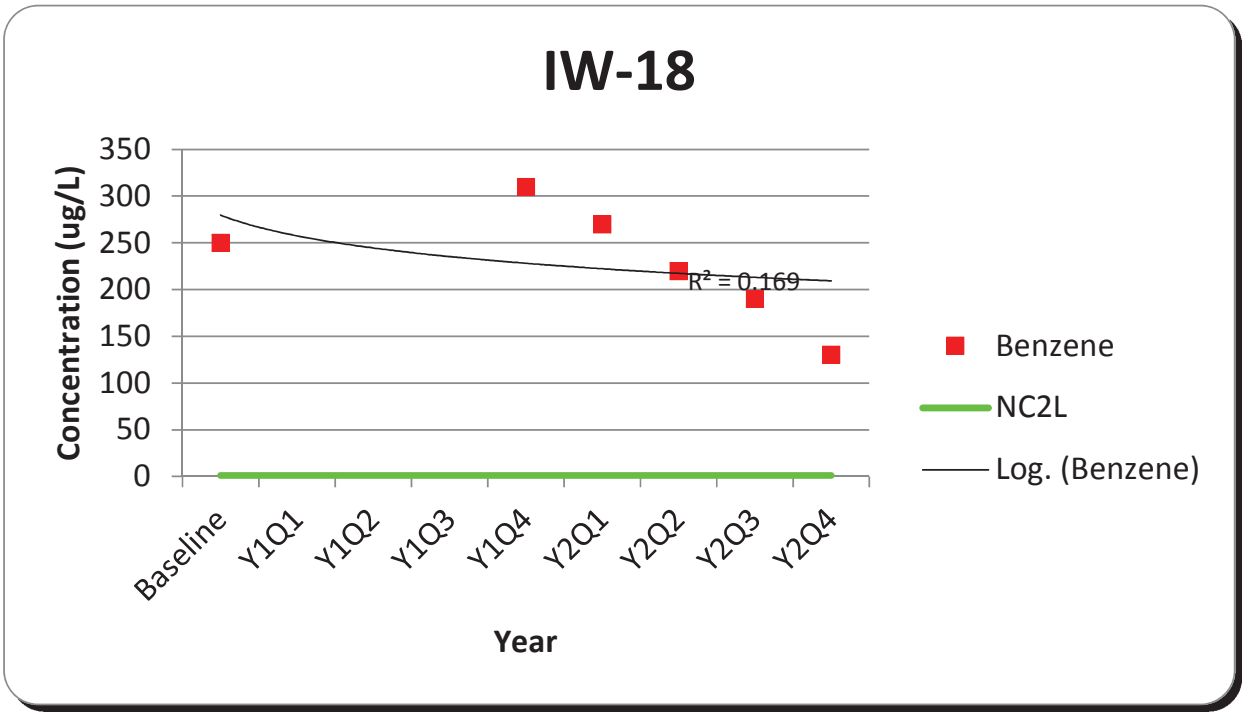

IW-10
Concentration (ug/L)
10
8
6
4
2
0
R² = 0.2792
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

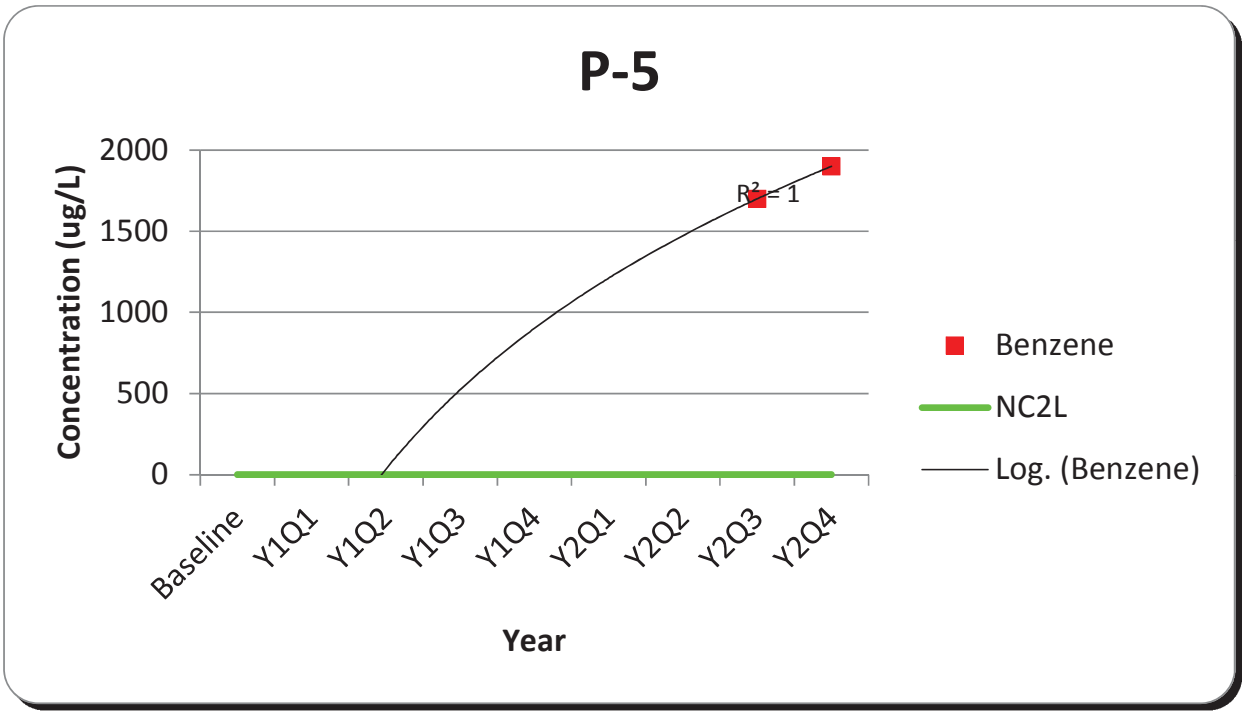

IW-11
Concentration (ug/L)
30
25
20
15
10
5
0
R² = 0.787
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)


IW-12
Concentration (ug/L)
450
400
350
300
250
200
150
100
50
0
R² = 0.0025
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

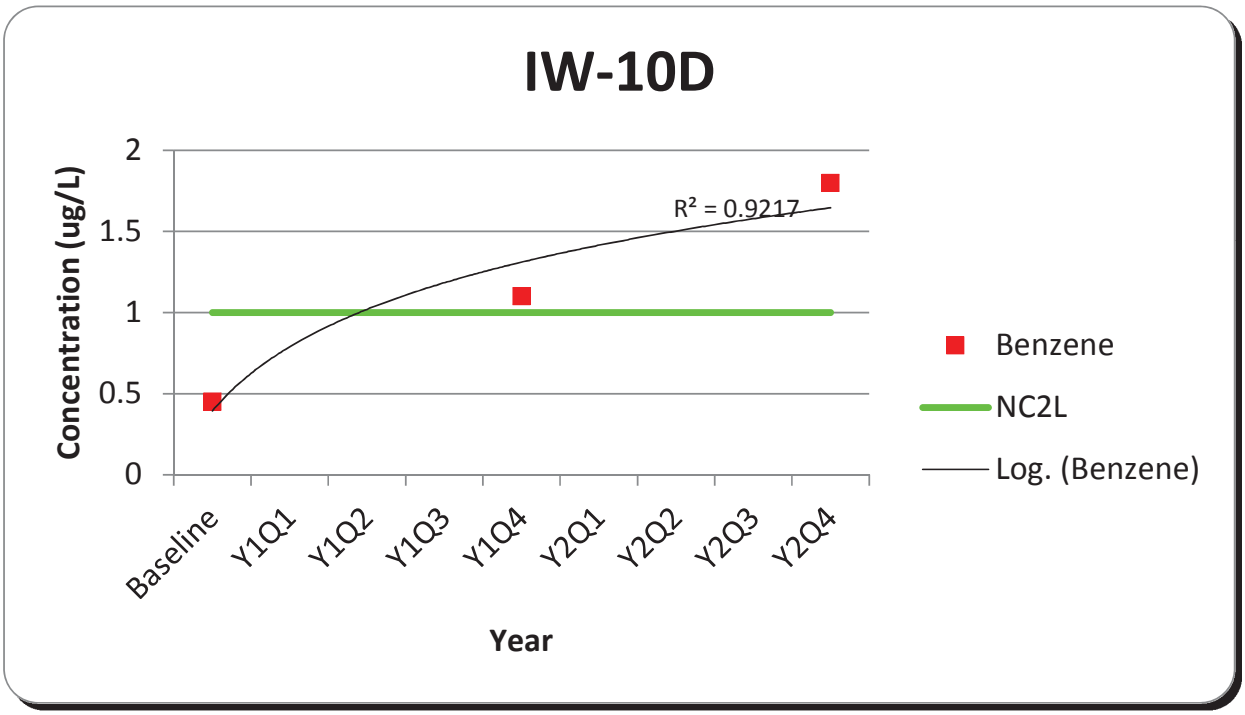

IW-14
Concentration (ug/L)
400
350
300
250
200
150
100
50
0
R² = 0.9512
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

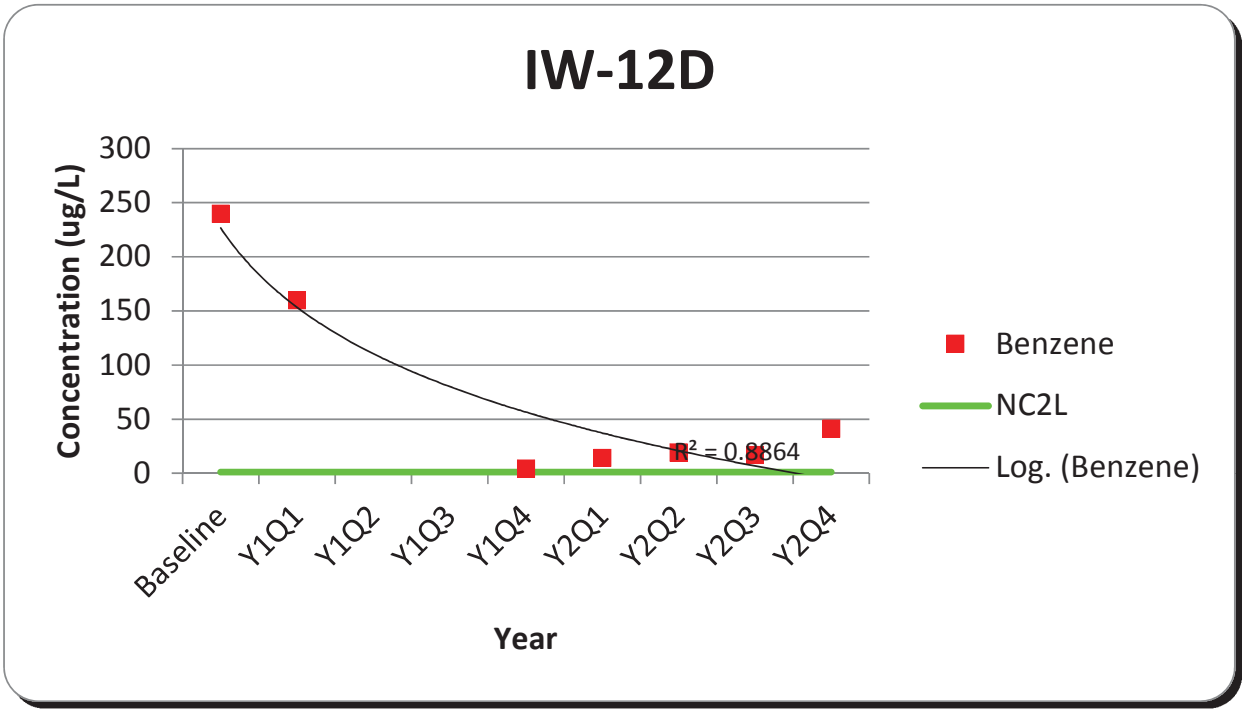

IW-16
Concentration (ug/L)
1400
1200
1000
800
600
400
200
0
R² = 0.3683
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)


IW-18
Concentration (ug/L)
350
300
250
200
150
100
50
0
R² = 0.169
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

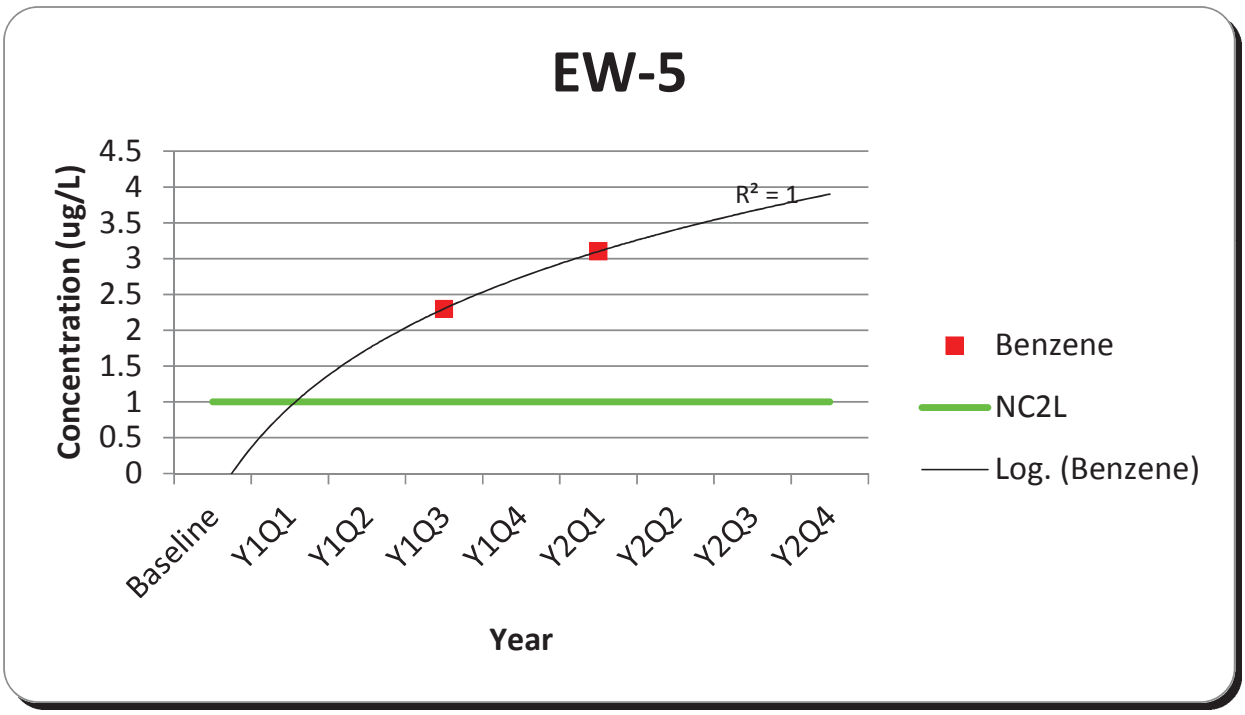

P-5
Concentration (ug/L)
2000
1500
1000
500
0
R² = 1
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

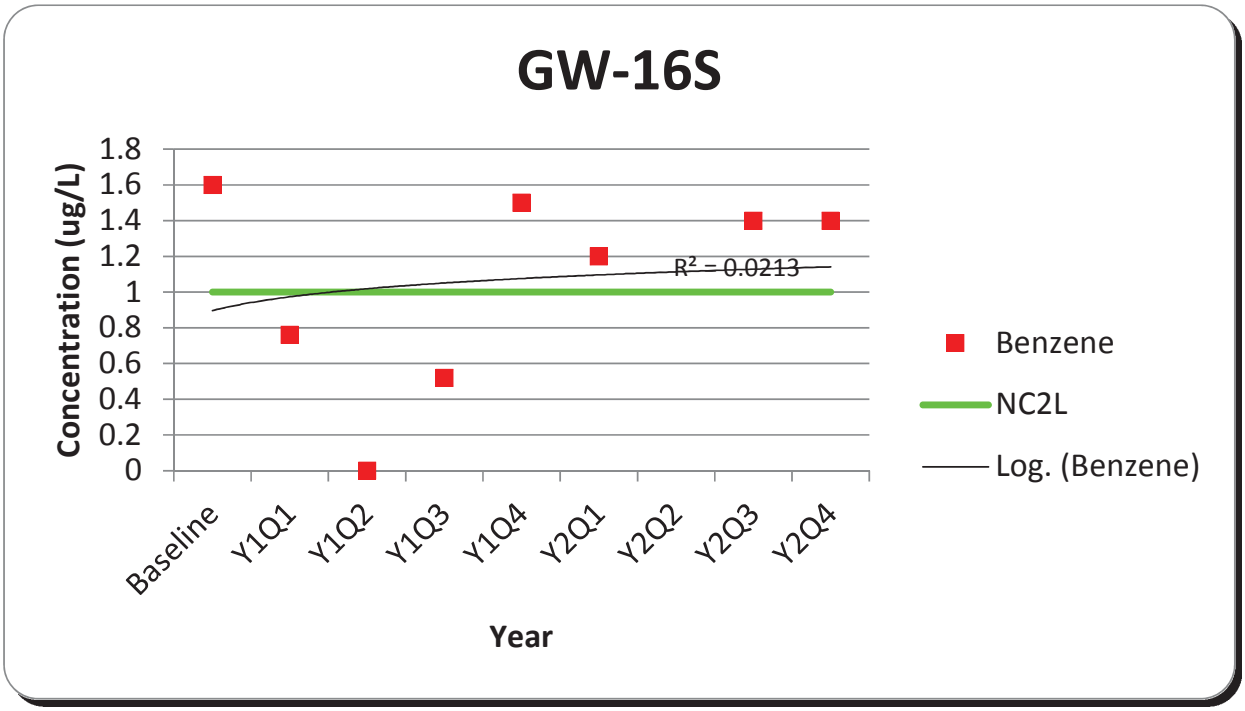
SWMU-13 DEEP

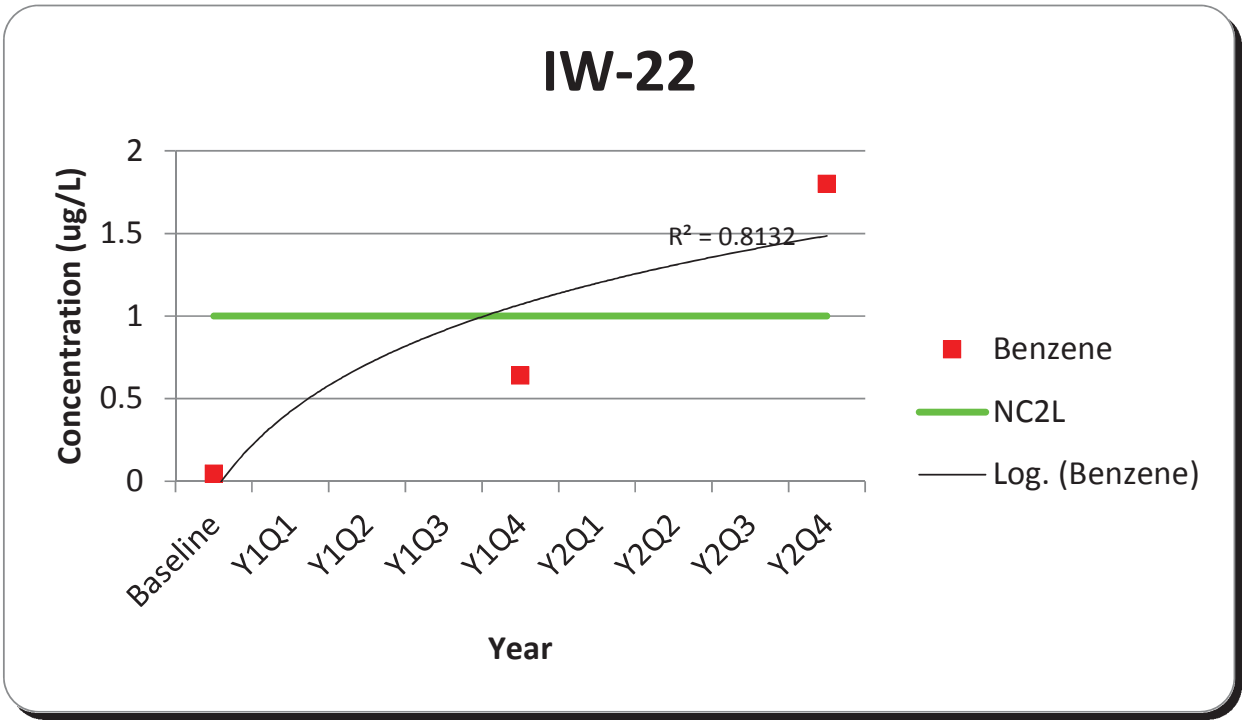

IW-10D
Concentration (ug/L)
2
1.5
1
0.5
0
R² = 0.9217
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

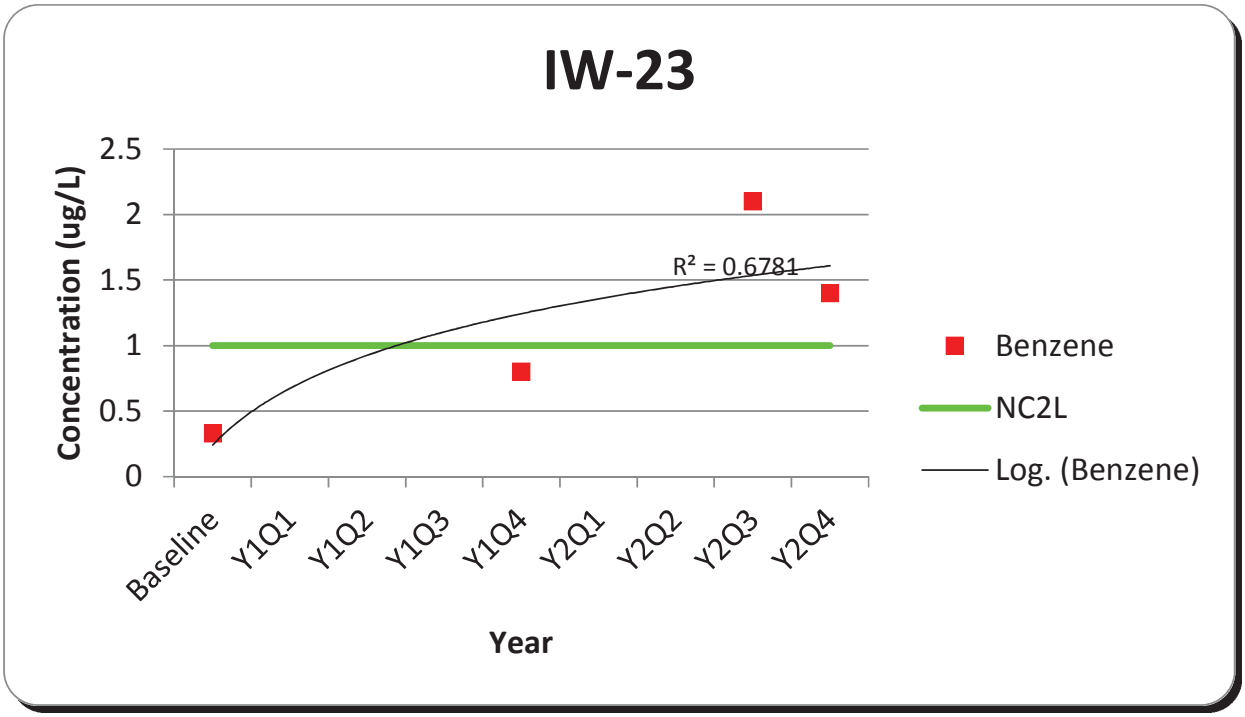

IW-12D
Concentration (ug/L)
300
250
200
150
100
50
0
R² = 0.8864
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

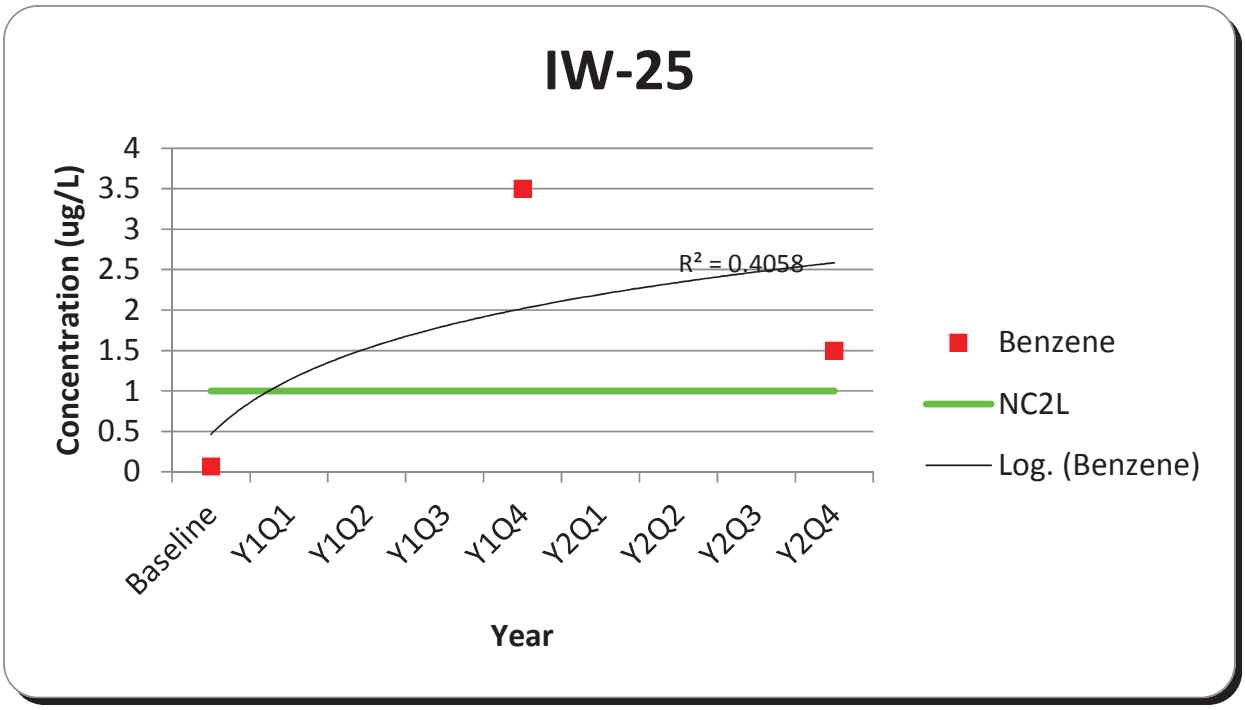
SWMU 15/16

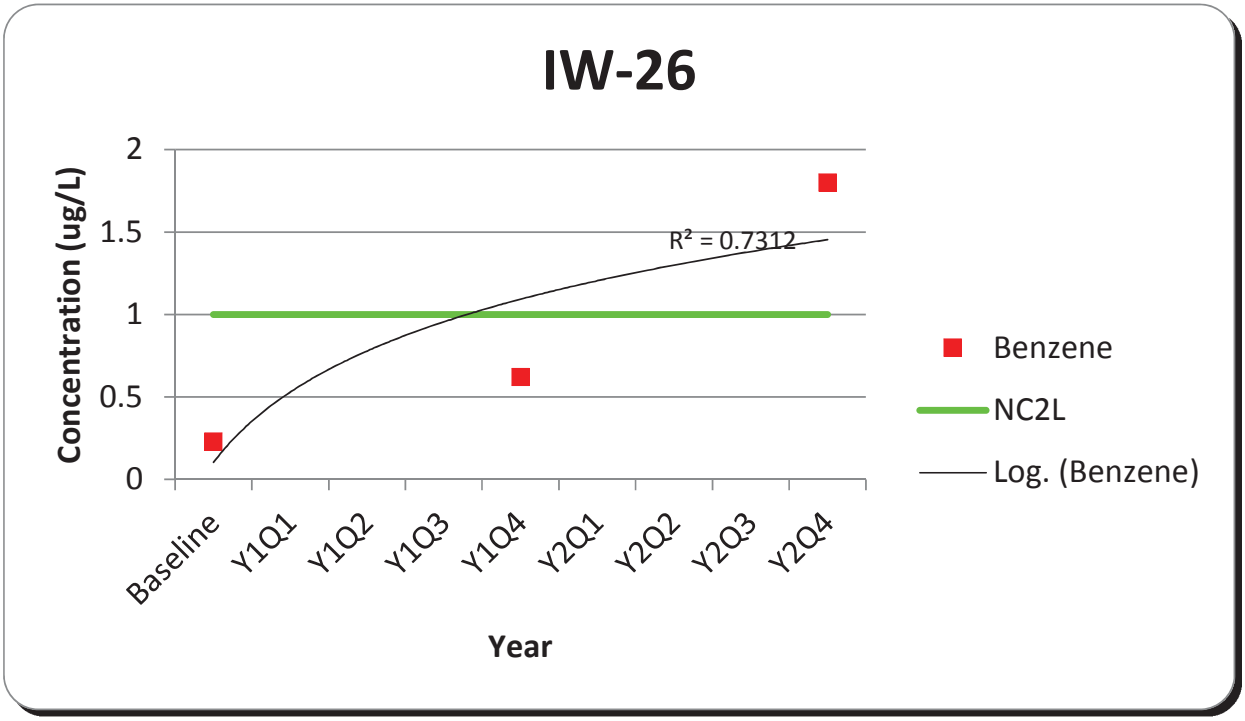

EW-5
Concentration (ug/L)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
R² = 1
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

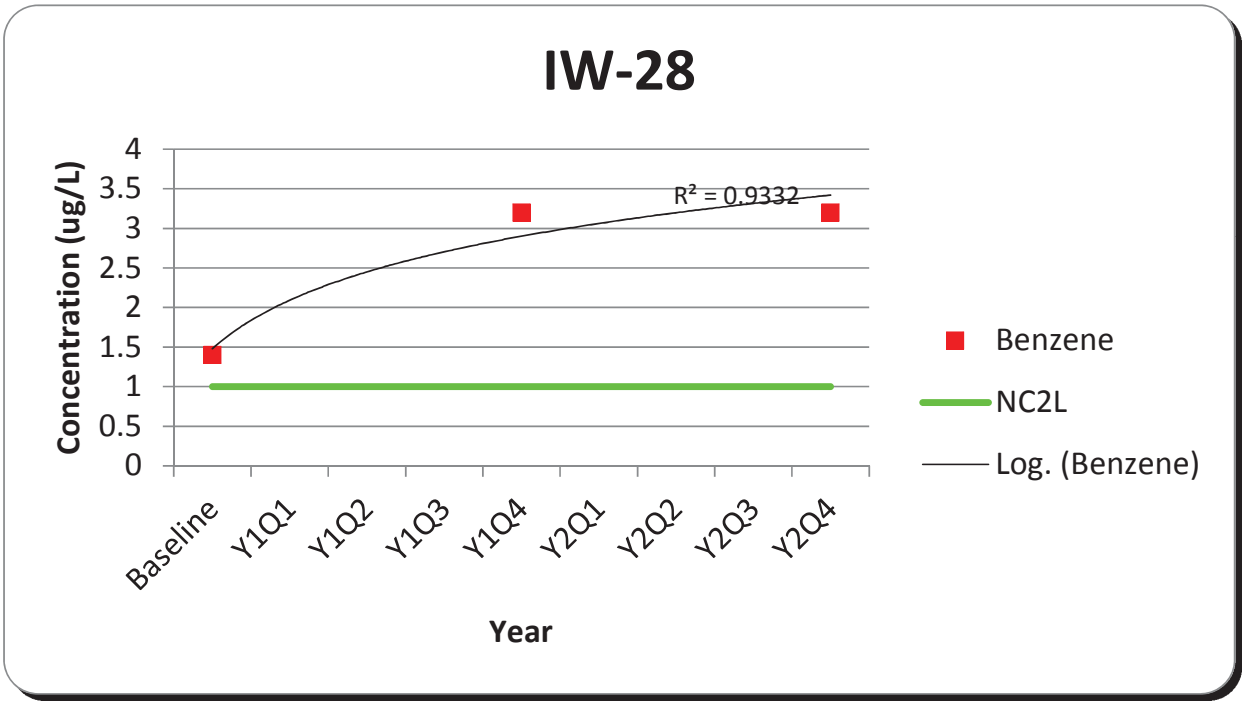

GW-16S
Concentration (ug/L)
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
R² = 0.0213
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

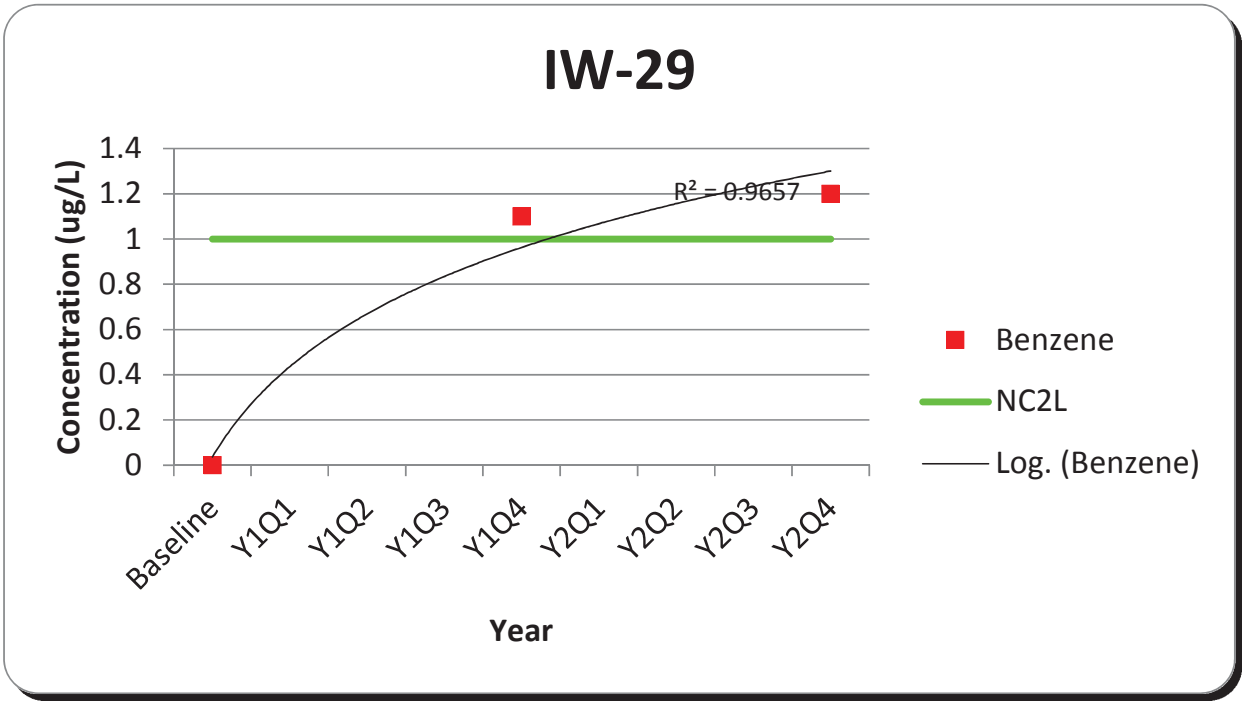

IW-22
Concentration (ug/L)
2
1.5
1
0.5
0
R² = 0.8132
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)


IW-23
Concentration (ug/L)
2.5
2
1.5
1
0.5
0
R² = 0.6781
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

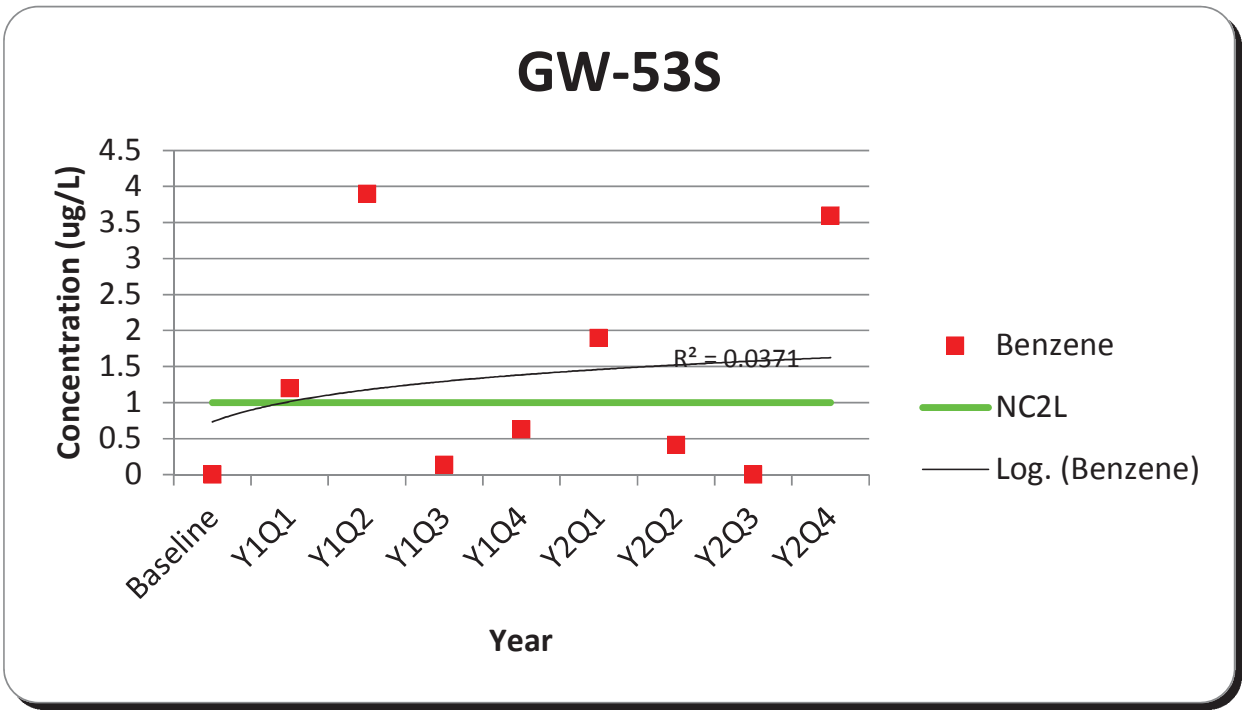

IW-25
Concentration (ug/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
R² = 0.4058
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)


IW-26
Concentration (ug/L)
2
1.5
1
0.5
0
R² = 0.7312
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)


IW-28
Concentration (ug/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
R² = 0.9332
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

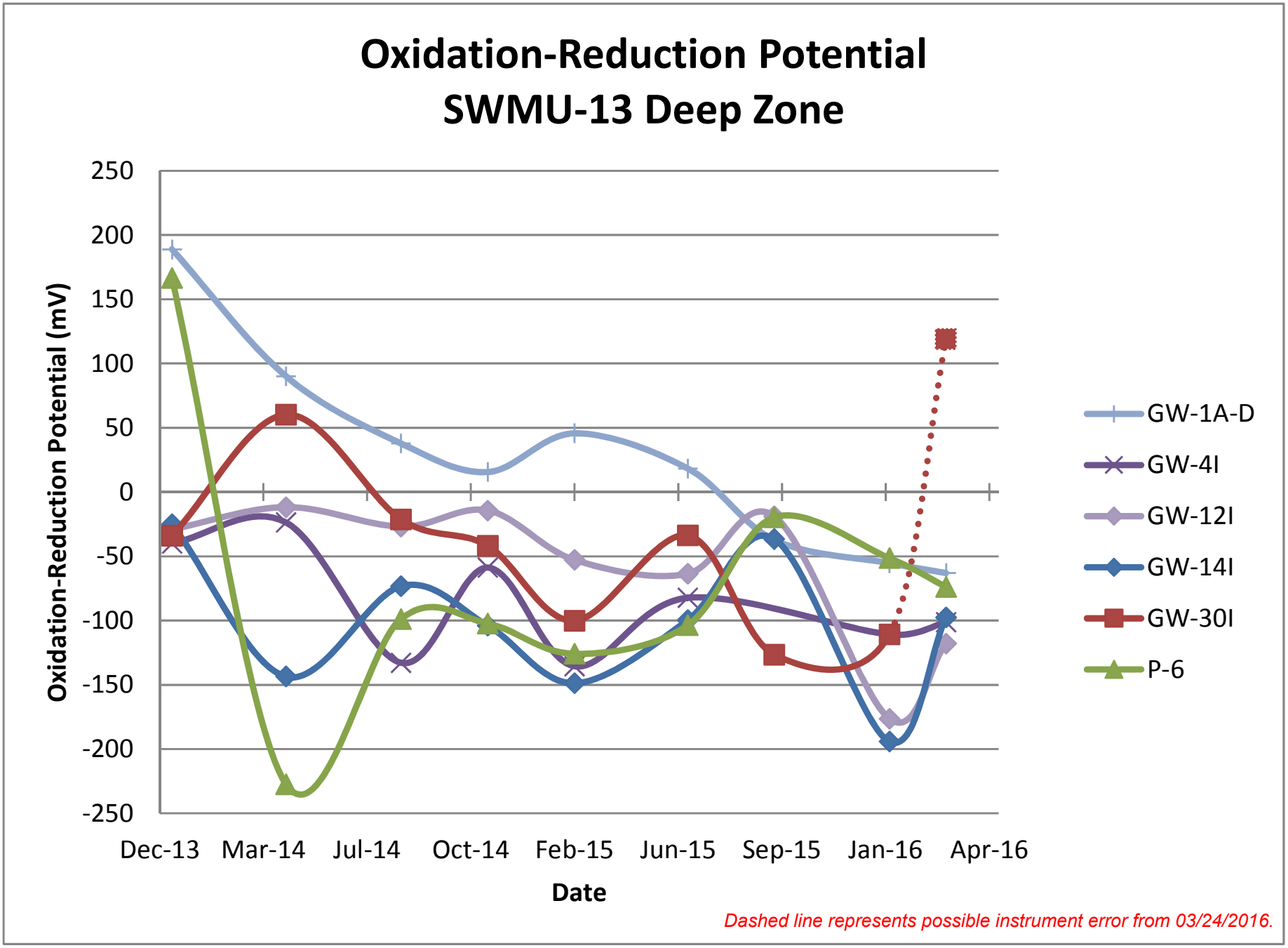

IW-29
Concentration (ug/L)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
R² = 0.9657
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

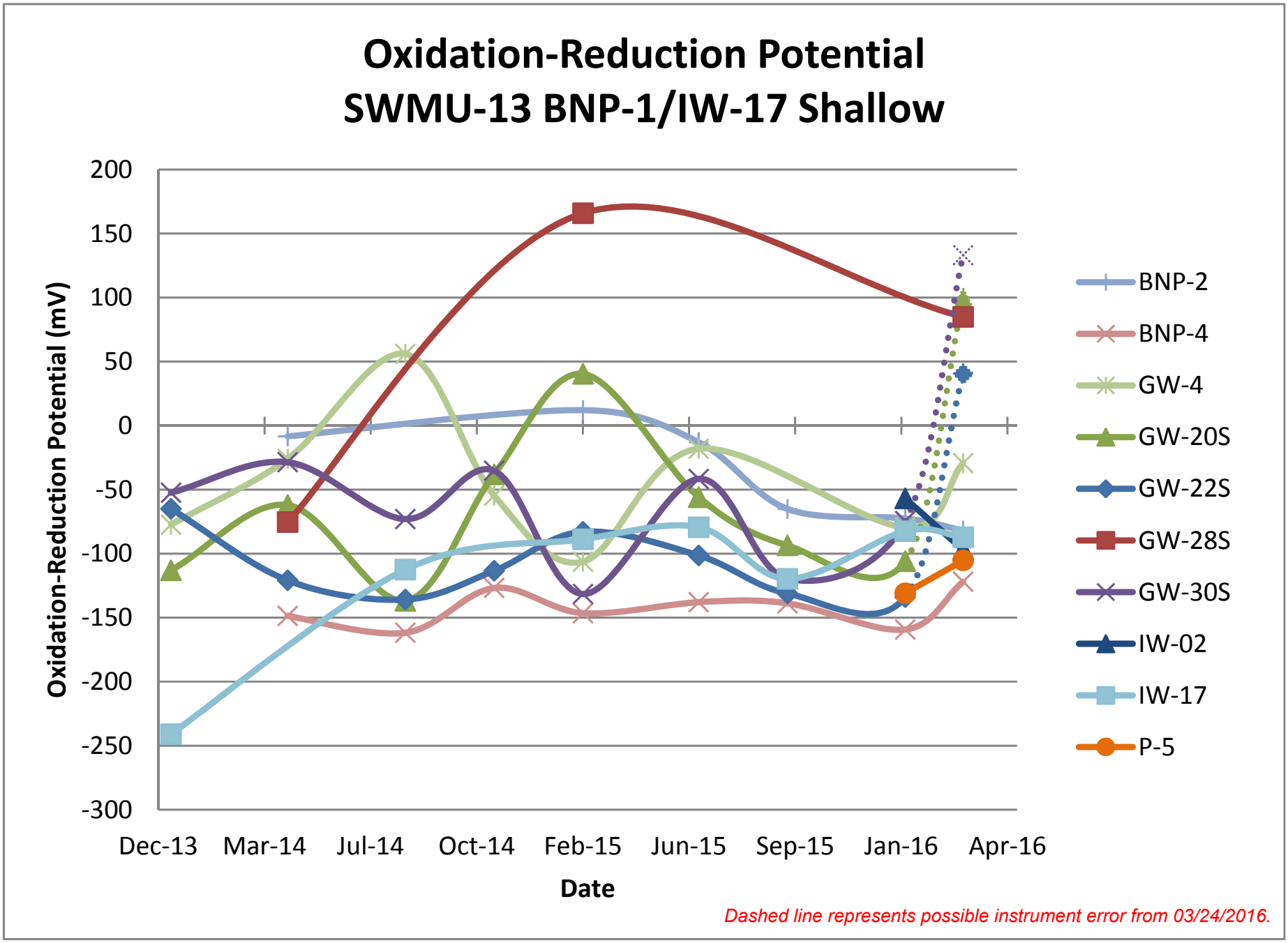
SWMU-4

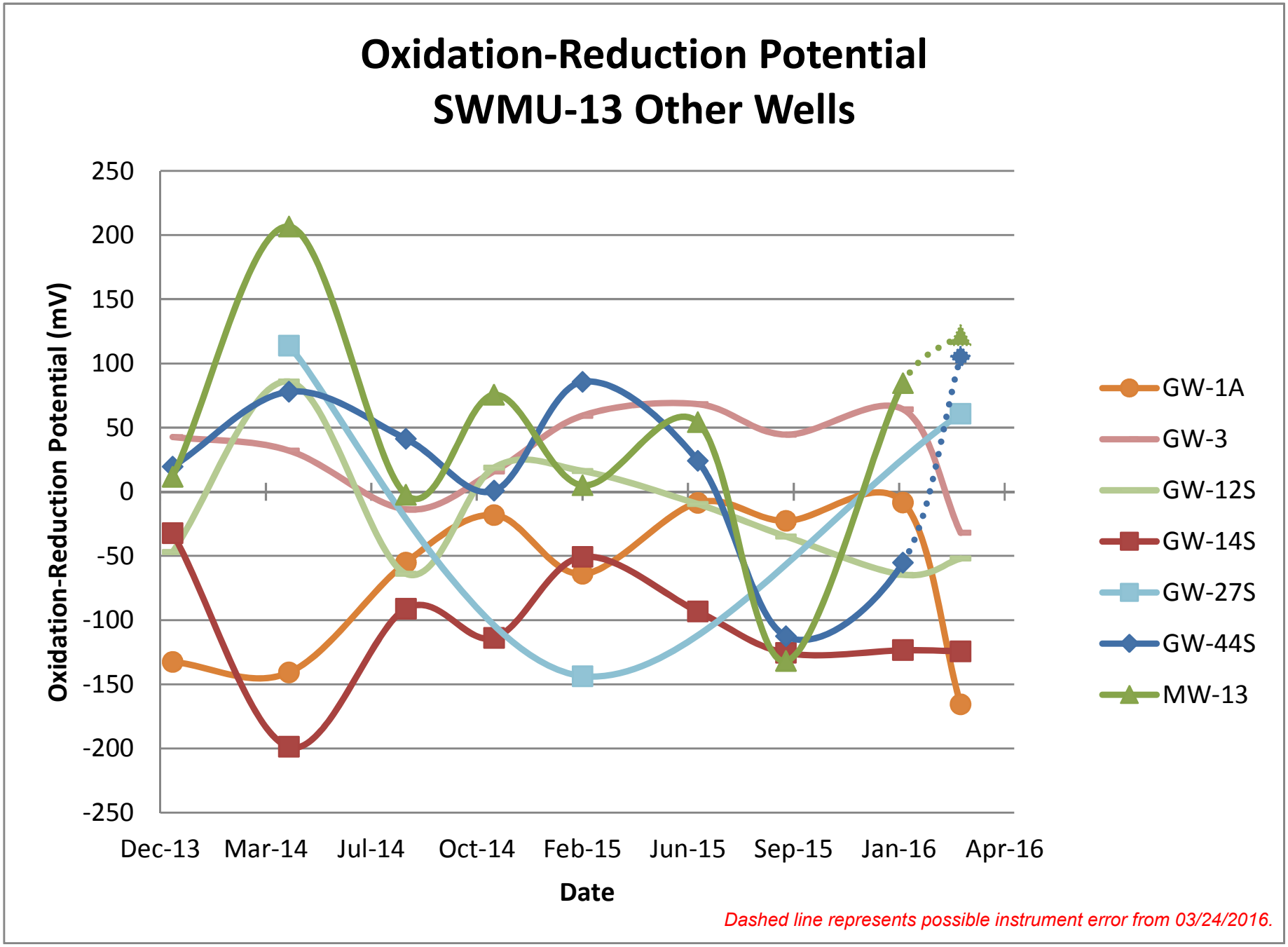

GW-53S
Concentration (ug/L)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
R² = 0.0371
Baseline
Y1Q1
Y1Q2
Y1Q3
Y1Q4
Y2Q1
Y2Q2
Y2Q3
Y2Q4
Year
Benzene
NC2L
Log. (Benzene)

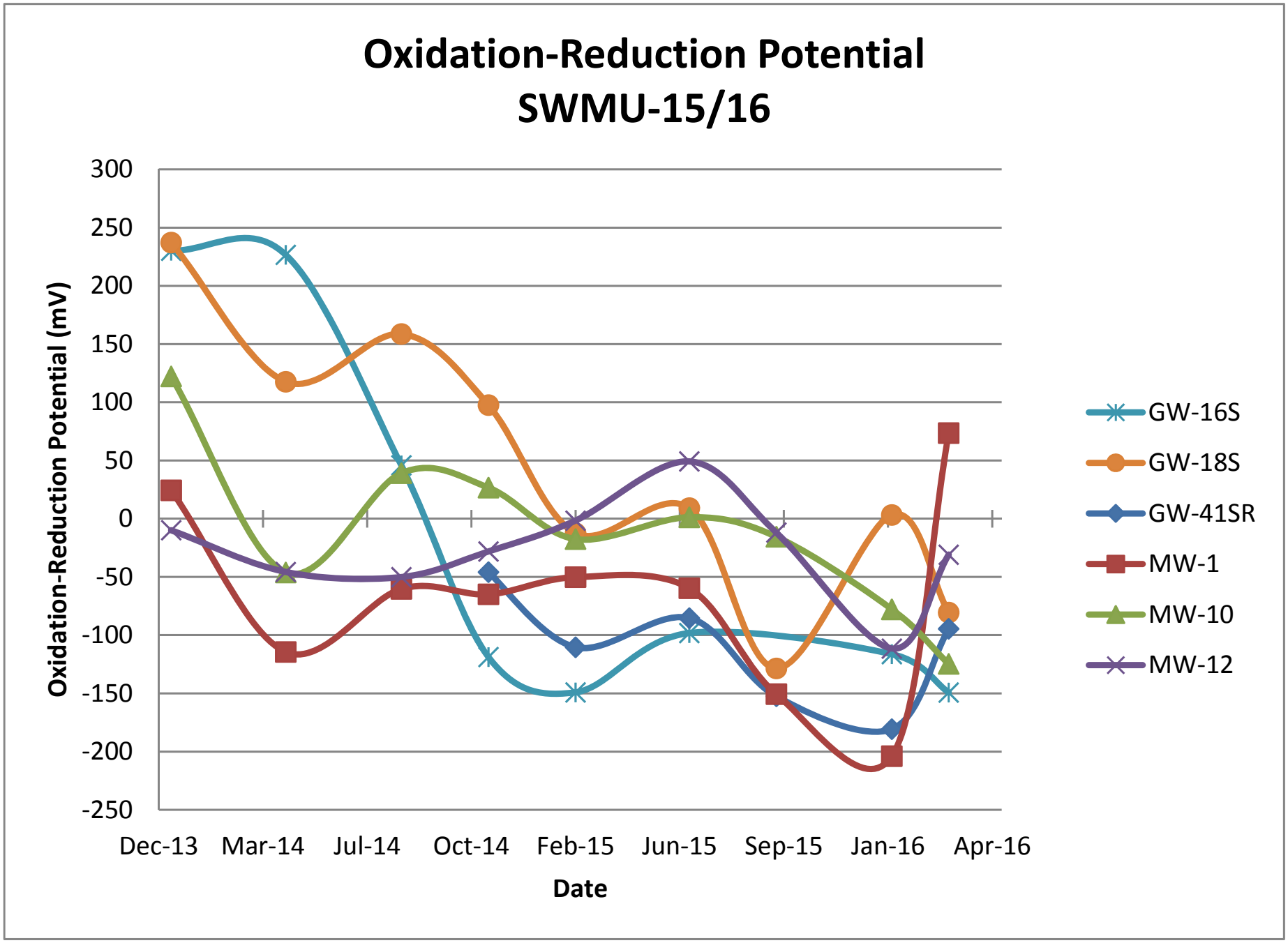
H-2

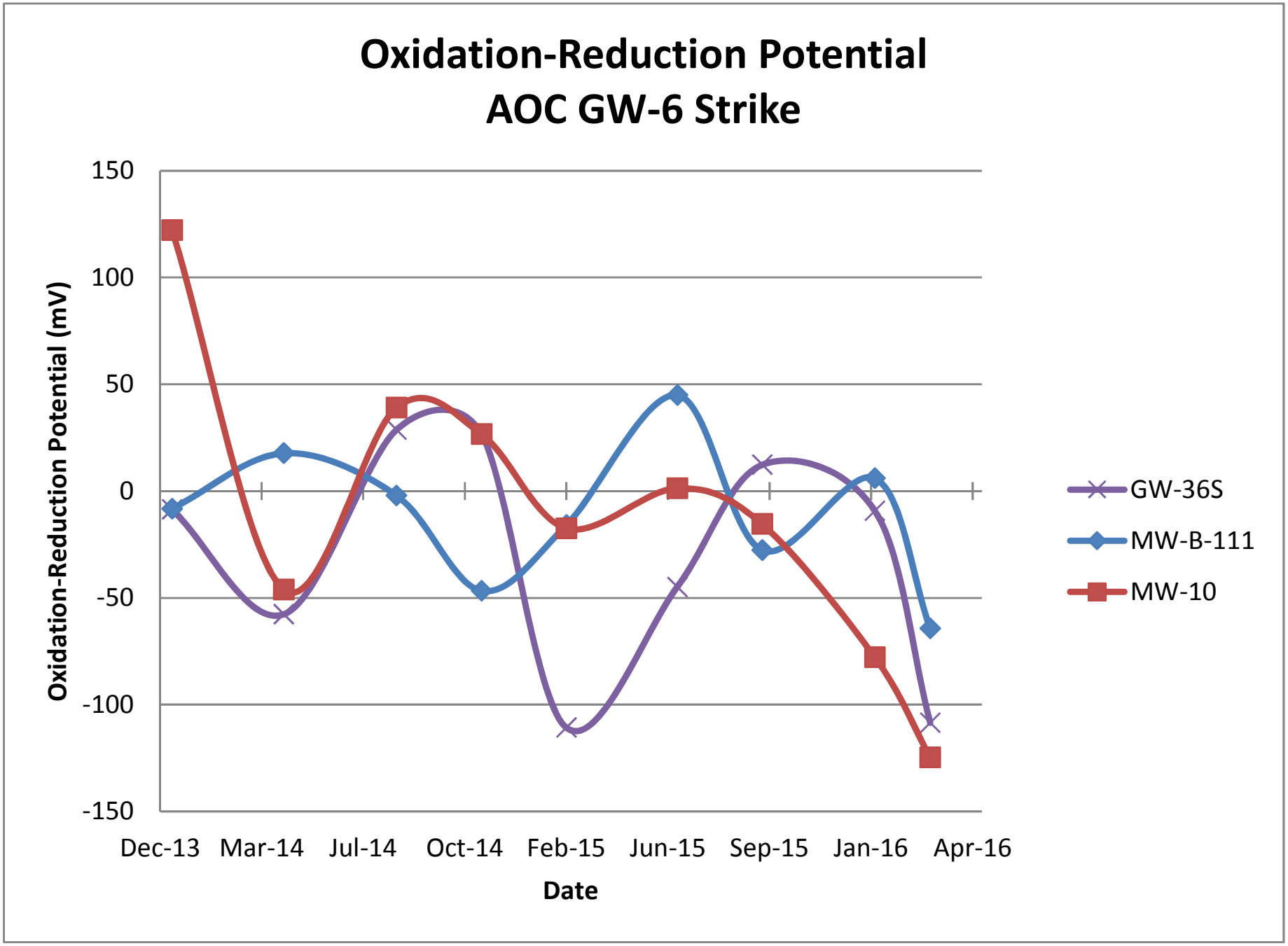
ORP TRENDS

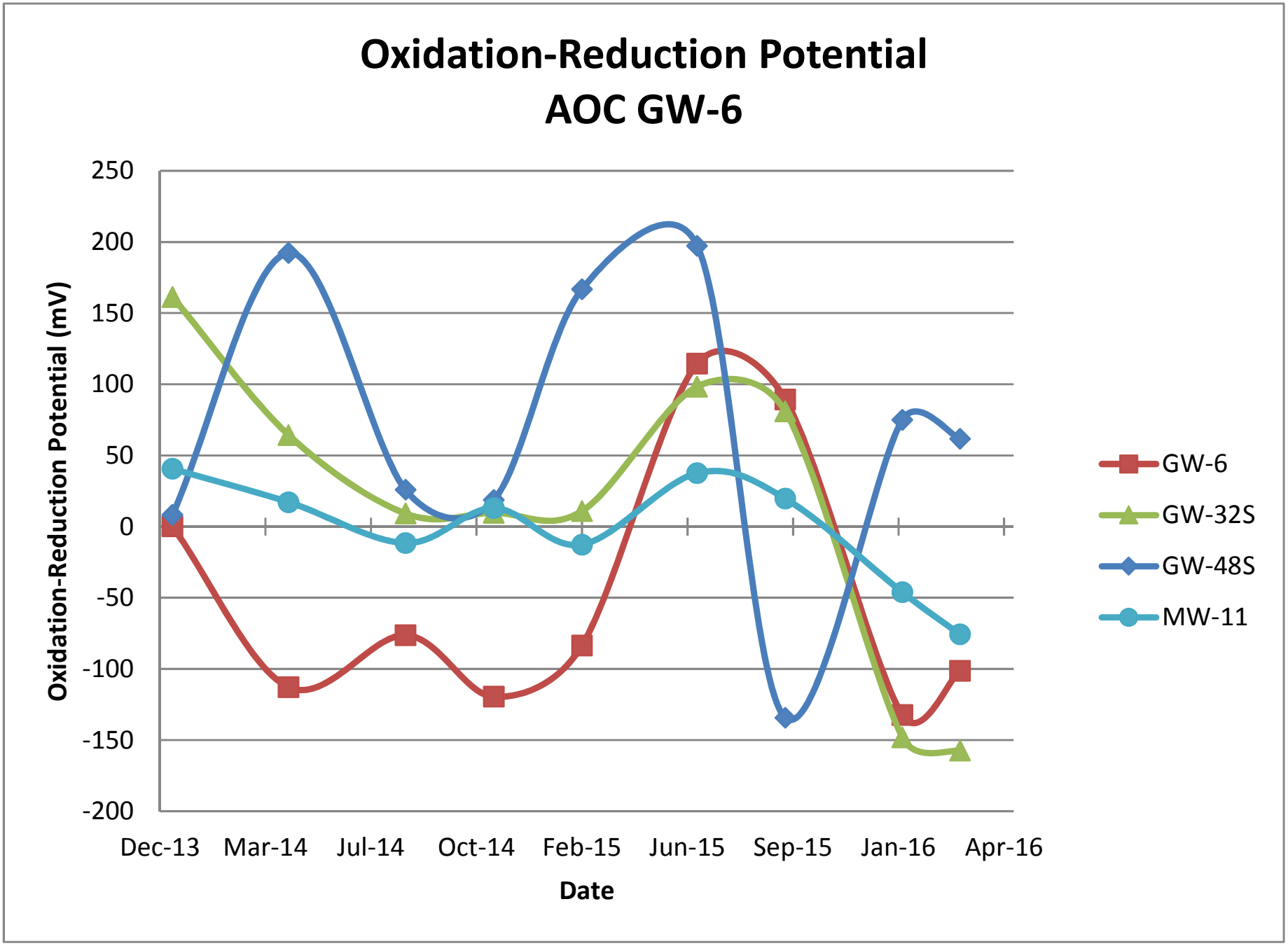

Oxidation-Reduction Potential
SWMU-13 Deep Zone
Oxidation-Reduction Potential (mV)
250
200
150
100
50
0
-50
-100
-150
-200
-250
Dec-13
Mar-14
Jul-14
Oct-14
Feb-15
Jun-15
Sep-15
Jan-16
Apr-16
Date
GW-1A-D
GW-4I
GW-12I
GW-14I
GW-30I
P-6
Dashed line represents possible instrument error from 03/24/2016.

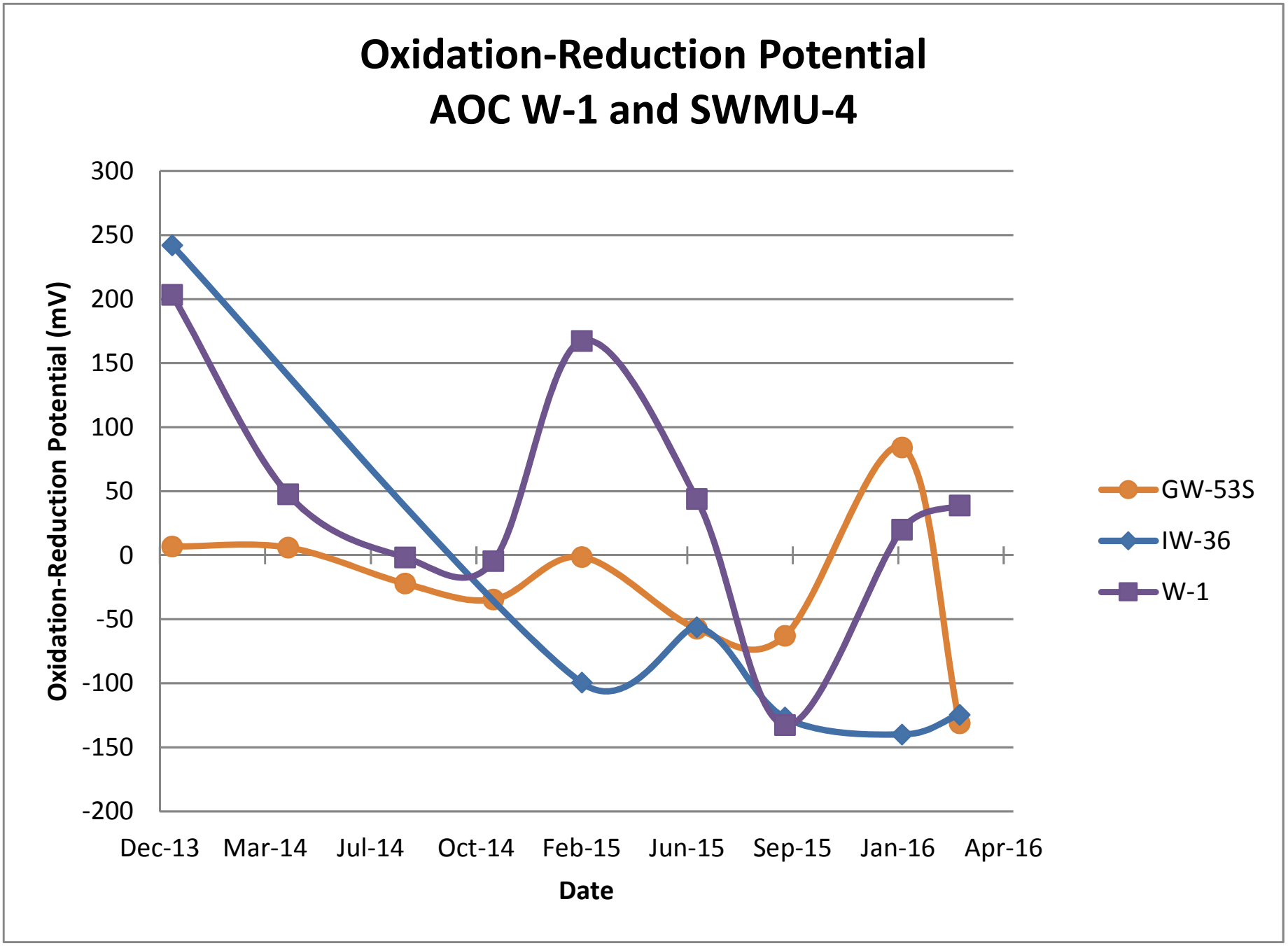

Oxidation-Reduction Potential
SWMU-13 BNP-1/IW-17 Shallow
Oxidation-Reduction Potential (mV)
200
150
100
50
0
-50
-100
-150
-200
-250
-300
Dec-13
Mar-14
Jul-14
Oct-14
Feb-15
Jun-15
Sep-15
Jan-16
Apr-16
Date
BNP-2
BNP-4
GW-4
GW-20S
GW-22S
GW-28S
GW-30S
IW-02
IW-17
P-5
Dashed line represents possible instrument error from 03/24/2016.


Oxidation-Reduction Potential
SWMU-13 Other Wells
Oxidation-Reduction Potential (mV)
250
200
150
100
50
0
-50
-100
-150
-200
-250
Dec-13
Mar-14
Jul-14
Oct-14
Feb-15
Jun-15
Sep-15
Jan-16
Apr-16
Date
GW-1A
GW-3
GW-12S
GW-14S
GW-27S
GW-44S
MW-13
Dashed line represents possible instrument error from 03/24/2016.


Oxidation-Reduction Potential
SWMU-15/16
Oxidation-Reduction Potential (mV)
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
Dec-13
Mar-14
Jul-14
Oct-14
Feb-15
Jun-15
Sep-15
Jan-16
Apr-16
Date
GW-16S
GW-18S
GW-41SR
MW-1
MW-10
MW-12


Oxidation-Reduction Potential
AOC GW-6 Strike
Oxidation-Reduction Potential (mV)
150
100
50
0
-50
-100
-150
Dec-13
Mar-14
Jul-14
Oct-14
Feb-15
Jun-15
Sep-15
Jan-16
Apr-16
Date
GW-36S
MW-B-111
MW-10

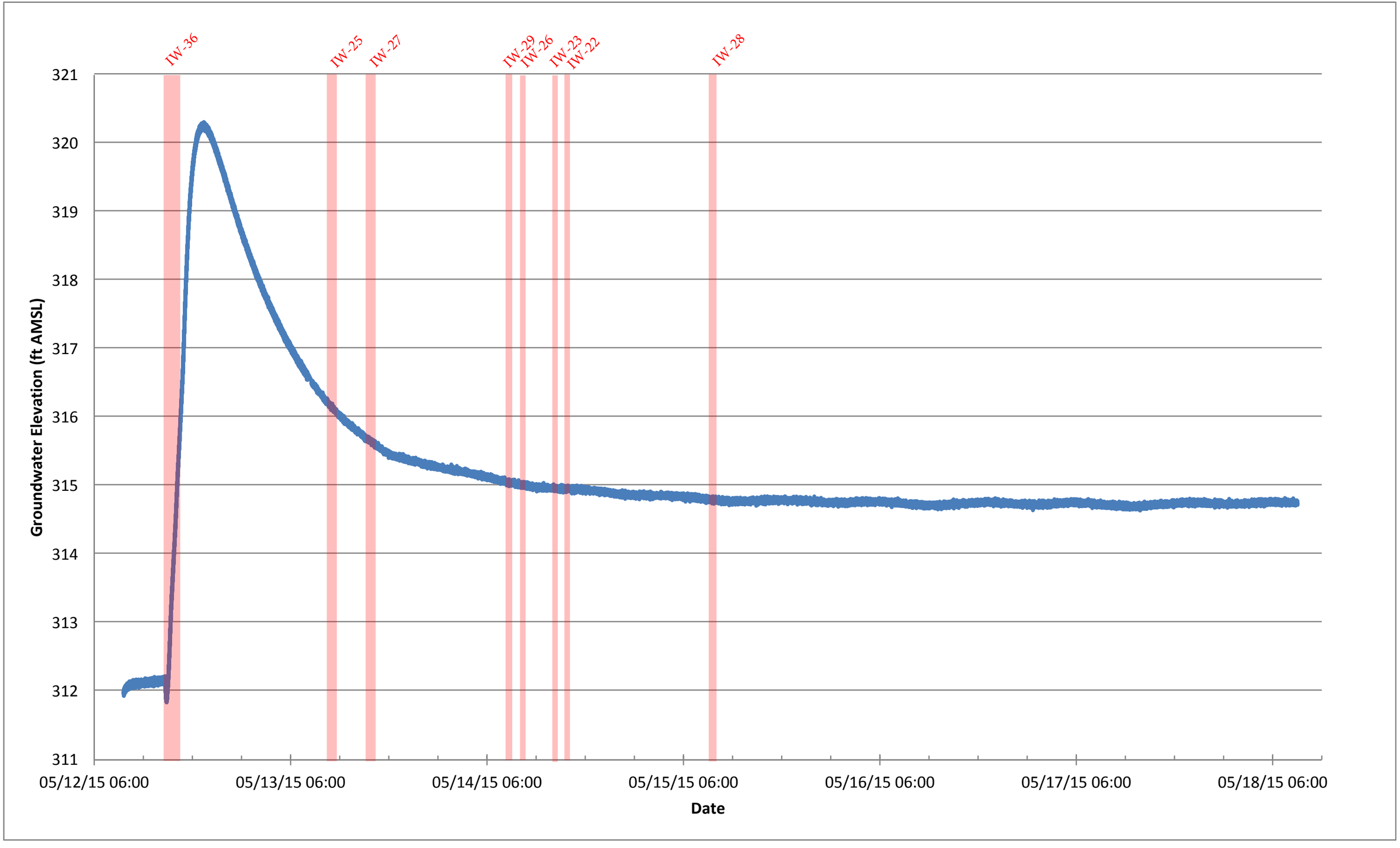

Oxidation-Reduction Potential
AOC GW-6
Oxidation-Reduction Potential (mV)
250
200
150
100
50
0
-50
-100
-150
-200
Dec-13
Mar-14
Jul-14
Oct-14
Feb-15
Jun-15
Sep-15
Jan-16
Apr-16
Date
GW-6
GW-32S
GW-48S
MW-11

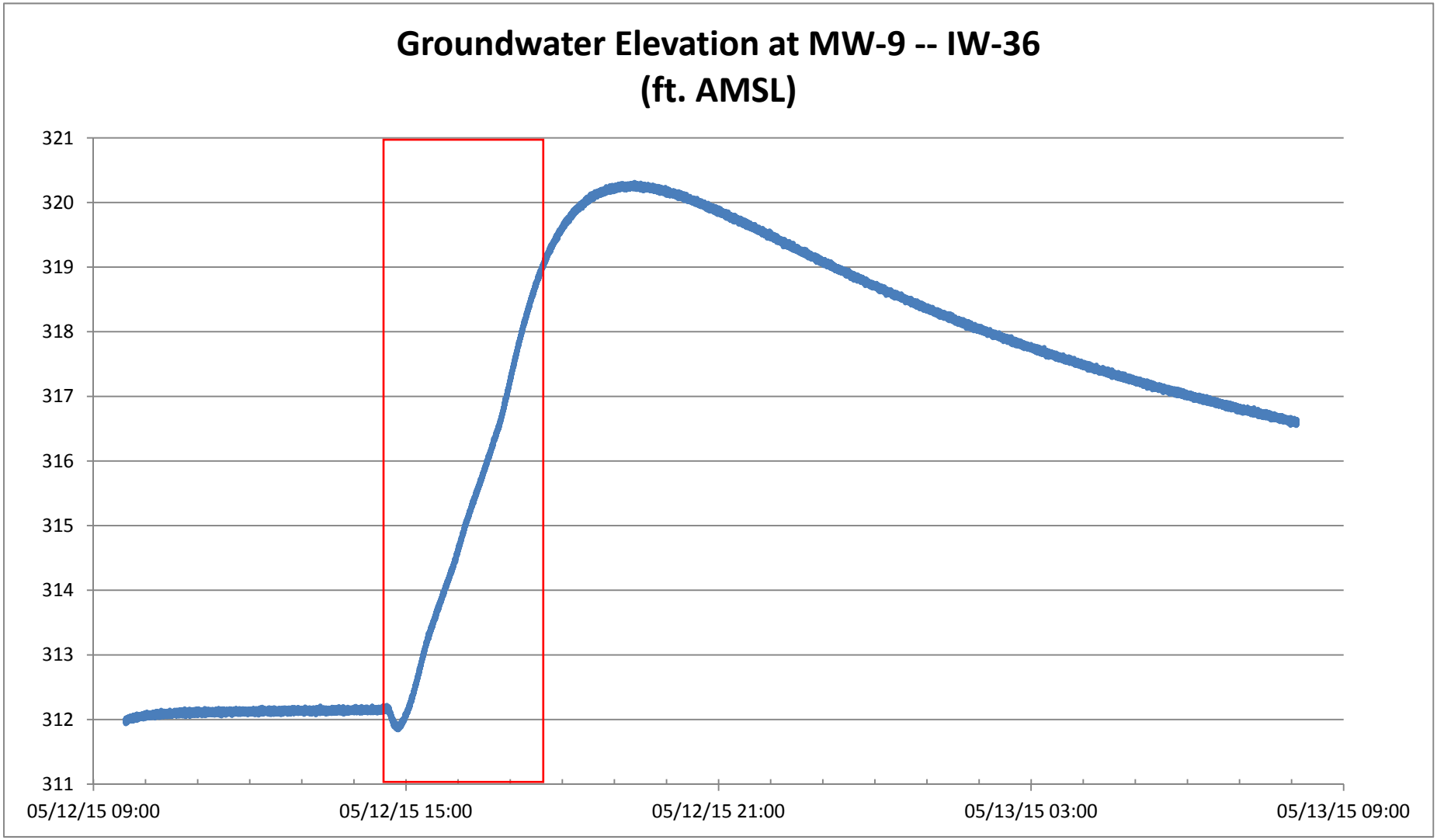

Oxidation-Reduction Potential
AOC W-1 and SWMU-4
Oxidation-Reduction Potential (mV)
300
250
200
150
100
50
0
-50
-100
-150
-200
Dec-13
Mar-14
Jul-14
Oct-14
Feb-15
Jun-15
Sep-15
Jan-16
Apr-16
Date
GW-53S
IW-36
W-1

H-3

AOC W-1 PRESSURE TRANSDUCER TRENDS

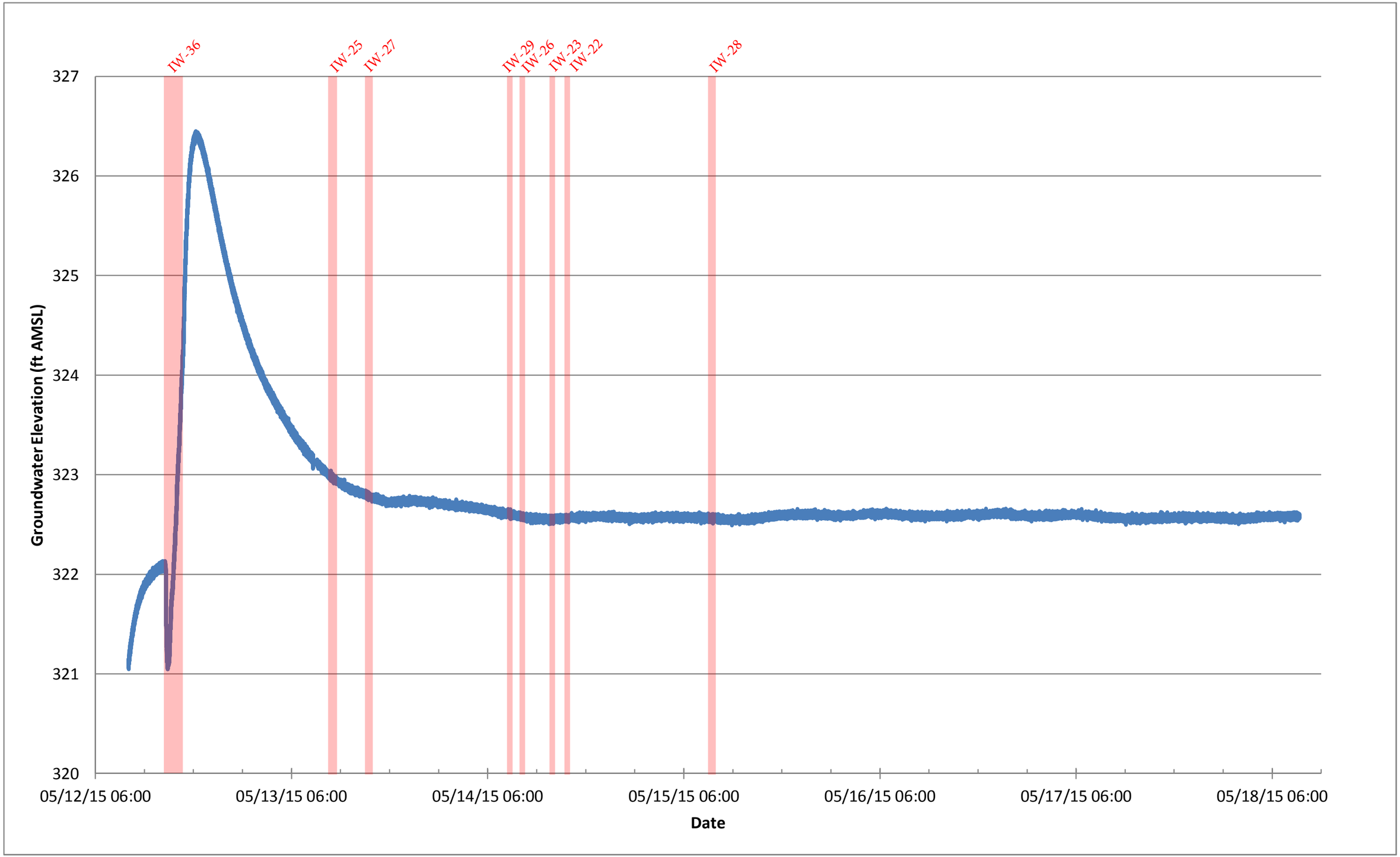
Groundwater Elevation at MW-9

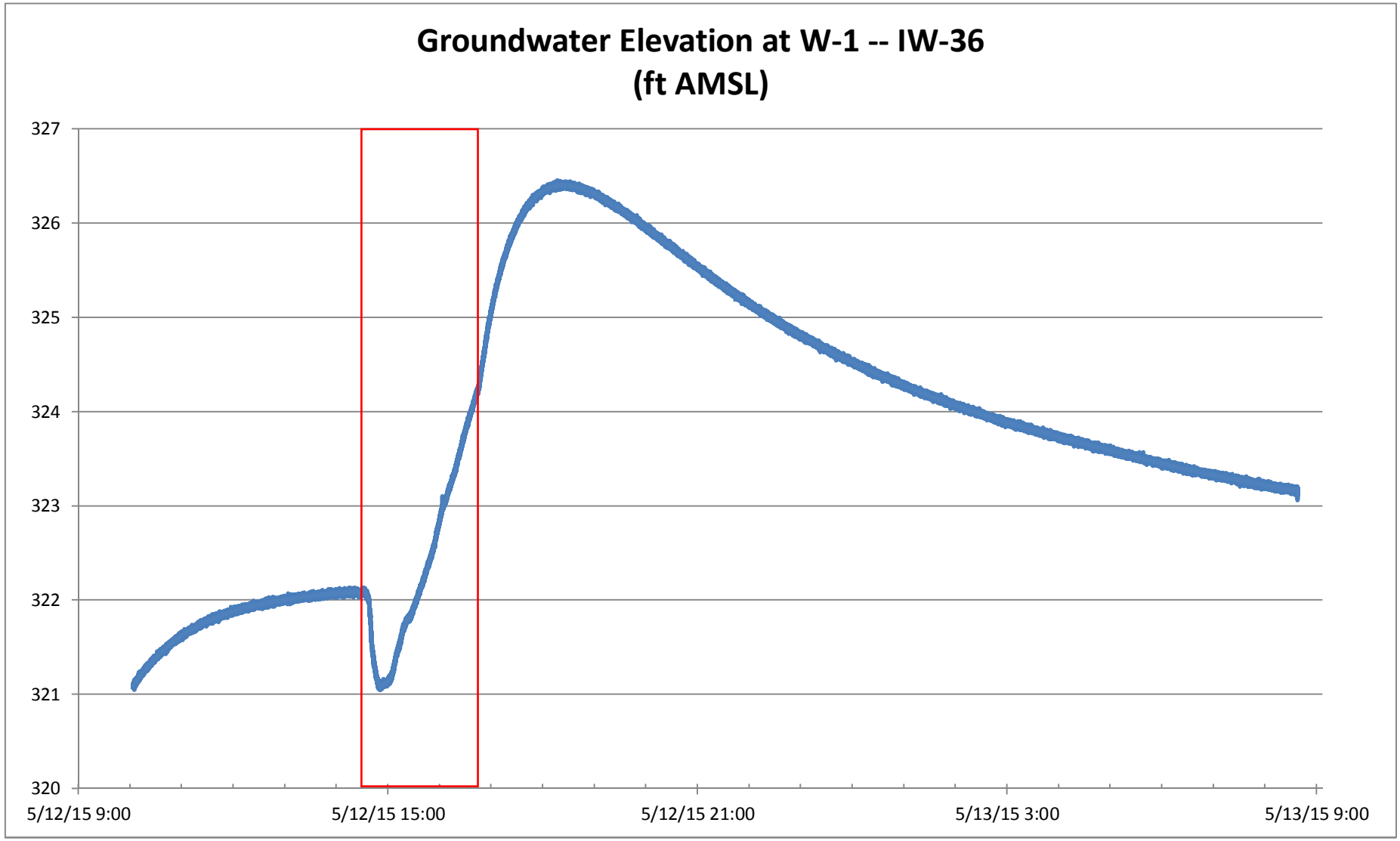




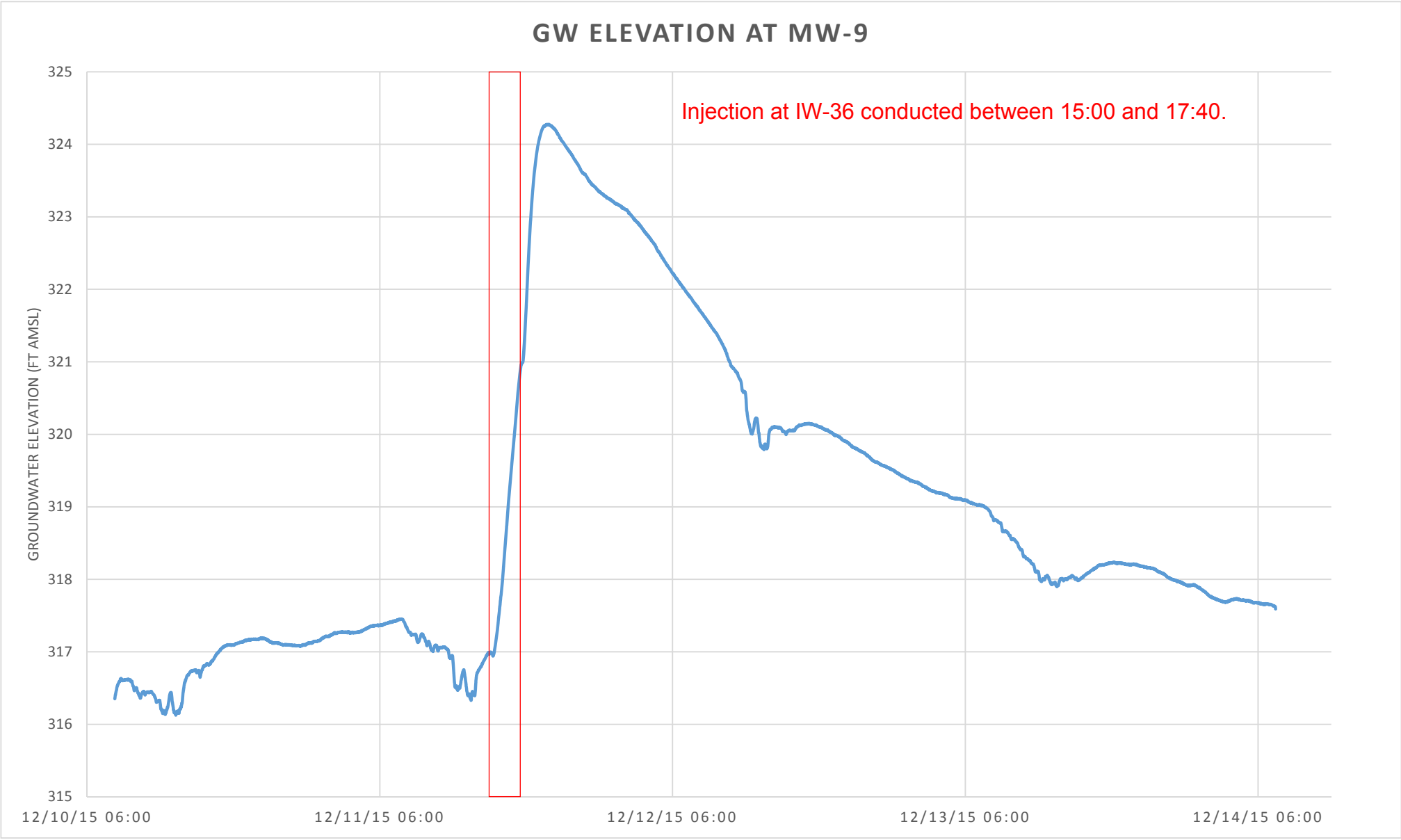
Injection at IW-36 occurred between 14:30 and 16:45.

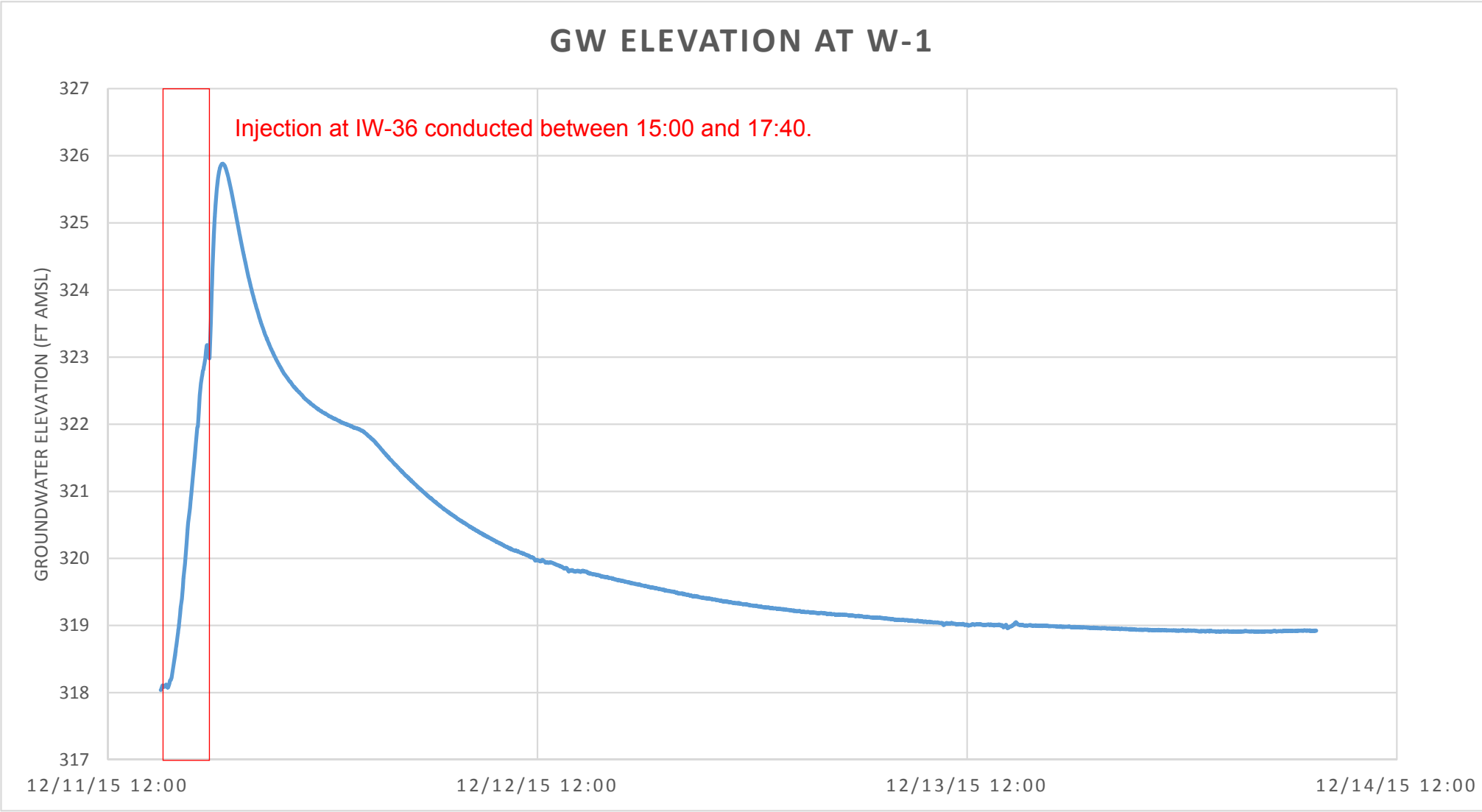
Groundwater Elevation at W-1





Injection at IW-36 occurred between 14:30 and 16:45.


GW ELEVATION AT MW-9
Injection at IW-36 conducted between 15:00 and 17:40.
GROUNDWATER ELEVATION (FT AMSL)
325
324
323
322
321
320
319
318
317
316
315
12/10/15 06:00
12/11/15 06:00
12/12/15 06:00
12/13/15 06:00
12/14/15 06:00


GW ELEVATION AT W-1
Injection at IW-36 conducted between 15:00 and 17:40.
GROUNDWATER ELEVATION (FT AMSL)
327
326
325
324
323
322
321
320
319
318
317
12/11/15 12:00
12/12/15 12:00
12/13/15 12:00
12/14/15 12:00

APPENDIX I

SUMMARY OF GROUNDWATER PROPOSED INJECTION WELLS FOR PERMIT MODIFICATION

APPENDIX I-1

REVISED PERMIT APPLICATION TABLE S-1

Revised Table S-1
Summary of Groundwater Injection Wells
GlaxoSmithKline Permit Application No.WQ0034465

Site Area	SWMU-13										
Injection Well	**IW-01**	**IW-03**	**IW-05**	**IW-06**	**IW-08**	**IW-10**	**IW-11**	**IW-12**	**IW-14**	**IW-16**	**BNP-1/IW-17**
Characteristics	Class 5L	Class 5L	Class 5L	Class 5L	Class 5L	Class 5L Phase II	Class 5L Phase II	Class 5L Phase II	Class 5L	Class 5L Phase II	Class 5L Phase II
Groundwater VOC Concentration Range(1)	Low	Low	High	High	High	High	High	High	High	High	High
Injection Rate(2) [gpm]	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20
Injection Pressure(3) [PSI]	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150
nZVI Per Injection(4) [kg/event]	40	40	70	70	70	70	70	70	70	70	70
Water Source	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater
Soy Additions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
nZVI Slurry/Water Volume(5) [gal/event]	211	211	740	740	740	740	740	740	740	740	740
Injection Events Per Year(6)	2	2	4	4	4	4	4	4	4	4	4
Total nZVI Injection Per Year(7) [kg]	80	80	280	280	280	280	280	280	280	280	280
Total nZVI Injection Slurry per Year(8) [gallons]	422	422	2958	2958	2958	2958	2958	2958	2958	2958	2958
Maximum nZVI Injection Per Year(9) [kg]	96	96	336	336	336	336	336	336	336	336	336
Maximum nZVI Slurry Per Year(9) [gallons]	506	506	3550	3550	3550	3550	3550	3550	3550	3550	3550

Notes :
Information is summarized from the October 2009 Non-Discharge Permit Application, Revised July 2010 (Permit Application)
1. Concentration Ranges Per Table 3 of the Permit Application:
   - •Concentrations for wells with high contamination are: in excess of 10,000 ug/L, typically 100,000 ug/L
   - •Concentrations for wells with medium contamination are: total VOC in the order of 1,000 ug/L and less than 10,000 ug/L
   - •Concentrations for wells with low contamination are: total VOC less than 1,000 ug/L
2. Injection Rate - based on solute tranport model results as described in Section 3 and Table 4 of the Permit Application.
3. Injection Pressure - nZVI slurry injection pressures are based on pilot test results and correlation of fracture jacking/re-opening pressure and lithostaticpressure per Table 3 of the Permit Application.
4. nZVI per Injection - mass of nZVI required to achieve a slurry concentration of 25 g/L as described in Table 4 of the Permit Application.
5. nZVI Slurry/Water Volume - volume of nZVI slurry per Table 4 of the Permit Application.
6. Injections per Year - number of injections per year required to meet the contaminant reduciton goals within the area of nZVI influence per Table 4 of the Permit Application.
7. Total nZVI Injection per Year - mass of nZVI injected on an annual basis per Table 4 of the Permit Application.
8. Total nZVI Injection Slurry per Year - Estimated volume of nZVI slurry injected into the aquifer through a specific injection well per Table 4 of the Permit Application.
9. Maximum nZVI values include a 20% increase per Table 6 of the Permit Application.

Revised Table S-1
Summary of Groundwater Injection Wells
GlaxoSmithKline Permit Application No.WQ0034465

Site Area	SWMU-13										
Injection Well Characteristics	**IW-18** Class 5L Phase II	**BR-1** Class 5L	**BR-2** Class 5L	**BR-3** Class 5L	**IW-02** Class 5L	**IW-04/GW-04** Class 5L	**IW-07** Class 5L	**IW-09** Class 5L Phase II Contingent	**IW-13** Class 5L Phase II Contingent	**11-SVE Well Points (IW-15)** Class 5L	**IW-03D** Class 5L
Groundwater VOC Concentration Range(1)	High	High	High	High	High	High	High	Medium	Medium	High	Medium
Injection Rate(2) [gpm]	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20
Injection Pressure(3) [PSI]	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150
nZVI Per Injection(4) [kg/event]	70	70	70	70	70	70	40	40	40	40	40
Water Source	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater
Soy Additions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
nZVI Slurry/Water Volume(5) [gal/event]	740	740	740	740	740	423	423	0	423	740	423
Injection Events Per Year(6)	4	4	4	4	4	4	4	0	1	1	2
Total nZVI Injection Per Year(7) [kg]	280	280	280	280	280	280	160	0	40	40	80
Total nZVI Injection Slurry per Year(8) [gallons]	2958	2958	2958	2958	2960	1690	1692	0	423	740	845
Maximum nZVI Injection Per Year(9) [kg]	336	336	336	336	336	336	192	0	48	48	96
Maximum nZVI Slurry Per Year(9) [gallons]	3550	3550	3550	3550	3552	2028	2030	0	507	888	1014

Notes :
Information is summarized from the October 2009 Non-Discharge Permit Application, Revised July 2010 (Permit Application)
1. Concentration Ranges Per Table 3 of the Permit Application:
   - •Concentrations for wells with high contamination are: in excess of 10,000 ug/L, typically 100,000 ug/L
   - •Concentrations for wells with medium contamination are: total VOC in the order of 1,000 ug/L and less than 10,000 ug/L
   - •Concentrations for wells with low contamination are: total VOC less than 1,000 ug/L
2. Injection Rate - based on solute tranport model results as described in Section 3 and Table 4 of the Permit Application.
3. Injection Pressure - nZVI slurry injection pressures are based on pilot test results and correlation of fracture jacking/re-opening pressure and lithostaticpressure per Table 3 of the Permit Application.
4. nZVI per Injection - mass of nZVI required to achieve a slurry concentration of 25 g/L as described in Table 4 of the Permit Application.
5. nZVI Slurry/Water Volume - volume of nZVI slurry per Table 4 of the Permit Application.
6. Injections per Year - number of injections per year required to meet the contaminant reduciton goals within the area of nZVI influence per Table 4 of the Permit Application.
7. Total nZVI Injection per Year - mass of nZVI injected on an annual basis per Table 4 of the Permit Application.
8. Total nZVI Injection Slurry per Year - Estimated volume of nZVI slurry injected into the aquifer through a specific injection well per Table 4 of the Permit Application.
9. Maximum nZVI values include a 20% increase per Table 6 of the Permit Application.

Revised Table S-1
Summary of Groundwater Injection Wells
GlaxoSmithKline Permit Application No.WQ0034465

Site Area	SWMU-13					SWMU-15/16					
Injection Well Characteristics	**IW-06D** Class 5L	**IW-08D or P-6** Class 5L	**IW-10D** Class 5L Phase II	**IW-12D** Class 5L Phase II	**IW-14D** Class 5L	**IW-22** Class 5L	**IW-23** Class 5L	**IW-26** Class 5L	**IW-28** Class 5L	**IW-25** Class 5L	**IW-27** Class 5L
Groundwater VOC Concentration Range(1)	Medium	Medium	Medium	Medium	Medium	Low	Low	Low	Low	Medium	Medium
Injection Rate(2) [gpm]	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20
Injection Pressure(3) [PSI]	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150
nZVI Per Injection(4) [kg/event]	40	40	40	40	40	20	20	20	20	40	40
Water Source	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater	Extracted Groundwater
Soy Additions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
nZVI Slurry/Water Volume(5) [gal/event]	423	423	423	423	423	211	211	211	211	423	423
Injection Events Per Year(6)	2	2	2	2	2	2	2	2	2	4	4
Total nZVI Injection Per Year(7) [kg]	80	80	80	80	80	40	40	40	40	160	160
Total nZVI Injection Slurry per Year(8) [gallons]	845	845	845	845	845	423	423	423	423	1691	1691
Maximum nZVI Injection Per Year(9) [kg]	96	96	96	96	96	48	48	48	48	192	192
Maximum nZVI Slurry Per Year(9) [gallons]	1014	1014	1014	1014	1014	507	507	507	507	2029	2029

Notes :
Information is summarized from the October 2009 Non-Discharge Permit Application, Revised July 2010 (Permit Application)
1. Concentration Ranges Per Table 3 of the Permit Application:
   - •Concentrations for wells with high contamination are: in excess of 10,000 ug/L, typically 100,000 ug/L
   - •Concentrations for wells with medium contamination are: total VOC in the order of 1,000 ug/L and less than 10,000 ug/L
   - •Concentrations for wells with low contamination are: total VOC less than 1,000 ug/L
2. Injection Rate - based on solute tranport model results as described in Section 3 and Table 4 of the Permit Application.
3. Injection Pressure - nZVI slurry injection pressures are based on pilot test results and correlation of fracture jacking/re-opening pressure and lithostaticpressure per Table 3 of the Permit Application.
4. nZVI per Injection - mass of nZVI required to achieve a slurry concentration of 25 g/L as described in Table 4 of the Permit Application.
5. nZVI Slurry/Water Volume - volume of nZVI slurry per Table 4 of the Permit Application.
6. Injections per Year - number of injections per year required to meet the contaminant reduciton goals within the area of nZVI influence per Table 4 of the Permit Application.
7. Total nZVI Injection per Year - mass of nZVI injected on an annual basis per Table 4 of the Permit Application.
8. Total nZVI Injection Slurry per Year - Estimated volume of nZVI slurry injected into the aquifer through a specific injection well per Table 4 of the Permit Application.
9. Maximum nZVI values include a 20% increase per Table 6 of the Permit Application.

Revised Table S-1
Summary of Groundwater Injection Wells
GlaxoSmithKline Permit Application No.WQ0034465

Site Area	SWMU-15/16	AOC Area Along Stike of AOC GW-6 and AOC GW-6							AOC W-1
Injection Well	IW-29	IW-30	IW-31	IW-32	IW-35	GW-32S	IW-33	IW-34	IW-36 or W-1
Characteristics	Class 5L	Class 5I	Class 5I	Class 5I	Class 5I	Class 5I	Class 5I	Class 5I	Class 5I
Groundwater VOC Concentration Range(1)	Medium	Low	Low	Low	Low	Low	Medium	Medium	Medium
Injection Rate(2) [gpm]	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20	5-20
Injection Pressure(3) [PSI]	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150	30-150
nZVI Per Injection(4) [kg/event]	40	20	20	20	20	20	40	40	40
Water Source	Extracted Groundwater	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water	Potable Water
Soy Additions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
nZVI Slurry/Water Volume(5) [gal/event]	423	106	106	211	211	211	423	423	423
Injection Events Per Year(6)	4	1	1	1	1	1	2	2	2
Total nZVI Injection Per Year(7) [kg]	160	20	20	20	20	20	80	80	80
Total nZVI Injection Slurry per Year(8) [gallons]	1691	106	106	211	211	211	845	845	845
Maximum nZVI Injection Per Year(9) [kg]	192	24	24	24	24	24	96	96	96
Maximum nZVI Slurry Per Year(9) [gallons]	2029	127	127	254	254	254	1014	1014	1014

Notes :
Information is summarized from the October 2009 Non-Discharge Permit Application, Revised July 2010 (Permit Application)
1. Concentration Ranges Per Table 3 of the Permit Application:
   - •Concentrations for wells with high contamination are: in excess of 10,000 ug/L, typically 100,000 ug/L
   - •Concentrations for wells with medium contamination are: total VOC in the order of 1,000 ug/L and less than 10,000 ug/L
   - •Concentrations for wells with low contamination are: total VOC less than 1,000 ug/L
2. Injection Rate - based on solute tranport model results as described in Section 3 and Table 4 of the Permit Application.
3. Injection Pressure - nZVI slurry injection pressures are based on pilot test results and correlation of fracture jacking/re-opening pressure and lithostaticpressure per Table 3 of the Permit Application.
4. nZVI per Injection - mass of nZVI required to achieve a slurry concentration of 25 g/L as described in Table 4 of the Permit Application.
5. nZVI Slurry/Water Volume - volume of nZVI slurry per Table 4 of the Permit Application.
6. Injections per Year - number of injections per year required to meet the contaminant reduciton goals within the area of nZVI influence per Table 4 of the Permit Application.
7. Total nZVI Injection per Year - mass of nZVI injected on an annual basis per Table 4 of the Permit Application.
8. Total nZVI Injection Slurry per Year - Estimated volume of nZVI slurry injected into the aquifer through a specific injection well per Table 4 of the Permit Application.
9. Maximum nZVI values include a 20% increase per Table 6 of the Permit Application.

APPENDIX I-2

WELLS LOGS FOR P-6 AND W-1

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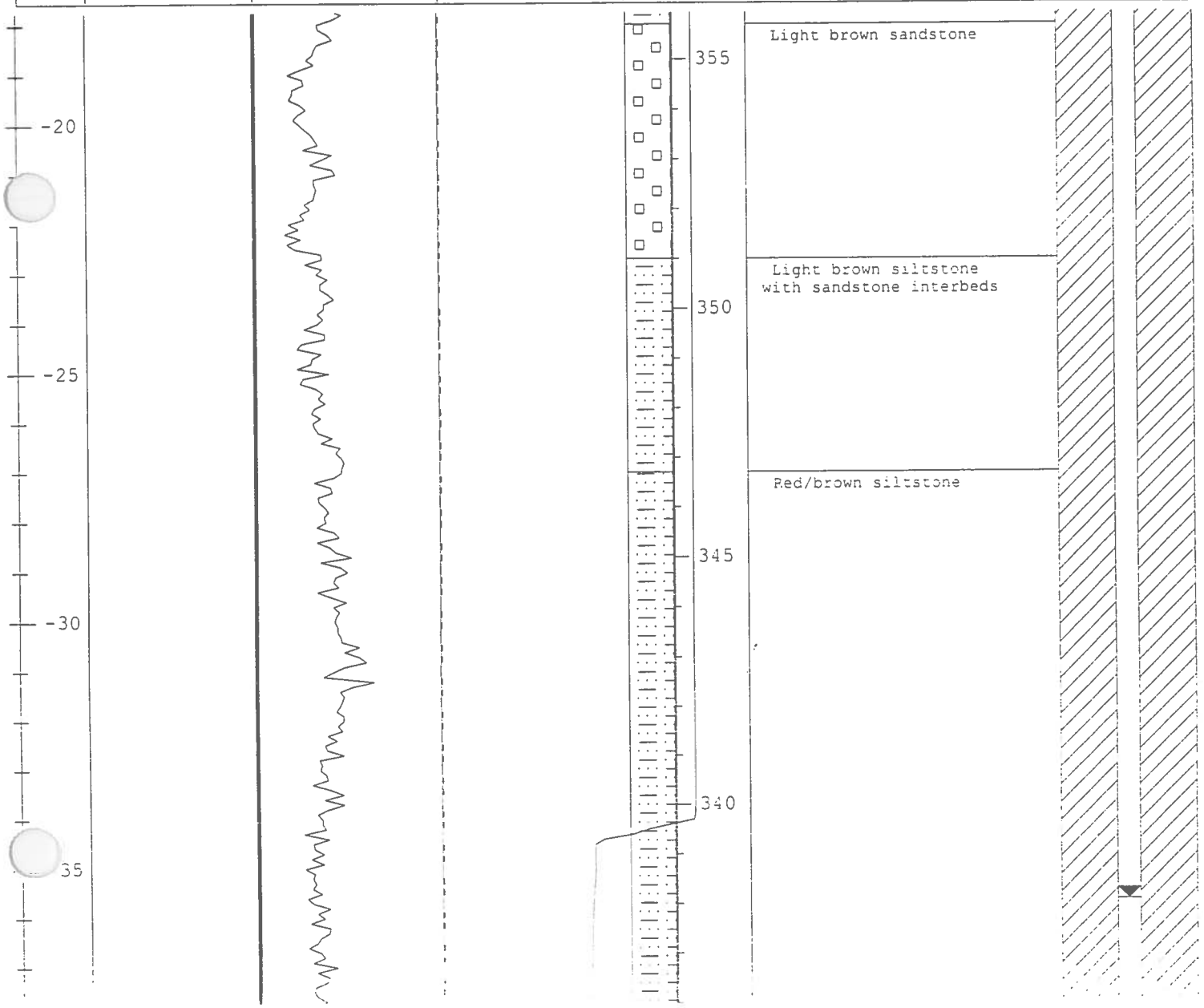
Boring Log
P-6

PROJECT NO. : 1054-96-554	SITE :Glaxo Wellcome South Campus, North Complex	COUNTY : Durham
WELL LOCATION : SWMU 13		GEOLOGIST : Walt Beckwith
DATE DRILLED : 7-12-96	DRILL METHOD : Air Rotary	RIG : Schramm T-660
TOTAL DEPTH : 77 FT. bgs	GROUND ELEV. : 373.7 FT.	TOC ELEV. : 376.17 FT.
STATIC WATER LEVEL : 35.62 FT. bgs	NORTHING : 789964.47	EASTING : 2039691.61
SURFACE CASING : na " ID. FROM na FT. TO na FT.		CASING TYPE : na
WELL RISER : 2 " ID. FROM 2.5 FT. TO -66.2 FT.		CASING TYPE : Schedule 40 PVC
WELL SCREEN : 2 " ID. FROM -66.2 FT. TO -76.2 FT.		SCREEN TYPE : Sch. 40 PVC 0.010 slot

Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.



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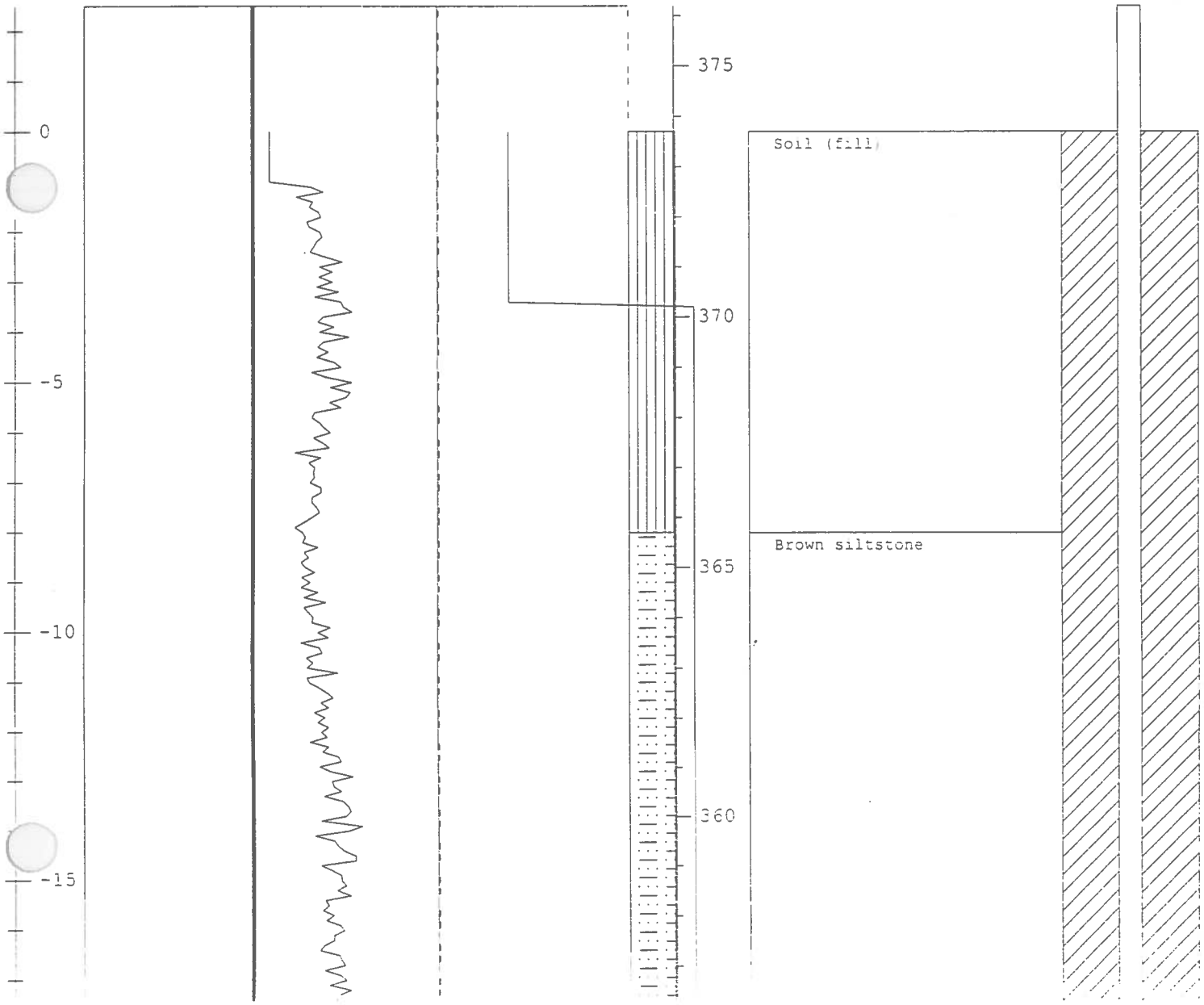
Boring Log
P-6

PROJECT NO. : 1054-96-554	SITE :Glaxo Wellcome South Campus, North Complex	COUNTY : Durham
WELL LOCATION : SWMU 13		GEOLOGIST : Walt Beckwith
DATE DRILLED : 7-12-96	DRILL METHOD : Air Rotary	RIG : Schramm T-660
TOTAL DEPTH : 77 FT. bgs	GROUND ELEV. : 373.7 FT.	TOC ELEV. : 376.17 FT.
STATIC WATER LEVEL : 35.62 FT. bgs	NORTHING : 789964.47	EASTING : 2039691.61
SURFACE CASING : na " ID. FROM na FT. TO na FT.	CASING TYPE : na	
WELL RISER : 2 " ID. FROM 2.5 FT. TO -66.2 FT.	CASING TYPE : Schedule 40 PVC	
WELL SCREEN : 2 " ID. FROM -66.2 FT. TO -76.2 FT.	SCREEN TYPE : Sch. 40 PVC 0.010 slot	

Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.



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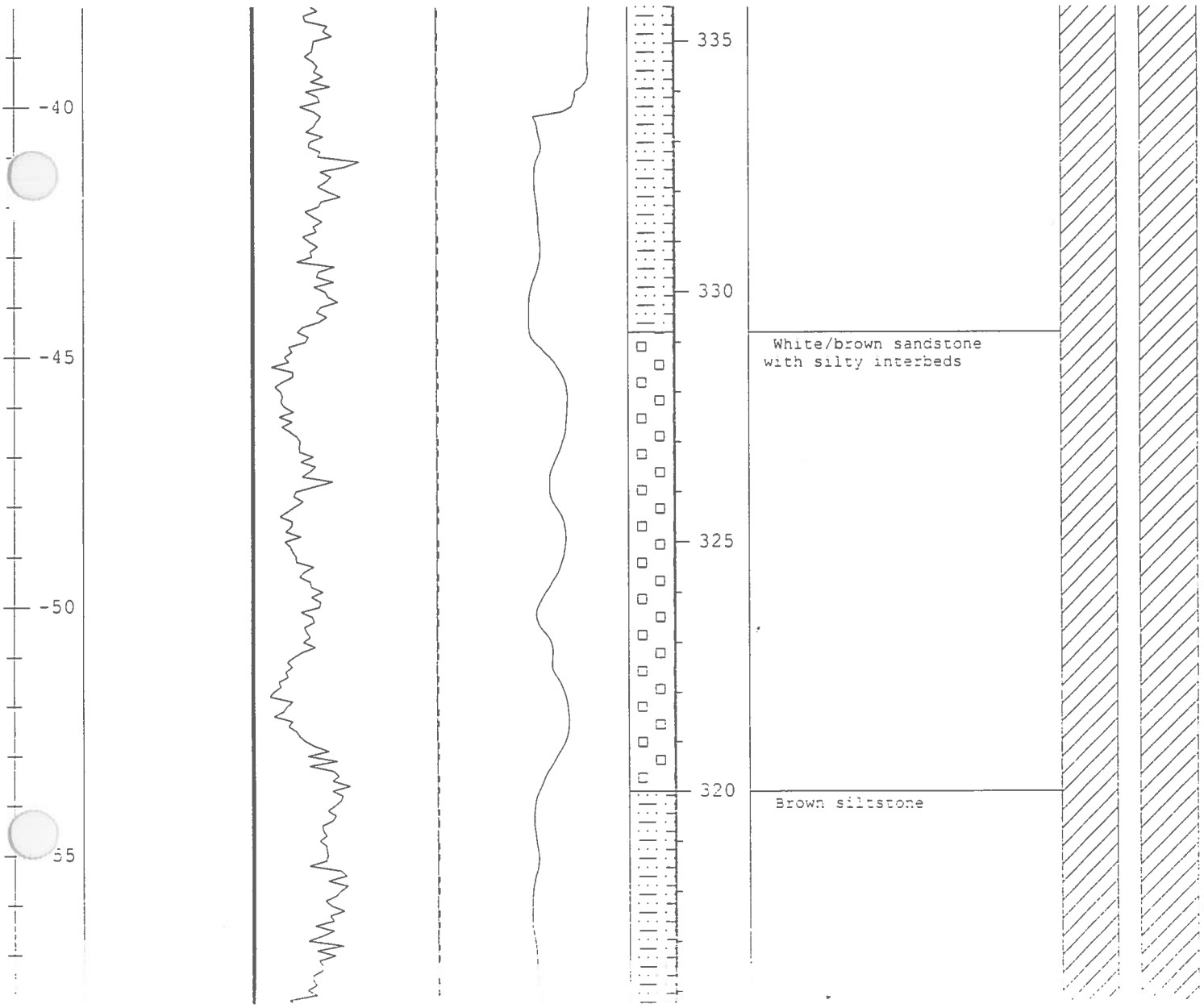
ENVIRONMENTAL SERVICES

Boring Log
P-6

PROJECT NO. : 1054-96-554	SITE :Glaxo Wellcome South Campus, North Complex	COUNTY : Durham
WELL LOCATION : SWMU 13		GEOLOGIST : Walt Beckwith
DATE DRILLED : 7-12-96	DRILL METHOD : Air Rotary	RIG : Schramm T-660
TOTAL DEPTH : 77 FT. bgs	GROUND ELEV. : 373.7 FT.	TOC ELEV. : 376.17 FT.
STATIC WATER LEVEL : 35.62 FT. bgs	NORTHING : 789964.47	EASTING : 2039691.61
SURFACE CASING : na " ID. FROM na FT. TO na FT.		CASING TYPE : na
WELL RISER : 2 " ID. FROM 2.5 FT. TO -66.2 FT.		CASING TYPE : Schedule 40 PVC
WELL SCREEN : 2 " ID. FROM -66.2 FT. TO -76.2 FT.		SCREEN TYPE :Sch. 40 PVC 0.010 slot

Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.



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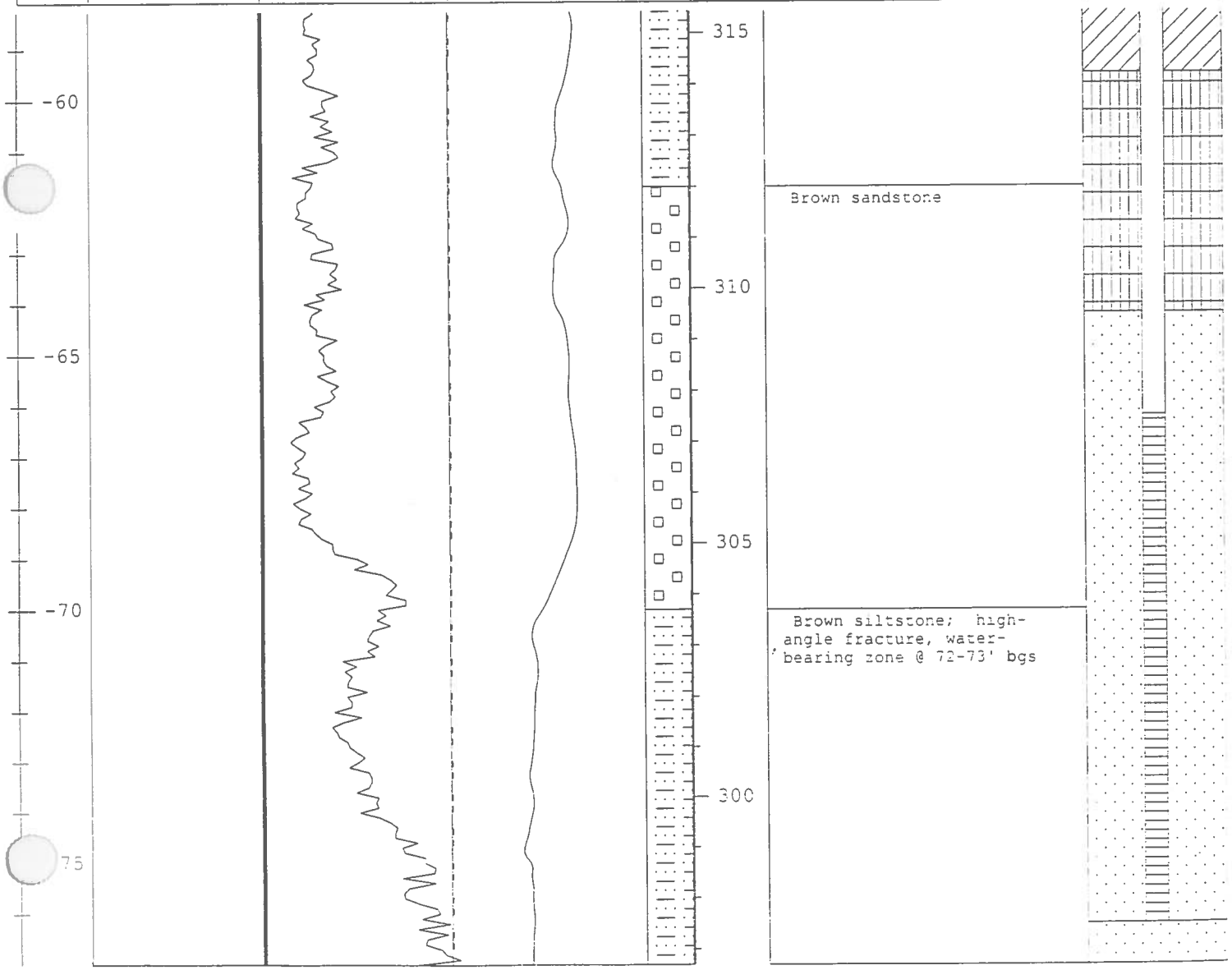
Boring Log
P-6

PROJECT NO. : 1054-96-554	SITE :Glaxo Wellcome South Campus, North Complex	COUNTY : Durham
WELL LOCATION : SWMU 13		GEOLOGIST : Walt Beckwith
DATE DRILLED : 7-12-96	DRILL METHOD : Air Rotary	RIG : Schramm T-660
TOTAL DEPTH : 77 FT. bgs	GROUND ELEV. : 373.7 FT.	TOC ELEV. : 376.17 FT.
STATIC WATER LEVEL : 35.62 FT. bgs	NORTHING : 789964.47	EASTING : 2039691.61
SURFACE CASING : na " ID. FROM na FT. TO na FT.		CASING TYPE : na
WELL RISER : 2 " ID. FROM 2.5 FT. TO -66.2 FT.		CASING TYPE : Schedule 40 PVC
WELL SCREEN : 2 " ID. FROM -66.2 FT. TO -76.2 FT.		SCREEN TYPE : Sch. 40 PVC 0.010 slot

Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.



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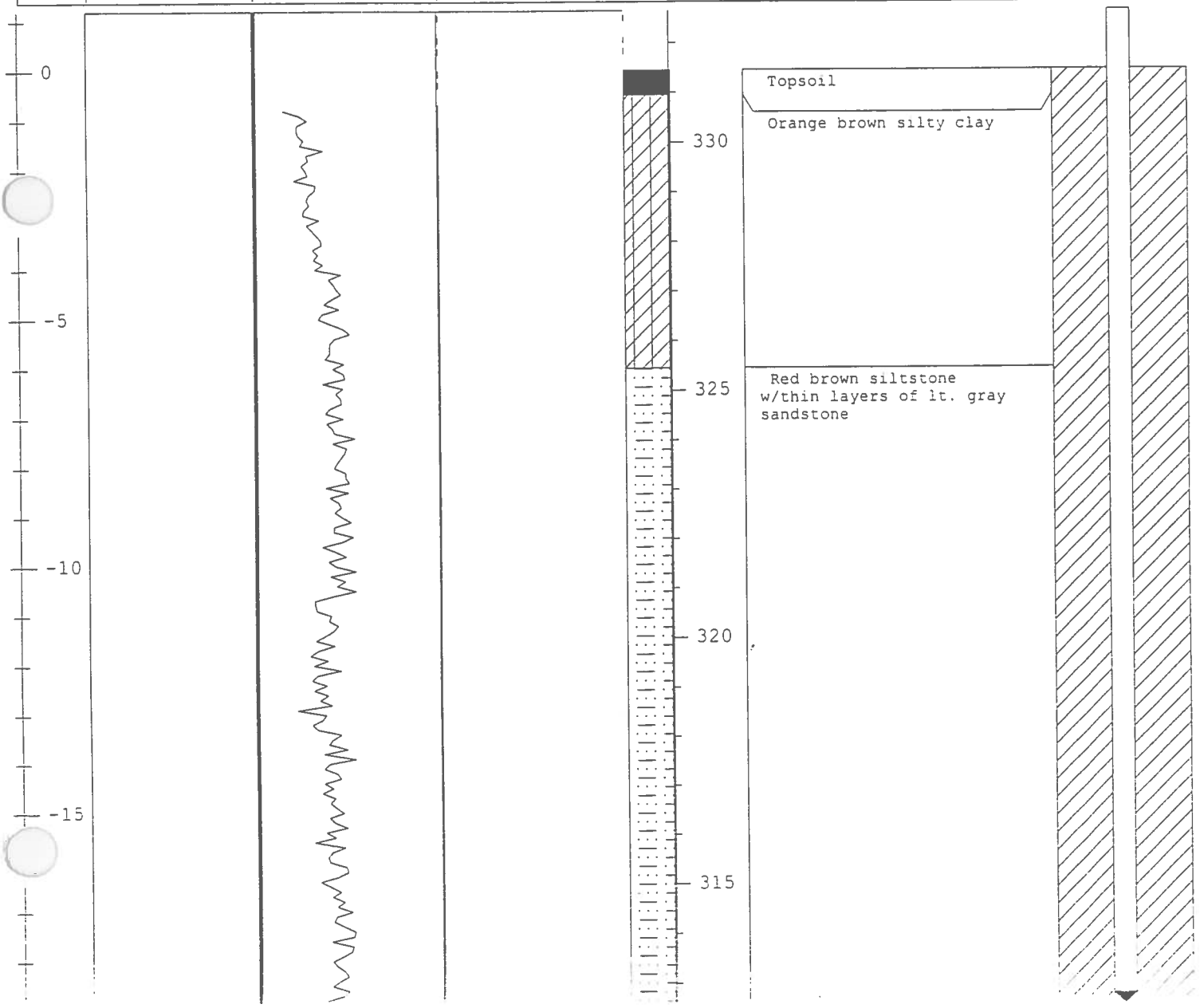
Boring Log
W-1

**NOTE: Lithology was revised based on geophysical data

PROJECT NO. : 1054-96-554	SITE :Glaxo Wellcome South Campus, North Complex	COUNTY : Durham
WELL LOCATION : AOC W-1		GEOLOGIST : Law Engineering
DATE DRILLED : 5-1-85	DRILL METHOD : Air Rotary	RIG :
TOTAL DEPTH : 99 FT. bgs	GROUND ELEV. : 331.45 FT.	TOC ELEV. : 332.65 FT.
STATIC WATER LEVEL : 18.9 FT. bgs	NORTHING : 789410.30	EASTING : 2038669.59
SURFACE CASING : " ID. FROM FT. TO FT.	CASING TYPE :	
WELL RISER : 2 " ID. FROM 1.2 FT. TO -89 FT.	CASING TYPE : Schedule 40 PVC	
WELL SCREEN : 2 " ID. FROM -89 FT. TO -99 FT.	SCREEN TYPE : Sch. 40 PVC 0.010 slot	

Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.



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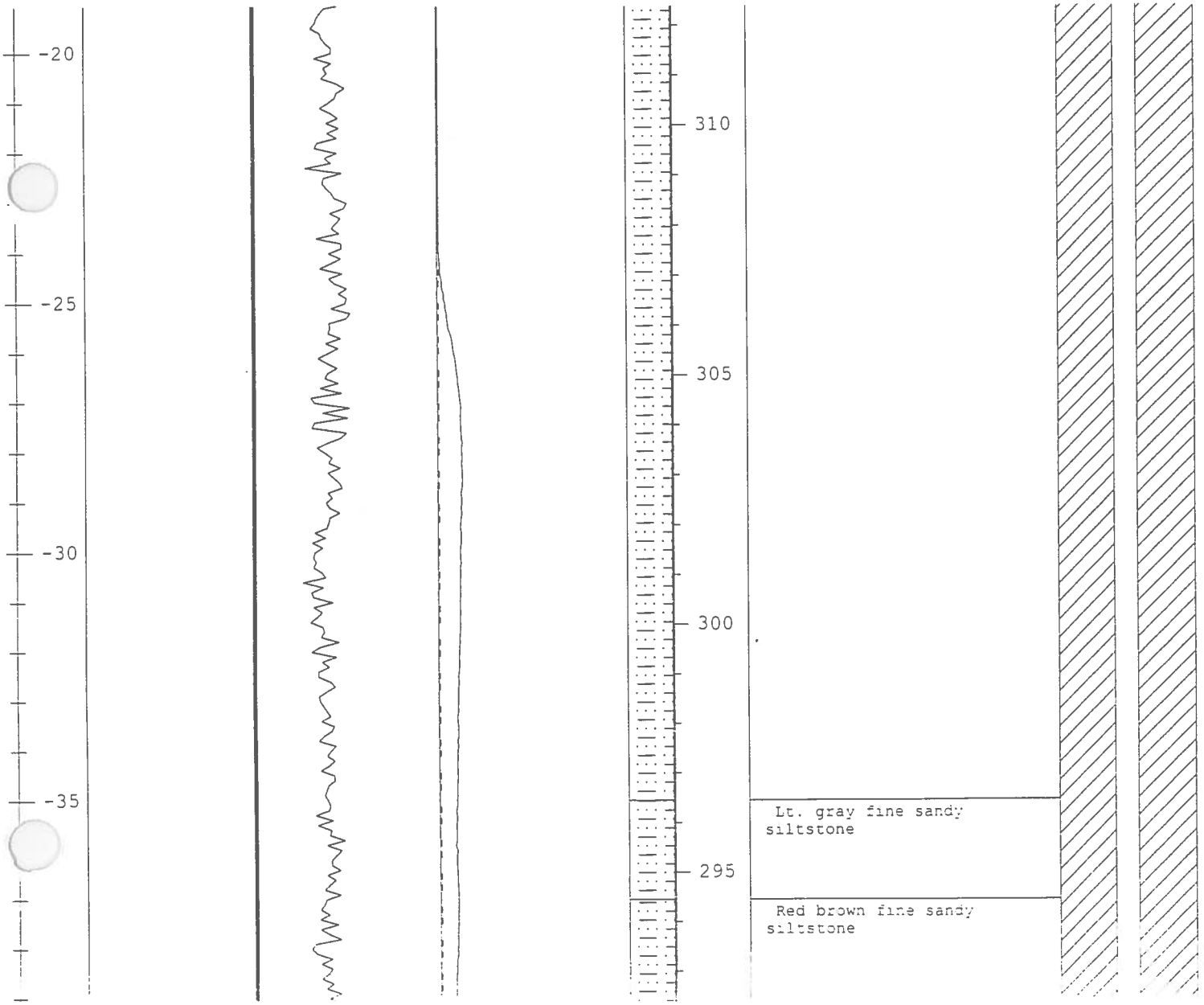
Boring Log
W-1

**NOTE: Lithology was revised based on geophysical data

PROJECT NO. : 1054-96-554	SITE :Glaxo Wellcome South Campus, North Complex	COUNTY : Durham
WELL LOCATION : AOC W-1		GEOLOGIST : Law Engineering
DATE DRILLED : 5-1-85	DRILL METHOD : Air Rotary	RIG :
TOTAL DEPTH : 99 FT. bgs	GROUND ELEV. : 331.45 FT.	TOC ELEV. : 332.65 FT.
STATIC WATER LEVEL : 18.9 FT. bgs	NORTHING : 789410.30	EASTING : 2038669.59
SURFACE CASING : " ID. FROM FT. TO FT.		CASING TYPE :
WELL RISER : 2 " ID. FROM 1.2 FT. TO -89 FT.		CASING TYPE : Schedule 40 PVC
WELL SCREEN : 2 " ID. FROM -89 FT. TO -99 FT.		SCREEN TYPE : Sch. 40 PVC 0.010 slot

Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.



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Boring Log
W-1

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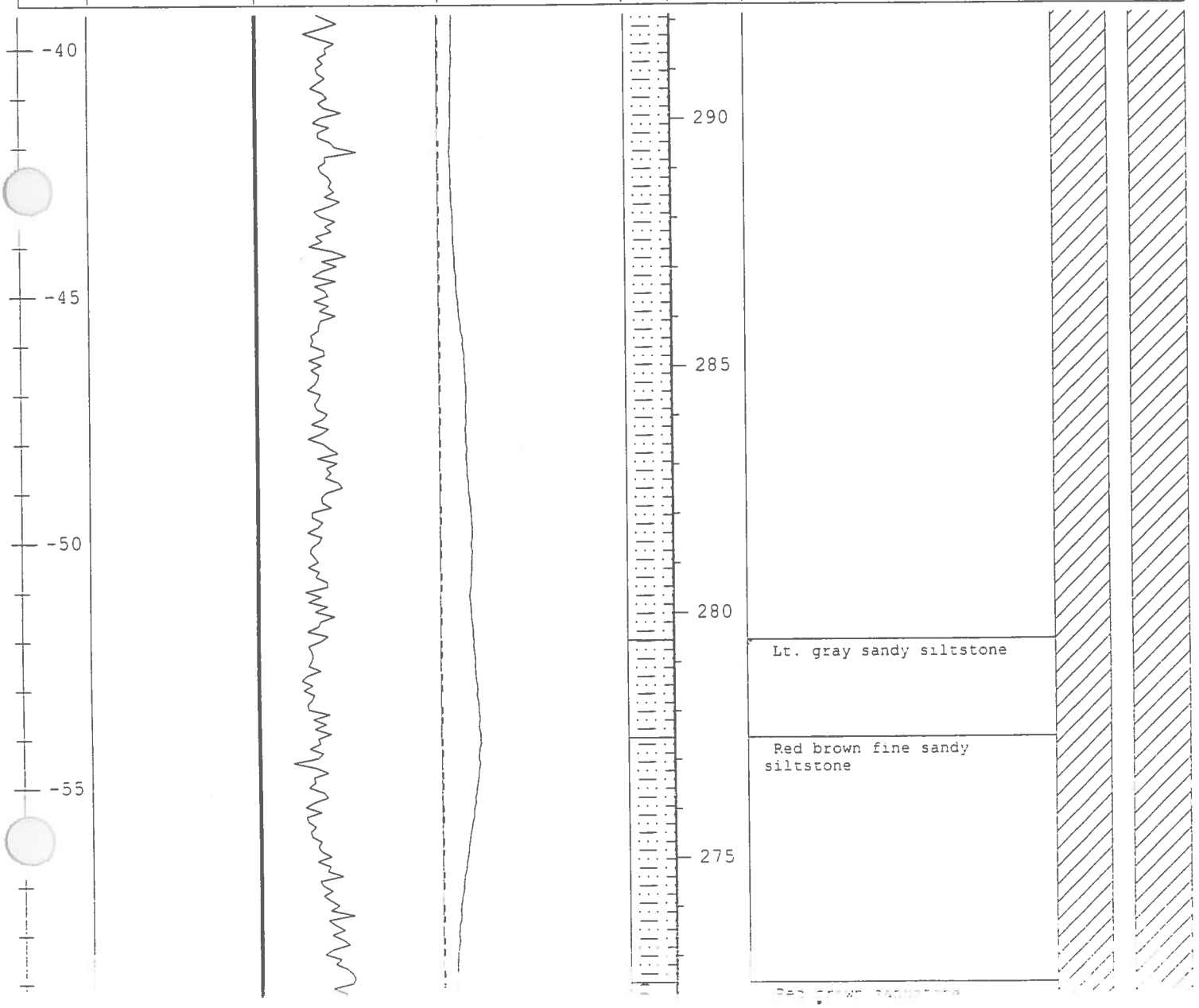
Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.



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Boring Log
W-1

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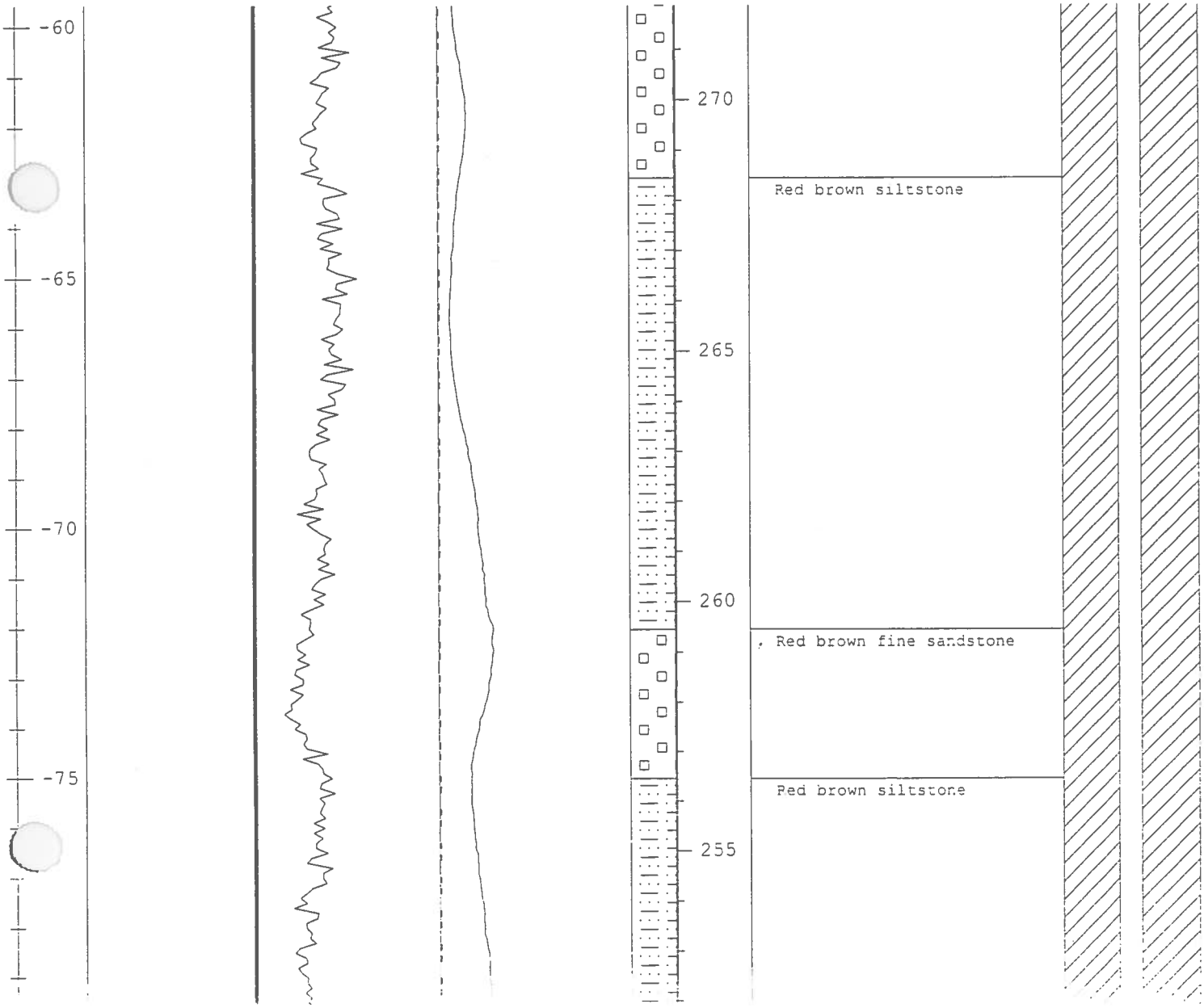
Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.



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ENVIRONMENTAL SERVICES

Boring Log
W-1

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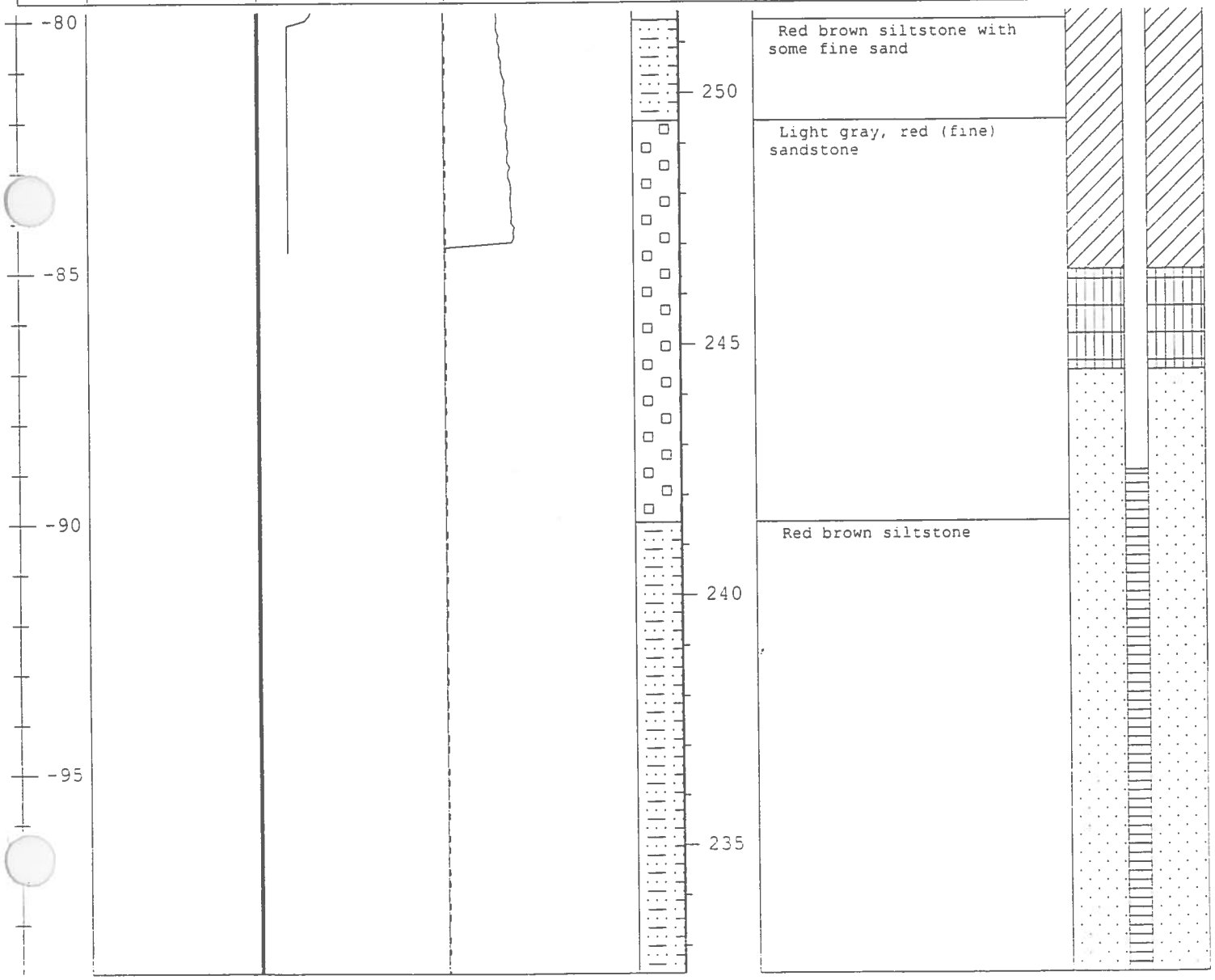
Depth (Feet bgs)	GAM(NAT) API-GR 0 400	CALIPER INCHES 2 8 / GAM(NAT) API-GR 0 400	RES OHM-M 10 1000	LITH	ELEV. (Feet MSL)	Subsurface Description	Well Dwg.
-80					250	Red brown siltstone with some fine sand	
-85					245	Light gray, red (fine) sandstone	
-90					240	Red brown siltstone	
-95					235		



APPENDIX I-3

JUNE 25, 2012 SVE WELL INJECTION EVENT RECORD

June 25, 2012

Project No.: 073-96115

UIC Program Staff
DWQ – Aquifer Protection Section
1636 Mail Service Center
Raleigh, NC 27699-1636
(919) 733-3221

RE: **SVE Well Injection Event Record**
Injection Permit WI0500421
GlaxoSmithKline, South Campus, North Complex, RTP, NC

To UIC Program Staff:

Golder Associates NC, Inc. (Golder), on behalf of GlaxoSmithKline (GSK), is submitting 2 copies of the attached Injection Event Record, see Attachment No. 1, as required per Item #3 under *Part VII – Monitoring and Reporting Requirements* in the facility's Injection Permit #WI0500421 (Permit) issued to GSK on September 26, 2011. The SVE wells were installed as described in Golder's Class 5Z Application Permit to Construct Enhanced Soil Vapor Extraction Wells submitted to NCDENR on August 8, 2011.

On March 6-8, 2012, Golder provided oversight for the drilling and installation of 12 shallow SVE wells (HF-1 through HF-11 and SVE-1) in the SWMU-13 vicinity. Borings were installed with 2" diameter rods affixed with a drive point using a direct-push method. Borings and wells were installed by licensed NC well driller, Jason Chiorazzi (#3379-A) of VERCO. Eleven of the 12 wells were hydraulically fractured (HF-1 through HF-11) by the fracturing subcontractor, FRx. Several locations received multiple fractures. Once the target depth was reached, the drill rod was retracted approximately one foot, leaving the drive point in place and creating an isolated section of borehole for fracturing. A high pressure water jet was lowered into the borehole which created a circular notch in the borehole wall to initiate a fracture. The slurry mix consisting of dechlorinated water, sand, guar gum, borax, and sodium chloride was then injected into the isolated section under hydraulic pressure. Pressures were monitored with analog and digital gauges. The pressure was allowed to build and once the pressure dropped, the fracture was created and the slurry mix injected. Pressure logs from each fractured well, fracture data, uplift control, and injection volume information provided by FRx is provided in Attachment No. 2. Uplift control was provided by setting up temporary measuring stations at various locations and distances from the fracture initiation. The station elevations were surveyed prior to and after fractures to measure any uplift.

All 12 installed borings were converted into shallow SVE wells ranging in depth from 11.5 to 21 feet below ground surface. Wells were completed in accordance with NC well construction regulations with 3/4" Sch. 40 PVC riser, pre-packed filter packs with 0.010" slotted PVC screens, and finished with sand, bentonite, and Portland cement with a concrete apron and locking pressure cap. Well construction records, provided in Attachment No. 3, were submitted by the driller to NCDENR following the injection event, which addresses Item #1 of *Part VII – Monitoring and Reporting Requirements*. Well construction tags have been made and will be permanently affixed to the SVE wells, which will address Item #8 of *Part I – Well Construction General Conditions.*

Item #3 of *Part VII- Monitoring and Reporting Requirements* requires the submission of an Injection Event Record. Item #4 of *Part VII - Monitoring and Reporting Requirements* requires the submission of a final project evaluation within 9 months after completing all injection-related activity associated with this Permit, or produce a project interim evaluation before submitting a renewal application for this permit. In discussing this requirement with Thomas Slusser of NCDENR, it is Golder's understanding that since the permit covers only the injection of sand and related materials for construction of the SVE wells, the Injection Event Record serves as the final project evaluation.

However, GSK plans to leave the permit in active status in the event there would be a need to modify the permit to add additional wells to the SVE system.

Should you have any questions or comments regarding the Injection Event Record, requirements of the Injection Permit or require additional information please do not hesitate to contact Lindsey Walata of GSK at (919) 483-4640 or Brian Eichlin at (336) 852-4903.

Sincerely,

GOLDER ASSOCIATES NC, INC.

Jeremy A. DeVore, P.G.
Project Geologist

Brian J. Eichlin, P.E.
Principal

Attachments:

Attachment No. 1 NCDENR Injection Event Record
Attachment No. 2 Fracture Data from FRx
Attachment No. 3 Well Construction Records

cc: Robert McDaniel, NCDENR Division of Waste Management, Hazardous Waste Section – 1 copy
DWQ – Aquifer Protection Section, Raleigh Regional Office – 1 copy
Lindsey Walata, GlaxoSmithKline – electronic copy
Tom Hilliard, GlaxoSmithKline – electronic copy
Florin Gheorghiu, Golder Associates – electronic copy

Attachment No. 1

INJECTION EVENT RECORD

North Carolina Department of Environment and Natural Resources – Division of Water Quality
Permit Number WI0500421

1. **Permit Information**

GlaxoSmithKline
Permittee

GSK North Complex, S. Campus
Facility Name

3029 E. Cornwallis Rd, RTP, NC 27709
Facility Address

2. **Injection Contractor Information**

FRx, Inc.
Injection Contractor / Company Name

Street Address PO Box 408292

Cincinnati OH 45249-8292
City State Zip Code

(513) 469-6040
Area code – Phone number

3. **Well Information**

Number of wells used for injection 11

Well names HF-1 through HF-11

Were any new wells installed during this injection event?
☒ Yes ☐ No

If yes, please provide the following information:

Number of Monitoring Wells 0

Number of Injection Wells 11

Type of Well Installed (Check applicable type):
☐ Bored ☐ Drilled ☒ Direct-Push
☐ Hand-Augured ☐ Other (specify) _____

Please include two copies of form GW-1b for each well installed.

Were any wells abandoned during this injection event?
☐ Yes ☒ No

If yes, please provide the following information:

Number of Monitoring Wells _____

Number of Injection Wells _____

Please include two copies of the GW-30 for each well abandoned.

4. **Injectant Information**

sand with guar gum, borax, and sodium chloride
Injectant Type (link gel)

Concentration n/a

If the injectant is diluted please indicate the source dilution fluid. dechlorinated water

Total Volume Injected 17,000 lbs sand 2,310 lbs gel

Volume Injected per well 250-1400 lbs sand 40-200 lbs gel (some wells w/multiple fractures)

5. **Injection History**

Injection date(s) March 6 through 8, 2012

Injection number (e.g. 3 of 5) 1 of 1

Is this the last injection at this site?
☒ Yes ☐ No

I DO HEREBY CERTIFY THAT ALL THE INFORMATION ON THIS FORM IS CORRECT TO THE BEST OF MY KNOWLEDGE AND THAT THE INJECTION WAS PERFORMED WITHIN THE STANDARDS LAID OUT IN THE PERMIT.

[signature] 6-11-12
SIGNATURE OF INJECTION CONTRACTOR DATE

Doug Knight
PRINT NAME OF PERSON PERFORMING THE INJECTION

Submit the original of this form to the Division of Water Quality within 30 days of injection.
Attn: UIC Program, 1636 Mail Service Center, Raleigh, NC 27699-1636, Phone No. 919-733-3221

Form UIC-IER
Rev. 07/09

INJECTION EVENT RECORD

North Carolina Department of Environment and Natural Resources – Division of Water Quality
Permit Number WI0500421

1. **Permit Information**

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Form UIC-IER
Rev. 07/09

Attachment No. 2

GSK Fracture Data

Date	Hole	Depth (ft)	Start Frac Plog	Start Frac Notes	End frac Plog	End frac Notes	Gel (gal)	Frac Sand (lbs)	Notes	Well Constructed	Well Count
3/6/2012	HF-1	11.5	9:24	9:18	9:40	9:31	175	1300		Yes	1
3/6/2012	HF-2 A	14	10:33	10:27	10:46	10:36	130	1300		Yes	2
3/6/2012	HF-2 B	10.5	11:32	11:26	11:39	11:31	40	400		With 2A	
3/7/2012	HF-3	20.5	13:47	13:44	14:05	13:56	205	1200		Yes	3
3/6/2012	HF-4 A	9	14:12	14:07	14:27	14:18	120	1000		Yes	4
3/6/2012	HF-4 B	11	15:22	15:16	15:41	15:32	185	1000		With 4A	
3/8/2012	HF-5	18	10:24	10:18	10:39	10:31	125	1200		Yes	5
3/6/2012	HF-6 A	9	16:12	16:06	16:28	16:22	75	250	Vented after 250 pounds sand	No	
3/6/2012	HF-6 B	12	17:03	16:58	17:16	17:04	100	750	Vented after 750 pounds sand	No	
3/7/2012	HF-6 C	15.5	11:31	11:26	11:44	11:36	150	1000	New Location to the North	Yes	6
3/8/2012	HF-7	12	9:31	9:25	10:00	9:44	200	1300		Yes	7
3/8/2012	HF-8	11	8:26	8:22	8:42	8:36	125	1400		Yes	8
3/6/2012	HF-9 A	11	18:02	17:56	18:25	18:19	185	1000	Vented after completion, 1000 pounds sand	?	
3/7/2012	HF-9 B	13	9:40	9:34	9:48	9:40	125	500	Vented after 500 pounds sand	?	
3/7/2012	HF-9 C	22	10:25	10:19	10:36	10:27	110	1000		Yes	9
3/7/2012	HF-10	16	14:35	14:29	14:48	14:40	110	1200		Yes	10
3/7/2012	HF-11	18	15:59	15:53	16:13	16:06	150	1200		Yes	11
						Totals	2310	17000			

notes: 1) data provided by FRx, Inc.

Golder Associates

GSK Uplift Data

HF-1 @11.5 ft.			HF-1			
Station #	Northing	Easting	Station #	Pre	Post	Uplift
1	0	-15	1	18.9	18.8	0.1
2	13	-7.5	2	211.6	210.6	1
3	5	-8.7	3	192.3	192	0.3
4	-5	-8.7	4	28.7	29.45	-0.75
5	10	0	5	108.6	107.9	0.7
6	-13	-7.5	6	16.1	16.9	-0.8
7	13	7.5	7	261.5	260.4	1.1
8	0	-15	8	241	240.3	0.7
9	-10	0	9	57.55	58.1	-0.55
10	-5	8.7	10	88.4	88	0.4
11	0	15	11	240.2	239.3	0.9
12	-13	7.5	12	158.1	157.6	0.5
Building	?	?	B	155.3	155.8	-0.5

HF-2			HF-2 A @14 ft.				HF-2 B @ 10.5 ft.			
Station #	Northing	Easting	Station #	Pre	Post	Uplift	Station #	Pre	Post	Uplift
1	0	15	1	116.9	117.2	-0.3	1	117.2	117.4	-0.2
2	13	7.5	2	96.2	96.5	-0.3	2	96.5	96.6	-0.1
3	5	8.7	3	232	232.6	-0.6	3	232.6	232.7	-0.1
4	-5	8.7	4	245.1	245.8	-0.7	4	245.8	na	na
5	-13	7.5	5	112.1	112.5	-0.4	5	112.5	na	na
6	10	0	6	93.2	93.8	-0.6	6	93.8	94.1	-0.3
7	-10	0	7	116.5	117.2	-0.7	7	117.2	117.9	-0.7
8	13	-7.5	8	218.4	218.7	-0.3	8	218.7	218.8	-0.1
9	-13	-7.5	9	236.4	236.6	-0.2	9	236.6	237.3	-0.7
10	-5	-8.7	10	88.1	89.2	-1.1	10	89.2	89.6	-0.4
11	5	-8.7	11	222.6	223.6	-1	11	223.6	223.9	-0.3
12	0	-15	12	208.7	209.4	-0.7	12	209.4	209.4	0
Building	?	?	B	44.5	44.5	0	B	44.5	43.8	0.7

HF-3 @ 20.5 ft.			HF-3			
Station #	Northing	Easting	Station #	Pre	Post	Uplift
1	13	-7.5	1	231.4	231.9	-0.5
2	13	7.5	2	112.6	112.8	-0.2
3	10	0	3	110.3	111	-0.7
4	5	-8.7	4	221.8	222.8	-1
5	5	8.7	5	268	268.6	-0.6
6	0	15	6	139.4	139.6	-0.2
7	0	-15	7	189.5	190.4	-0.9
8	-5	8.7	8	276	na	na
9	-5	-8.7	9	87	88	-1
10	-10	0	10	261.6	262.8	-1.2
11	-13	7.5	11	257.5	257.9	-0.4
12	-13	-7.5	12	86.8	87.4	-0.6
Ref	?	?	Ref	75.8	75.8	0

HF-4			HF-4 A @9 ft.				HF-4 B @ 11 ft.			
Station #	Northing	Easting	Station #	Pre	Post	Uplift	Station #	Pre	Post	Uplift
1	7.5	13	1	173.8	173.8	0	1	174.1	174.1	0
2	15	0	2	204.3	204.6	-0.3	2	204.7	204.9	-0.2
3	8.7	5	3	224.2	224.6	-0.4	3	224.6	224.9	-0.3
4	0	10	4	271	271	0	4	271.2	271.3	-0.1
5	8.7	-5	5	54.6	56	-1.4	5	55.7	57.1	-1.4
6	na	na	6	na	na	na	6	na	na	na
7	-8.7	5	7	110.5	110.7	-0.2	7	110.8	111	-0.2
8	7.5	-13	8	37	37.8	-0.8	8	37.6	39.7	-2.1
9	-15	0	9	100	100.2	-0.2	9	100.3	100.4	-0.1
10	0	-10	10	178.2	181	-2.8	10	179.8	182	-2.2
11	-8.7	-5	11	67.3	68.1	-0.8	11	68	68.6	-0.6
12	-7.5	-13	12	49.3	50.4	-1.1	12	na	na	na
Ref	?	?	Ref	8.3	8.4	-0.1	Ref	8.3	8.3	0

HF-5 @ 18 ft.			HF-5			
Station #	Northing	Easting	Station #	Pre	Post	Uplift
1	-13	7.5	1	95.8	96.1	-0.3
2	-13	-7.5	2	217.6	217.9	-0.3
3	-10	0	3	215	215.6	-0.6
4	-5	8.7	4	78.5	79.3	-0.8
5	-5	-8.7	5	197	197.9	-0.9
6	0	15	6	67.2	67.4	-0.2
7	0	-15	7	10.9	12	-1.1
8	5	-8.7	8	49.4	50	-0.6
9	5	8.7	9	25.9	27	-1.1
10	10	0	10	163.7	164.2	-0.5
11	13	-7.5	11	156.4	156.8	-0.4
12	13	7.5	12	169.5	169.7	-0.2
Ref	?	?	Ref	208.2	208.2	0

HF-6 A&B (not C)			HF-6 A @ 9 ft.				HF-6 B @ 12 ft.			
Station #	Northing	Easting	Station #	Pre	Post	Uplift	Station #	Pre	Post	Uplift
1	-13	7.5	1	102	101.9	0.1	1	101.9	102.2	-0.3
2	-5	8.7	2	221.6	221.6	0	2	221.6	na	na
3	5	8.7	3	53.8	53.7	0.1	3	53.7	54	-0.3
4	-10	0	4	216.2	216.2	0	4	216.2	216.6	-0.4
5	13	7.5	5	29.8	29.8	0	5	29.8	29.9	-0.1
6	-13	-7.5	6	52.2	52.1	0.1	6	52.1	52.4	-0.3
7	-5	-8.7	7	202.8	202.8	0	7	202.8	203.2	-0.4
8	10	0	8	178.7	178.6	0.1	8	178.6	178.9	-0.3
9	5	-8.7	9	47.5	47.5	0	9	47.5	na	na
10	0	-15	10	191	191	0	10	191	191.4	-0.4
11	13	-7.5	11	156.4	156.4	0	11	156.4	156.6	-0.2
12	na	na	12	na	na	na	12	na	na	na
Ref	?	?	Ref	41.4	41.5	-0.1	Ref	41.5	41.5	0

HF-6 C @ 15.5 ft.			HF-6 C			
Station #	Northing	Easting	Station #	Pre	Post	Uplift
1	-13	7.5	1	na	n	na
2	0	15	2	71.4	72	-0.6
3	-5	8.7	3	190	191.3	-1.3
4	-10	0	4	37.3	38.8	-1.5
5	-13	-7.5	5	32.3	33	-0.7
6	5	8.7	6	220.5	221.6	-1.1
7	-5	-8.7	7	185.5	186.6	-1.1
8	13	7.5	8	242.6	243.1	-0.5
9	0	-15	9	213.9	214.4	-0.5
10	10	0	10	211.6	212.4	-0.8
11	5	-8.7	11	104	na	na
12	13	-7.5	12	110.7	111	-0.3
Ref	?	?	Ref	19.1	19.1	0

HF-7 @ 12 ft.			HF-7			
Station #	Northing	Easting	Station #	Pre	Post	Uplift
1	0	-15	1	221.1	222.2	-1.1
2	-13	-7.5	2	42.4	43.2	-0.8
3	-5	-8.7	3	207	208.6	-1.6
4	5	-8.7	4	241	242.9	-1.9
5	13	-7.5	5	133.4	134.5	-1.1
6	10	0	6	261	262.9	-1.9
7	-10	0	7	189.3	190.6	-1.3
8	13	7.5	8	135.3	136.6	-1.3
9	5	8.7	9	109.2	111.2	-2
10	-5	8.7	10	192.9	194.2	-1.3
11	-13	7.5	11	39	39.7	-0.7
12	0	15	12	68.6	69	-0.4
Ref	?	?	Ref	250.5	250.5	0

HF-8 @ 11 ft.			HF-8			
Station #	Northing	Easting	Station #	Pre	Post	Uplift
1	-13	-7.5	1	184.6	185.4	-0.8
2	-5	-8.7	2	194.2	196.3	-2.1
3	5	-8.7	3	212.9	214.1	-1.2
4	13	-7.5	4	92	92.1	-0.1
5	-10	0	5	52.9	54.2	-1.3
6	10	0	6	102.8	103.3	-0.5
7	-13	7.5	7	192.2	192.5	-0.3
8	-5	8.7	8	71.2	72	-0.8
9	5	8.7	9	98.4	99.1	-0.7
10	13	7.5	10	157.5	157.6	-0.1
11	0	15	11	247.3	247.4	-0.1
12	na	na	12	na	na	na
Ref	?	?	Ref	212.4	212.4	0

HF-9			HF-9 A @ 11 ft.				HF-9 B @ 13 ft.				HF-9 C @ 22 ft.			
Station #	Northing	Easting	Station #	Pre	Post	Uplift	Station #	Pre	Post	Uplift	Station #	Pre	Post	Uplift
1	0	15	1	251.9	252	-0.1	1	263.2	263.3	-0.1	1	262.6	262.8	-0.2
2	-13	7.5	2	258.6	259	-0.4	2	253	253	0	2	262.3	262	0.3
3	-5	8.7	3	117.2	117.5	-0.3	3	116.9	116.8	0.1	3	116.1	116.3	-0.2
4	5	8.7	4	102.8	103	-0.2	4	113.3	113.4	-0.1	4	111.8	112.4	-0.6
5	13	7.5	5	228.1	228.3	-0.2	5	236.3	236.3	0	5	235.9	236.5	-0.6
6	-10	0	6	259.7	260	-0.3	6	264.7	264.7	0	6	264.1	264.4	-0.3
7	10	0	7	53.9	54.1	-0.2	7	103.6	na	na	7	102.2	102.9	-0.7
8	-13	-7.5	8	253.8	254	-0.2	8	271.8	na	na	8	271.1	271.3	-0.2
9	-5	-8.7	9	241.3	241.6	-0.3	9	257.3	na	na	9	255	255.3	-0.3
10	5	-8.7	10	233.5	233.8	-0.3	10	246.5	246.5	0	10	246	246.4	-0.4
11	13	-7.5	11	86.5	86.7	-0.2	11	97.2	97.2	0	11	96.8	96.9	-0.1
12	0	-15	12	98.1	98	0.1	12	113.1	113.1	0	12	112.5	112.9	-0.4
Ref	?	?	Ref	57.2	57.2	0	Ref	27	na	na	Ref	27.2	27.2	0

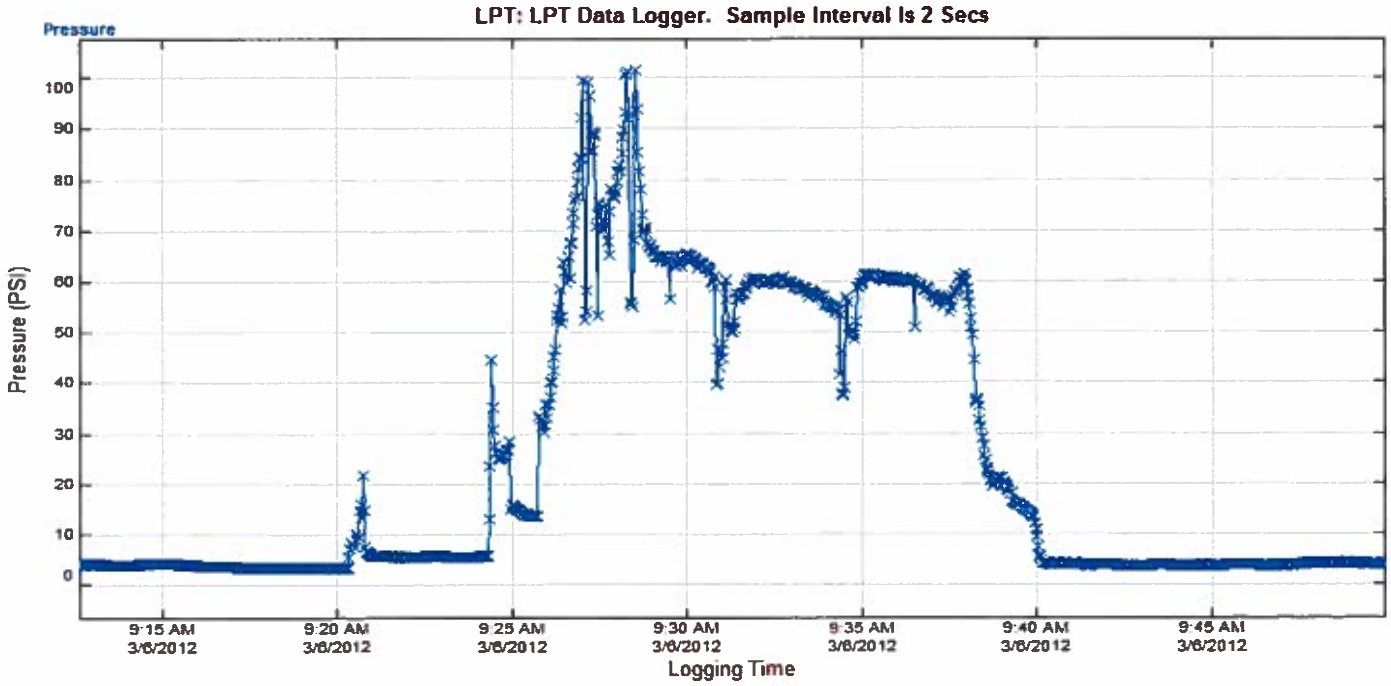
HF-10 @ 16 ft.			HF-10			
Station #	Northing	Easting	Station #	Pre	Post	Uplift
1	0	-15	1	170.7	170.9	-0.2
2	-13	-7.5	2	163.3	163.4	-0.1
3	-5	-8.7	3	27.7	28.1	-0.4
4	5	-8.7	4	163.2	163.7	-0.5
5	13	-7.5	5	159.8	160.1	-0.3
6	10	0	6	12.5	13.1	-0.6
7	-10	0	7	151.5	151.9	-0.4
8	13	7.5	8	151.8	152.2	-0.4
9	5	8.7	9	13.8	14.3	-0.5
10	-5	8.7	10	8.4	8.9	-0.5
11	-13	7.5	11	6.3	6.7	-0.4
12	na	na	12	na	na	na
Ref	?	?	Ref	150.8	150.8	0

HF-11 @ 18 ft.			HF-11			
Station #	Northing	Easting	Station #	Pre	Post	Uplift
1	-13	-7.5	1	13.8	13.6	0.2
2	0	-15	2	27.2	27.2	0
3	-5	-8.7	3	160.6	160.5	0.1
4	5	-8.7	4	169.1	169	0.1
5	-10	0	5	169.8	169.9	-0.1
6	13	-7.5	6	164.2	164.3	-0.1
7	10	0	7	37.4	37.5	-0.1
8	-13	7.5	8	155.8	155.8	0
9	13	7.5	9	31.3	31.3	0
10	5	8.7	10	166.2	166.2	0
11	-5	8.7	11	26.7	26.7	0
12	0	15	12	21.1	21.1	0
Ref	?	?	Ref	150.8	150.8	0

notes: 1) data provided by FRx, Inc.

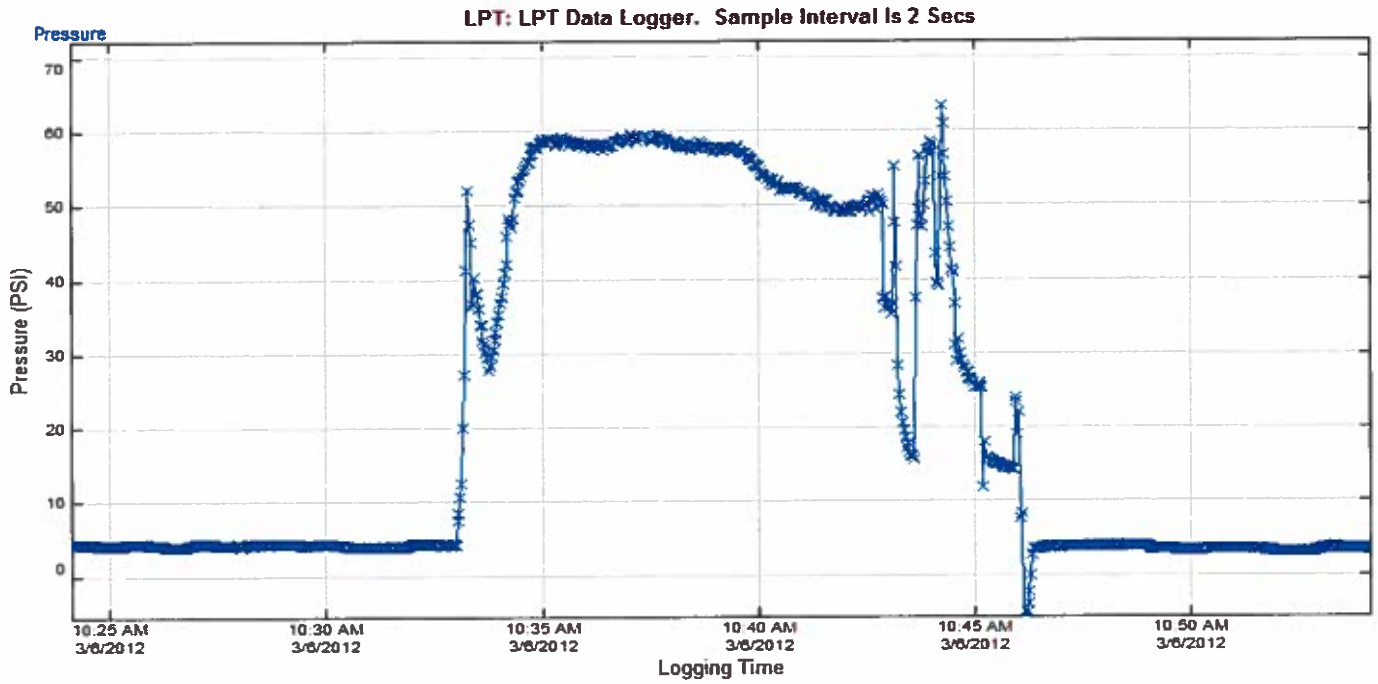
Golder Associates

HF-1



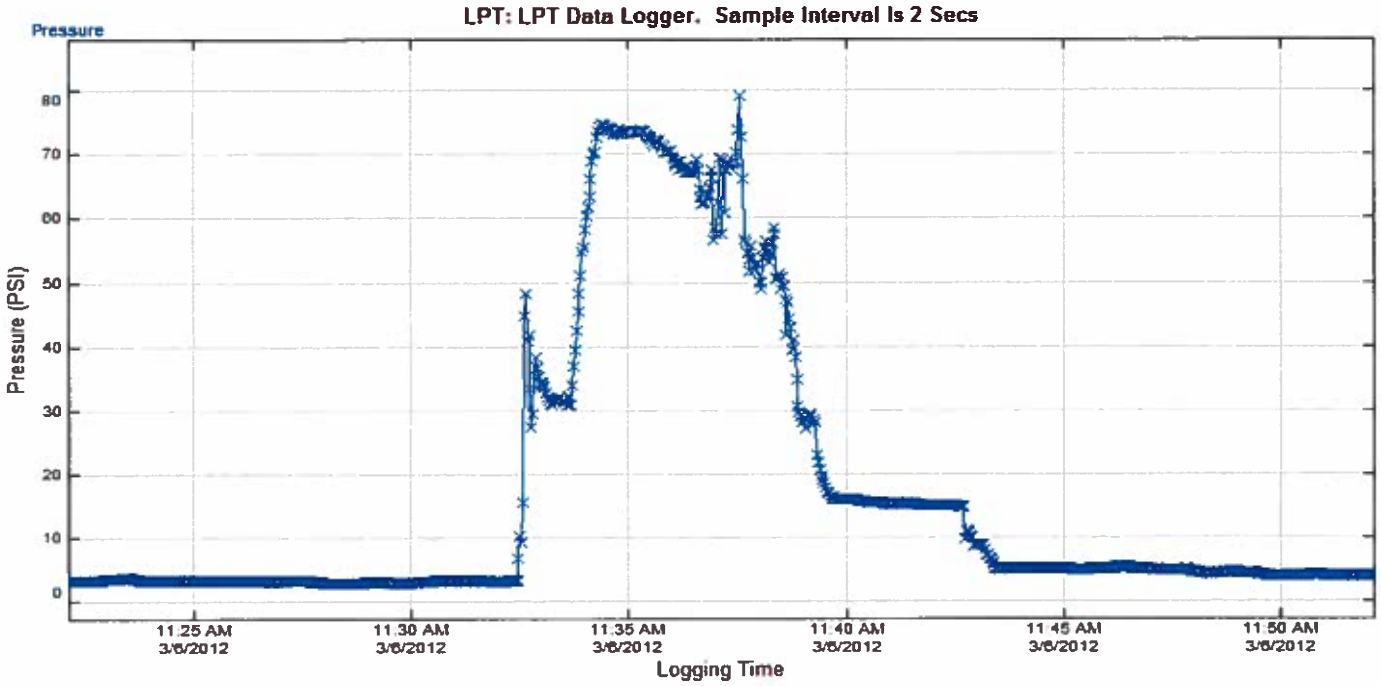
Golder Associates

HF-2 A



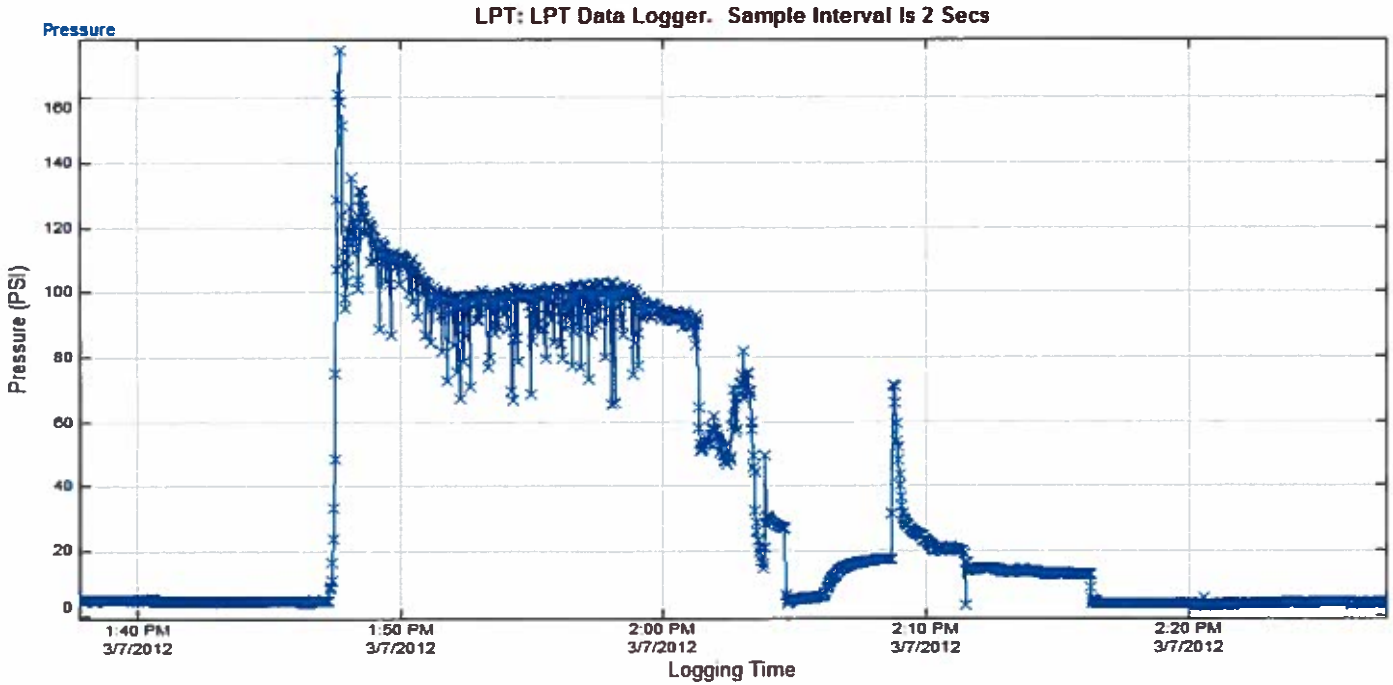
Golder Associates

HF-2 B



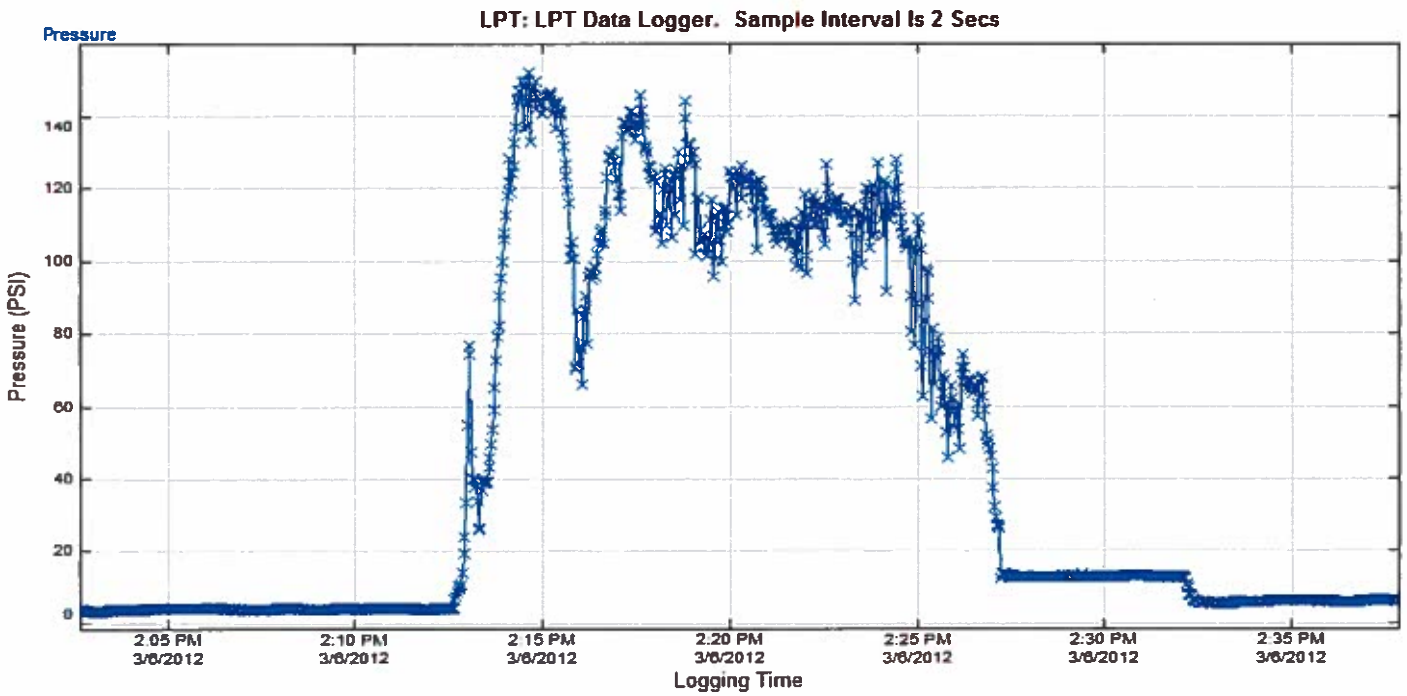
Golder Associates

HF-3



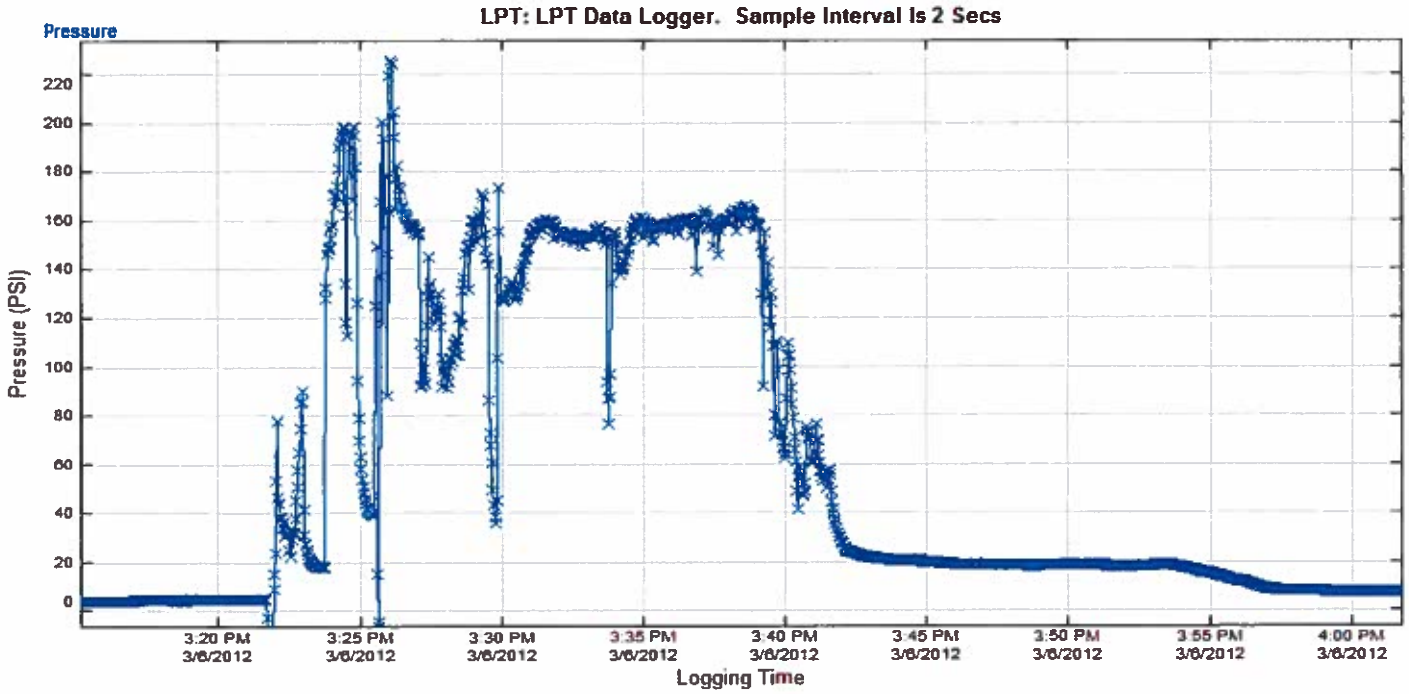
Golder Associates

HF-4 A



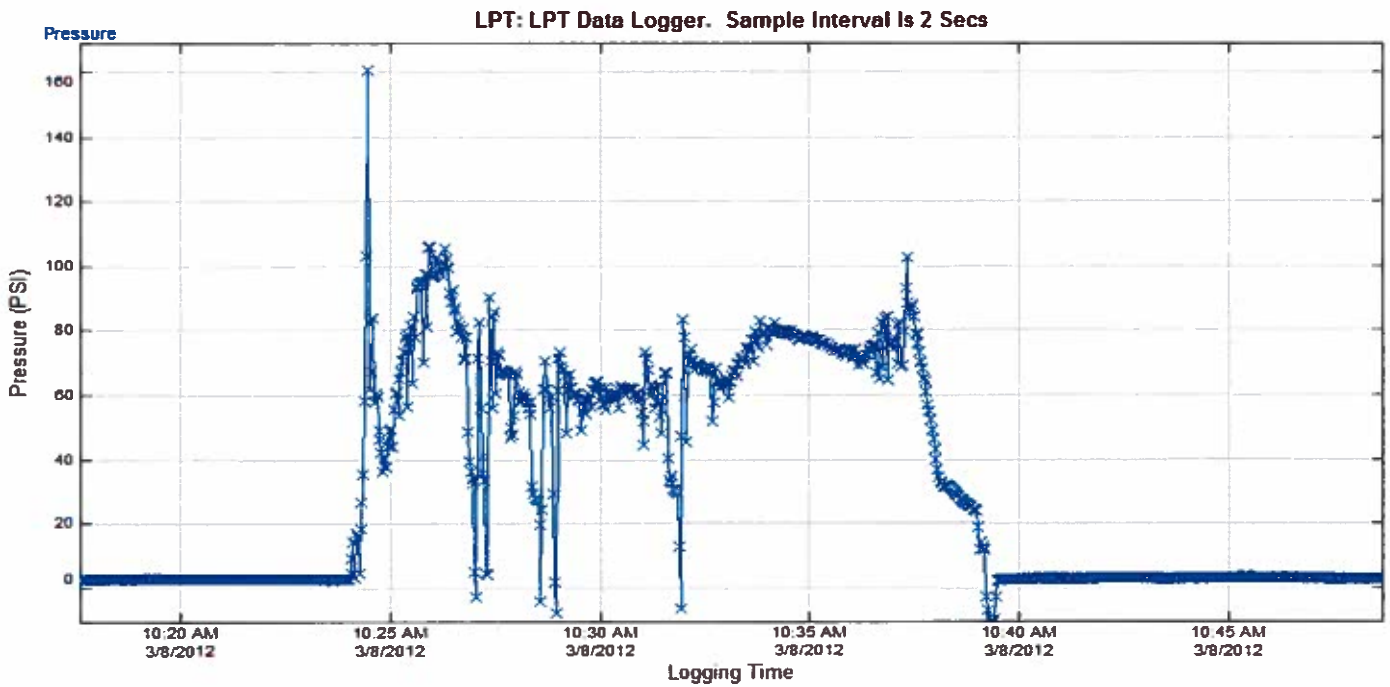
Golder Associates

HF- 4 B



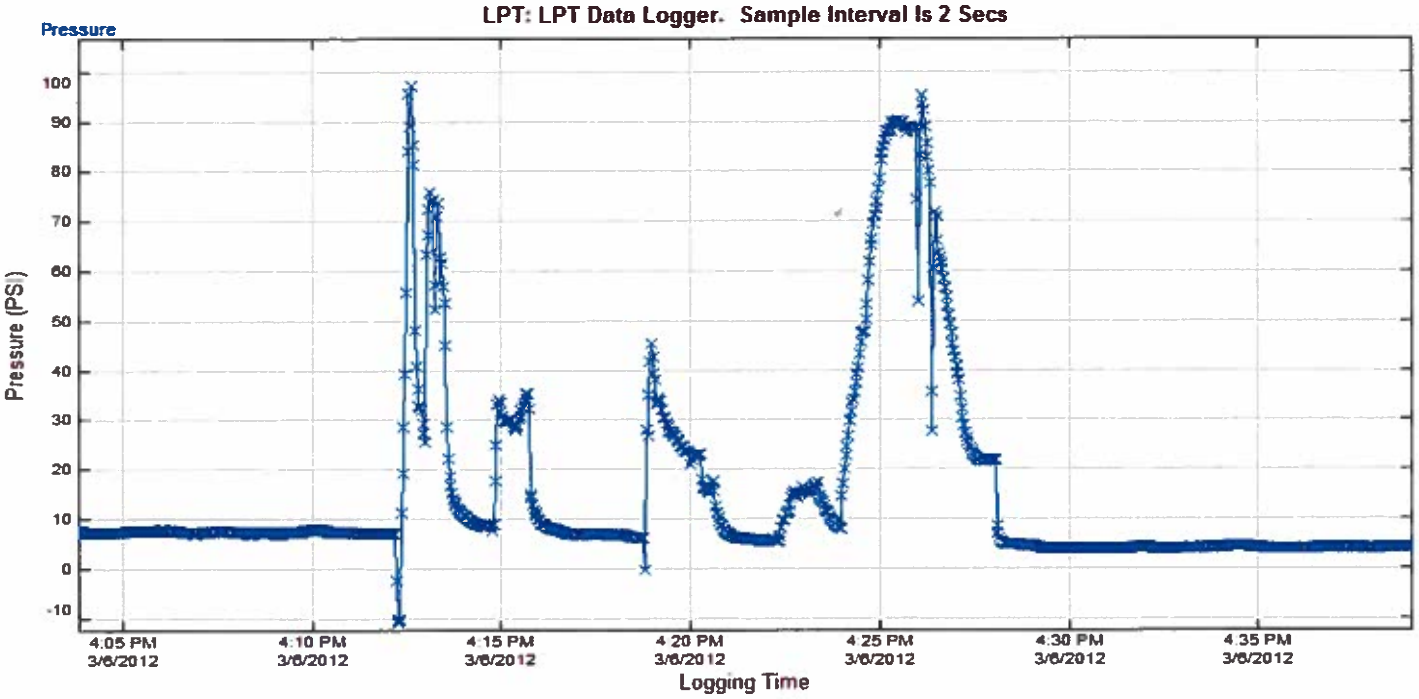
Golder Associates

HF-5



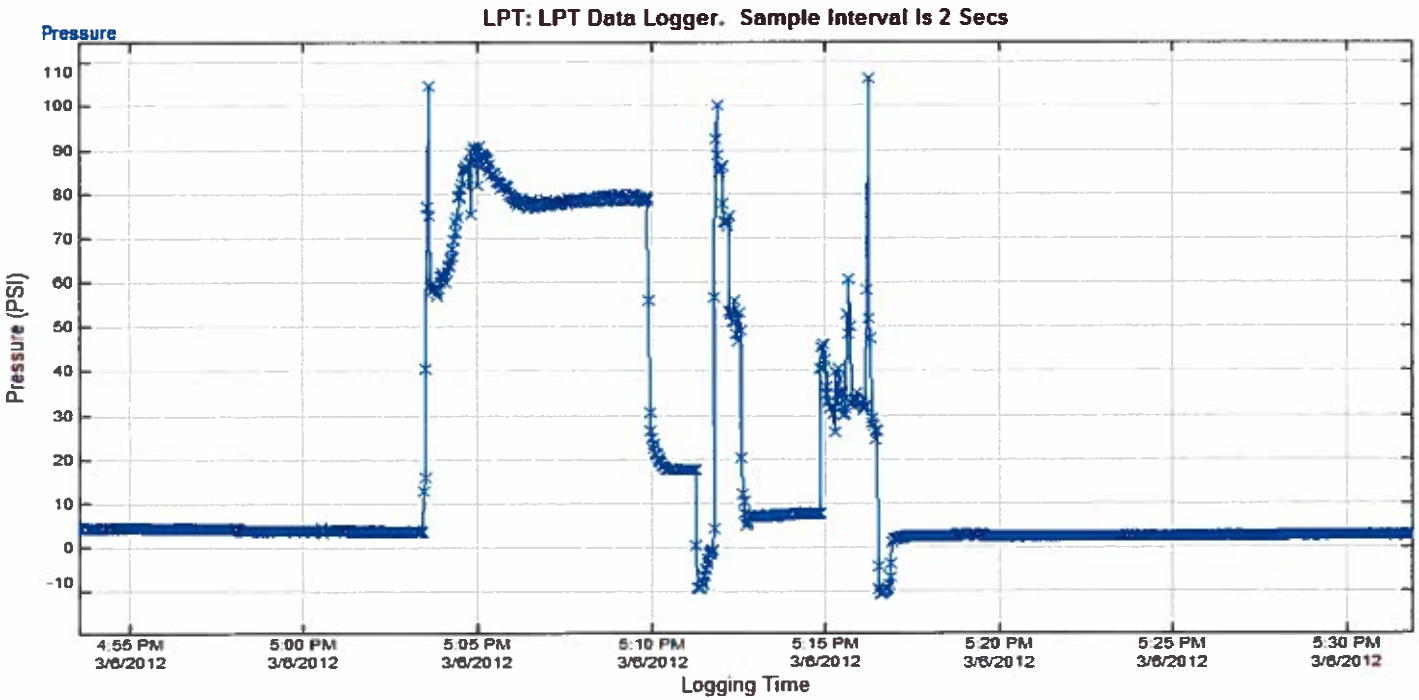
Golder Associates

HF-6 A



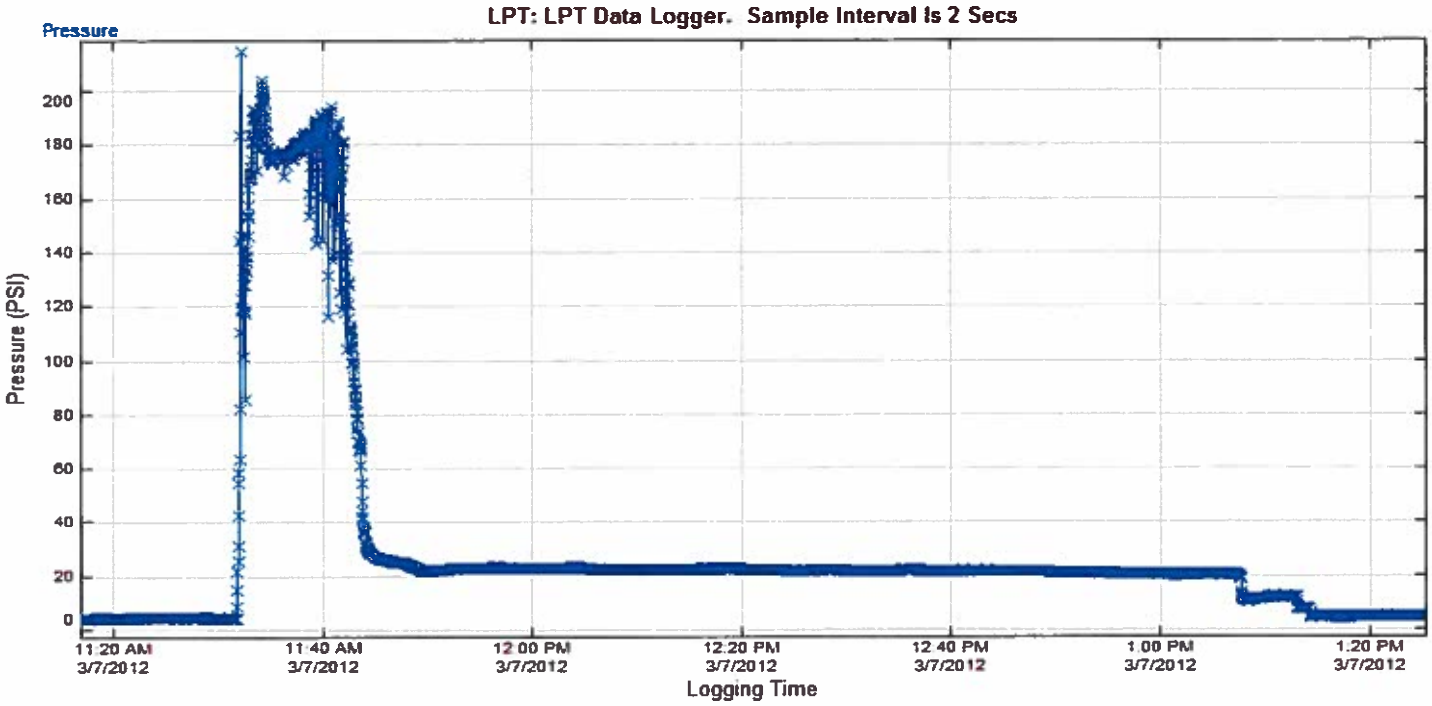
Golder Associates

HF-6 B



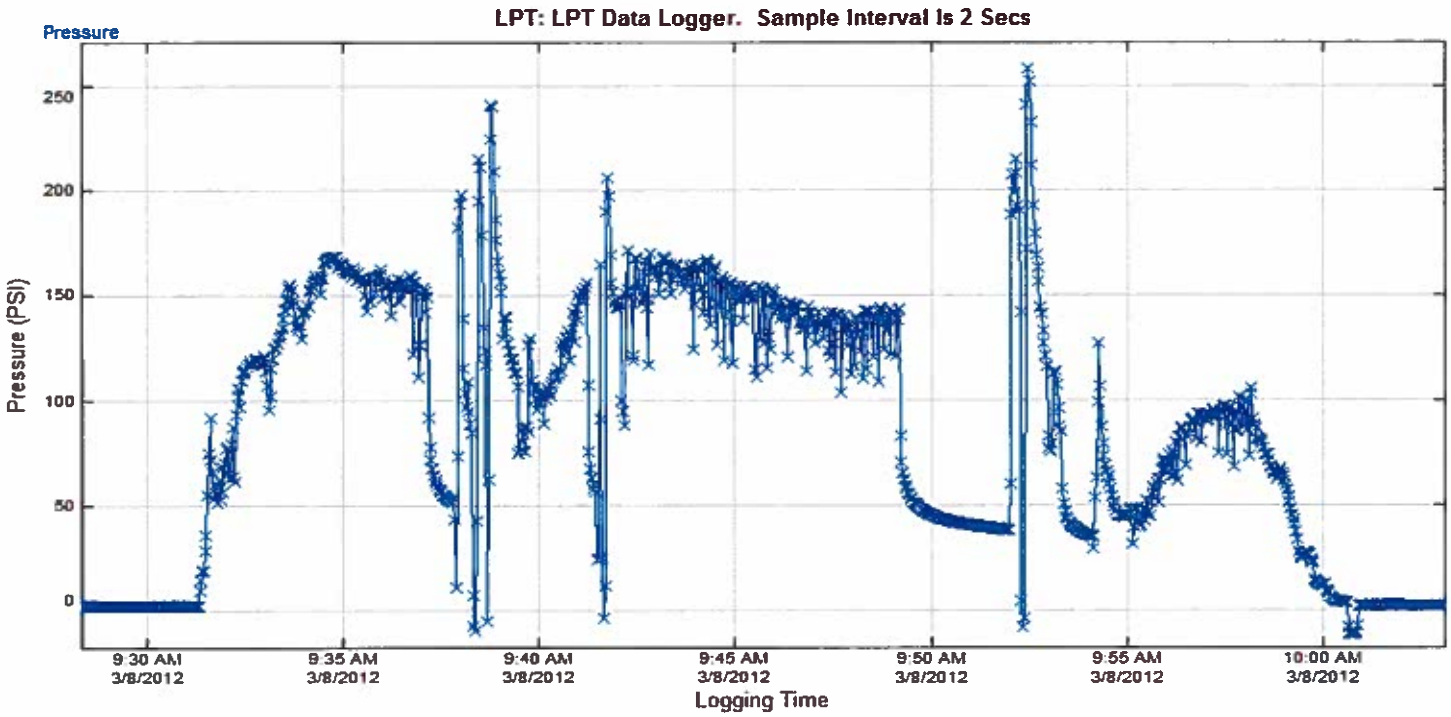
Golder Associates

HF-6 C



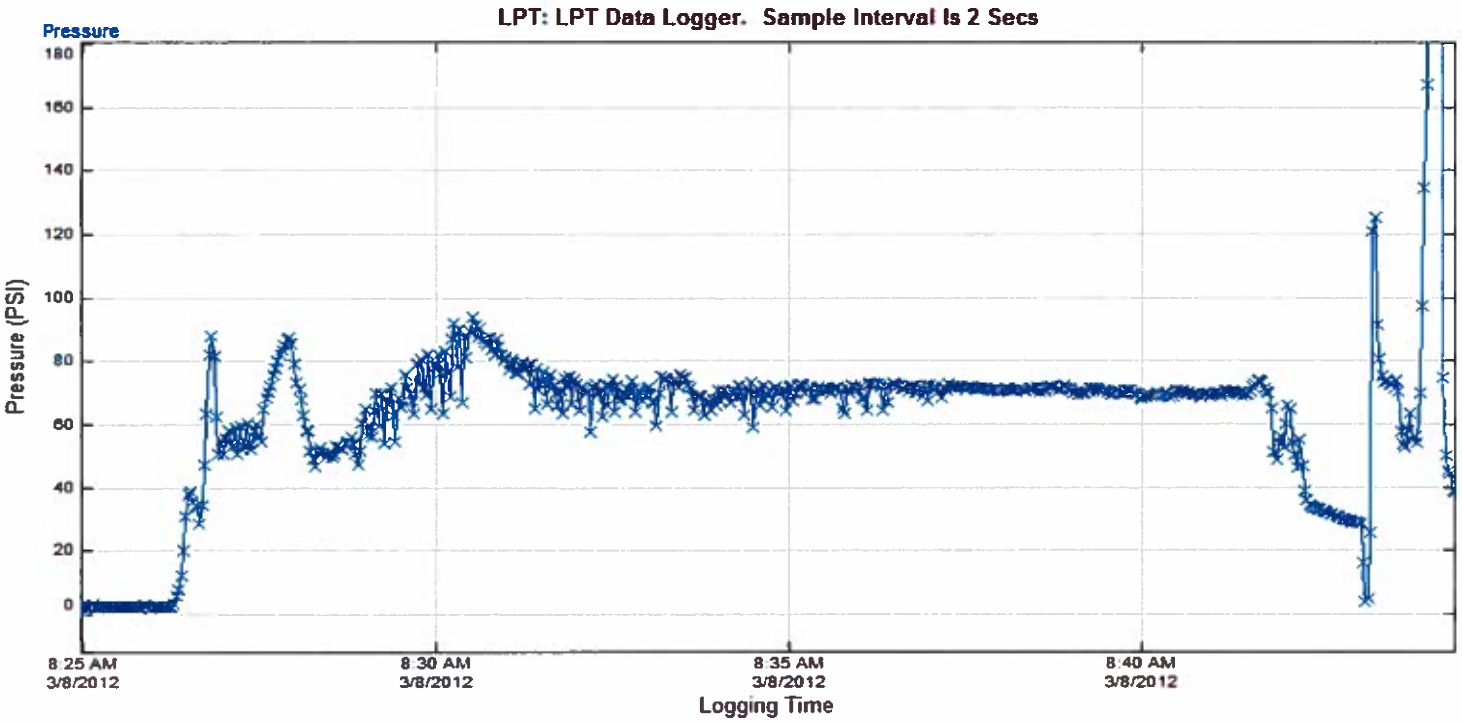
Golder Associates

HF-7



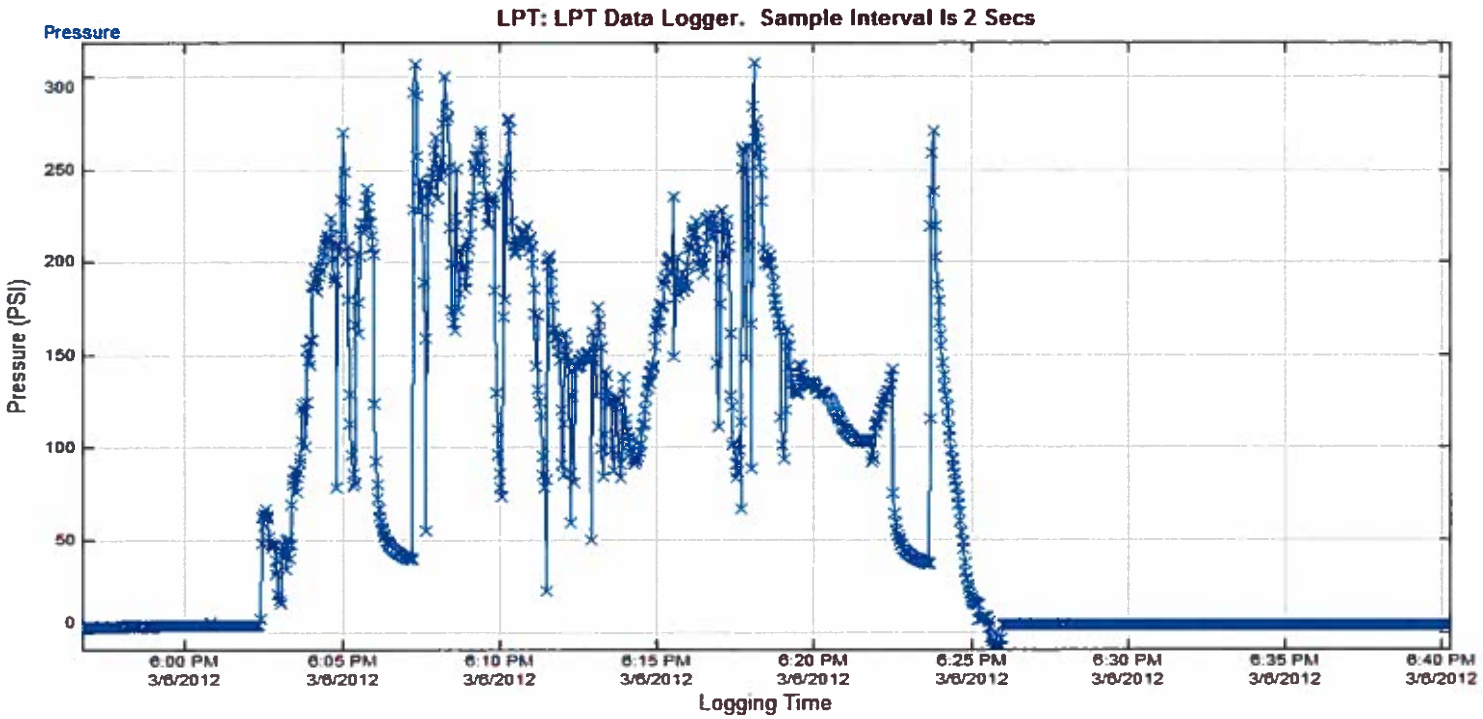
Golder Associates

HF-8



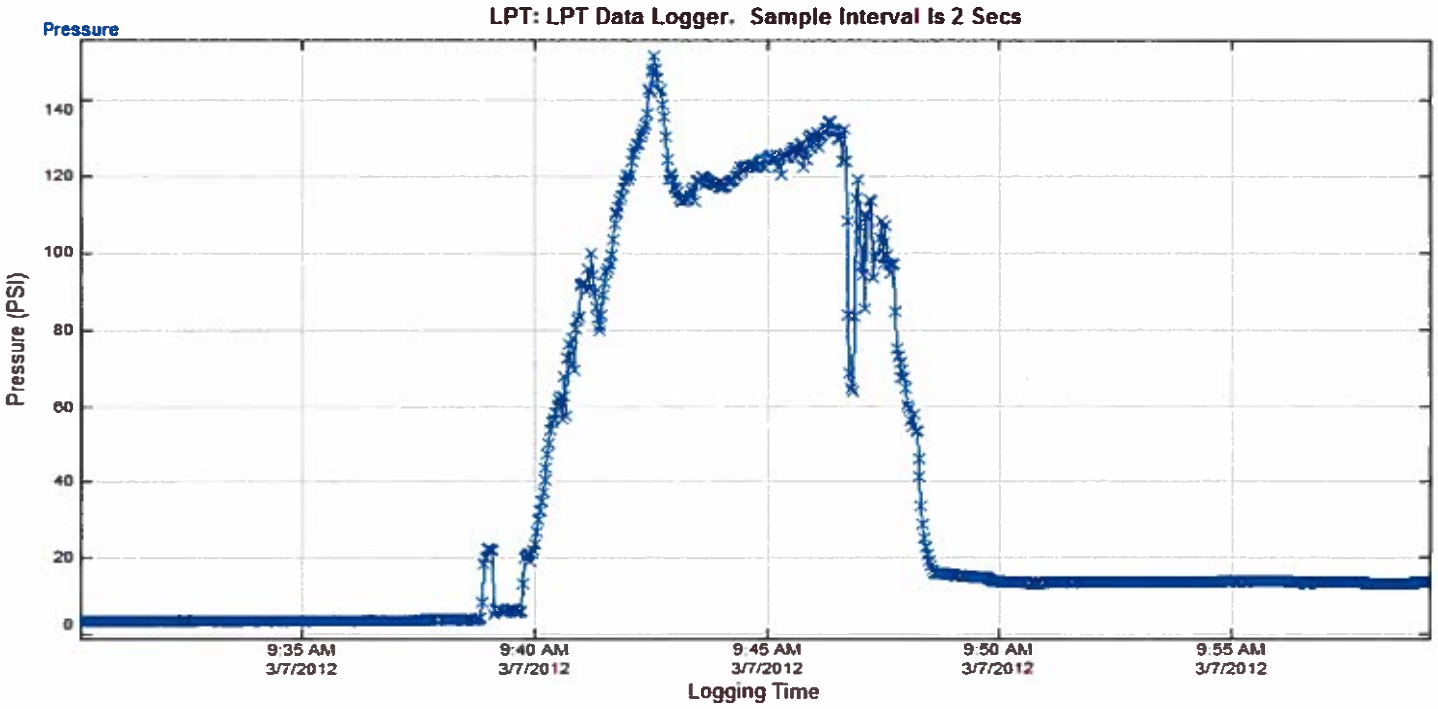
Golder Associates

HF-9 A



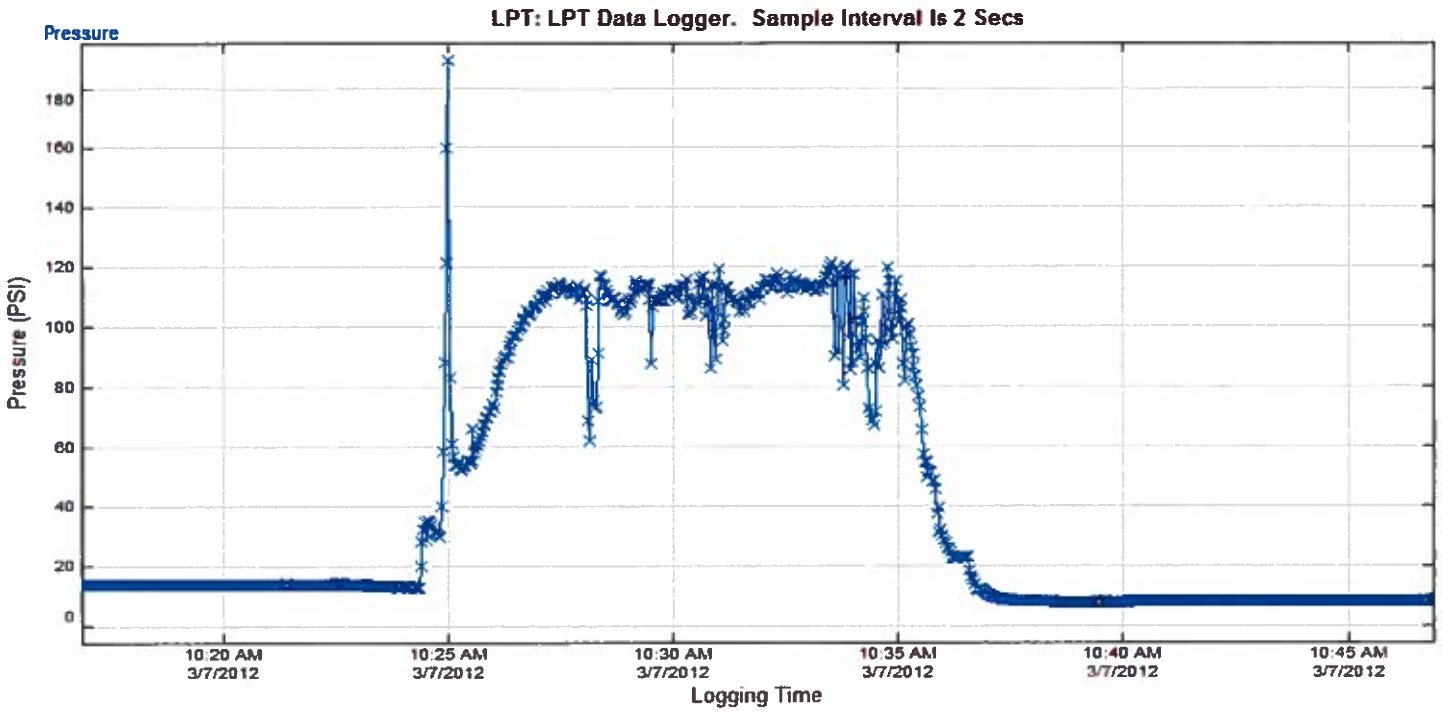
Golder Associates

HF-9 B



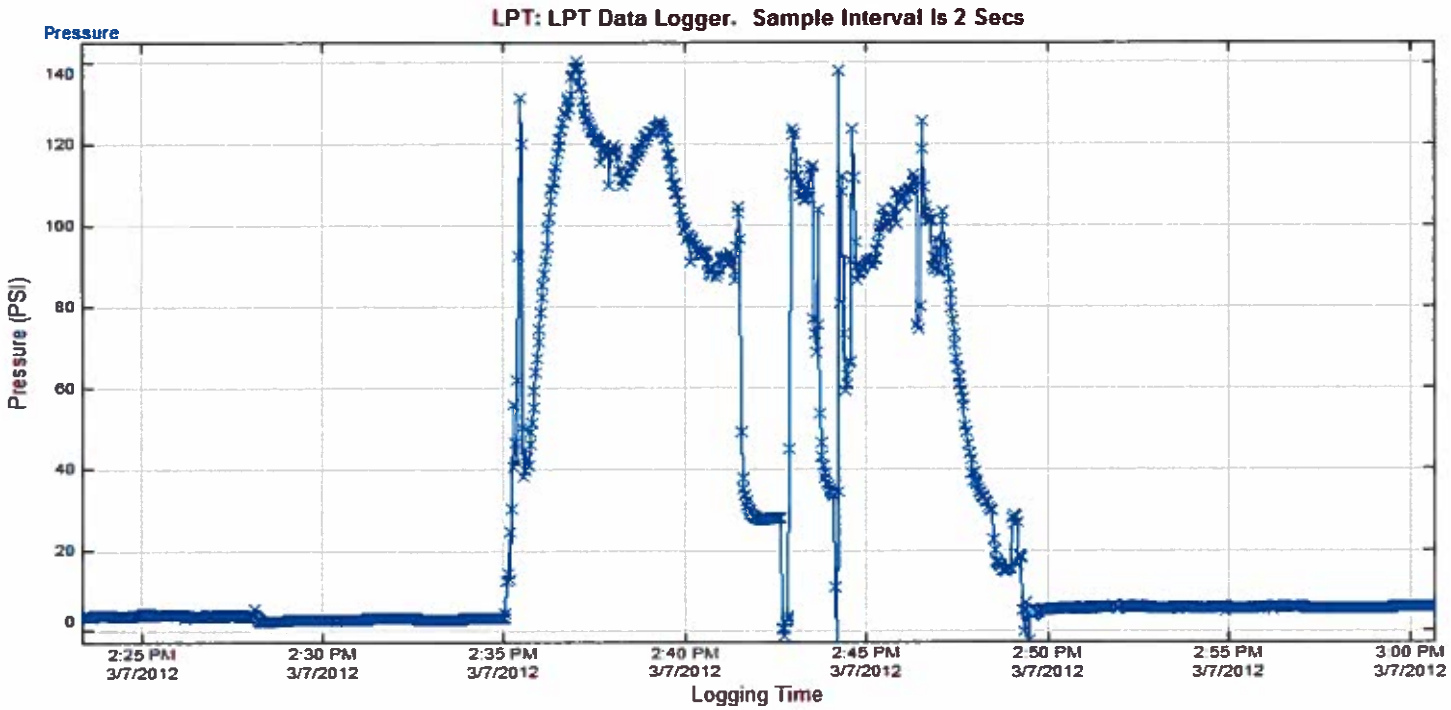
Golder Associates

HF-9 C



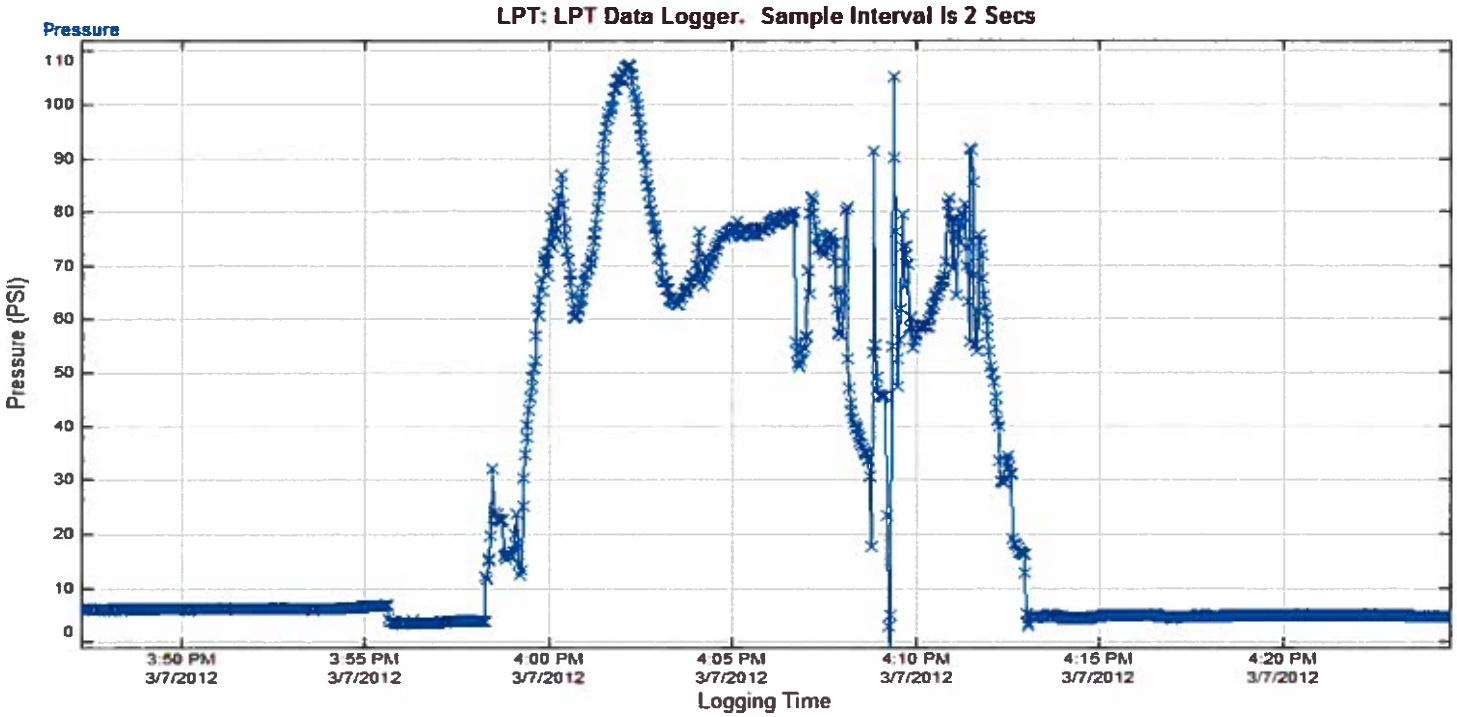
Golder Associates

HF-10



Golder Associates

HF-11



Golder Associates

GSK Pressure Log Interpretation

Injection pressure logs were acquired during the fracturing work at the GSK facility. These data can be interpreted to yield estimates of fracture extent. The mechanical analysis of fractures as outlined by Murdoch was used to extract a ratio of two key geotechnical parameters, the elasticity and the Type I stress intensity factor. This ratio, along with typical values for bulk modulus for clayey soils allows estimates of fracture radii. The data for each fracture are summarized in the following table.

Date	Hole	Depth (ft)	Start Time	Pressure Log Inverse Slope (kPa^{-2}/sec)	Ratio $K^{3/2} : E^{1/2}$ (kPa m^{x})	Radius (m)	Radius (ft)
3/6/2012	HF-1	11.5	9:24	6.53E-09	56.04	5.48	17.99
3/6/2012	HF-2 A	14	10:33	9.85E-09	39.23	5.60	18.36
3/6/2012	HF-2 B	10.5	11:32	1.61E-08	28.76	3.74	12.27
3/7/2012	HF-3	20.5	13:47	3.7E-09	47.95	6.99	22.93
3/6/2012	HF-4 A	9	14:12	1.2E-09	136.47	4.59	15.05
3/6/2012	HF-4 B	11	15:22	2.31E-09	88.69	5.37	17.63
3/8/2012	HF-5	18	10:24	2.57E-08	18.24	6.07	19.91
3/6/2012	HF-6 A	9	16:12	3.87E-07	5.32	3.90	12.79
3/6/2012	HF-6 B	12	17:03	1.96E-08	26.30	4.85	15.90
3/7/2012	HF-6 C	15.5	11:31	4.39E-09	55.40	5.86	19.24
3/8/2012	HF-7	12	9:31	8.19E-10	119.77	5.72	18.75
3/8/2012	HF-8	11	8:26	1.84E-08	30.98	5.11	16.76
3/6/2012	HF-9 A	11	18:02	5.04E-09	54.57	5.37	17.63
3/7/2012	HF-9 B	13	9:40	7.98E-08	16.44	5.12	16.79
3/7/2012	HF-9 C	22	10:25	1.28E-09	76.56	6.31	20.71
3/7/2012	HF-10	16	14:35	4.58E-09	48.56	5.68	18.64
3/7/2012	HF-11	18	15:59	4.21E-08	15.75	6.27	20.57

A value of 50,000 kPa was assumed as the bulk modulus for the calculation of radii.

These results are consistent with the uplift patterns observed.

References

Murdoch, L. C. (2002) "Mechanical Analysis of Idealized Shallow Hydraulic Fractures." Journal of Geotechnical and Geoenvironmental Engineering 128:6 (488-495.)

Attachment No. 3

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) SVE-1

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 15

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 1 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 10 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 7 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 10	Bottom 15 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 9	Bottom 15 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C. WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-1

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/6/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 86603546146 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 11.5

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 1 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 6.5 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 3.5 Ft.	PORTLAND	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 6.5	Bottom 11.5 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 5.5	Bottom 11.5 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	1.5	Fine Sand
1.5	3.5	Silty Clay
3.5	5	Sandy Clay
5	6	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-2

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/6/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 14.5

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 9.5 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 6.5 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 9.5	Bottom 14.5 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 8.5	Bottom 14.5 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	1.5	Silty Sand
1.5	6	Clayey Silt

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-3

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 21

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 16 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 13 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 16	Bottom 21 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 15	Bottom 21 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-4

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/6/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 13

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 8 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 5 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 8	Bottom 13 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 7	Bottom 13 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	2	Silty Sand
2	4	Silty Clay
4	6	Clayey Silt

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-5

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 19

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 14 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 11 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 14	Bottom 19 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 13	Bottom 19 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
/		
/		
/		
/		
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/		
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/		

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-6

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 16.5

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 11.5 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 8.5 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 11.5	Bottom 16.5 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 10.5	Bottom 16.5 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	2	Sandy Silt
2	3	Silty Clay
3	6	Clayey Silt

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-7

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 13

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD [gpm]: _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 8 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 5 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 7	Bottom 13 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 8	Bottom 13 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	2.5	Silty Clay
2.5	3	Silty Sand
3	5	Silty Clay
5	6	Clayey Silt

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE 3/29/12

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-8

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 12

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 7 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 4 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 7	Bottom 12 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 6	Bottom 12 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	2.5	Clayey Silt
2.5	5	Silty Clay
5	6	Silty Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE 3/29/12

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-9

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/7/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 22

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 17 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 13 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 17	Bottom 22 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 15	Bottom 22 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-10

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/7/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 86603546145 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 17.5

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 12.5 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 9.5 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 12.5	Bottom 17.5 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 11.5	Bottom 17.5 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	2	Silty Sand
2	4	Silty Clay
4	6	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE 3/29/12

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-11

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/7/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 19

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☑

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 14	Ft. 3/4"	40	PVC
Top	Bottom	Ft.		
Top	Bottom	Ft.		

8. GROUT:

Depth		Material	Method
Top 0	Bottom 11	Ft. Portland	
Top	Bottom	Ft.	
Top	Bottom	Ft.	

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 14	Bottom 19	Ft. 3/4 in.	.010 in.	PVC
Top	Bottom	Ft. in.	in.	
Top	Bottom	Ft. in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 13	Bottom 19	Ft. #2	sand
Top	Bottom	Ft.	
Top	Bottom	Ft.	

11. DRILLING LOG

Top	Bottom	Formation Description
0	2	Silty Sand
2	4	Silty Clay
4	6	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) SVE-1

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 86603546146 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 15

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☑

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 1 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom

7. CASING:

Depth Top	Depth Bottom	Diameter	Thickness/ Weight	Material
0	10 Ft.	3/4"	40	PVC
	Ft.			
	Ft.			

8. GROUT:

Depth Top	Depth Bottom	Material	Method
0	7 Ft.	Portland	
	Ft.		
	Ft.		

9. SCREEN:

Depth Top	Depth Bottom	Diameter	Slot Size	Material
10	15 Ft.	3/4 in.	.010 in.	PVC
	Ft.	in.	in.	
	Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth Top	Depth Bottom	Size	Material
9	15 Ft.	#2	sand
	Ft.		
	Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE 3/29/12

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-1

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/6/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 86603546145 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 11.5

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 1 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 6.5 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 3.5 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 6.5	Bottom 11.5 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 5.5	Bottom 11.5 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	1.5	Fine Sand
1.5	3.5	Silty Clay
3.5	5	Sandy Clay
5	6	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

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NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington — SC — 29072
City or Town — State — Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-2

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/6/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name — Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham — NC — 27709
City or Town — State — Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro — NC — 27407
City or Town — State — Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 14.5

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 9.5 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 6.5 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 9.5	Bottom 14.5 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 8.5	Bottom 14.5 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	1.5	Silty Sand
1.5	6	Clayey Silt

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE 3/29/12

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(If applicable)

SITE WELL ID #(If applicable) HF-3

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

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Street Address

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City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 21

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 16 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 13 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 16	Bottom 21 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 15	Bottom 21 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-4

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/6/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 86603546149 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 13

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 8 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 5 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 8	Bottom 13 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 7	Bottom 13 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	2	Silty Sand
2	4	Silty Clay
4	6	Clayey Silt

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE 3/29/12

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-5

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd.
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 19

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☑

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 14 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 11 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 14	Bottom 19 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 13	Bottom 19 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-6

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 16.5

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" If Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 11.5 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 8.5 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 11.5	Bottom 16.5 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 10.5	Bottom 16.5 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	2	Sandy Silt
2	3	Silty Clay
3	6	Clayey Silt

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-7

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 13

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 8 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 5 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 7	Bottom 13 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 8	Bottom 13 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	2.5	Silty Clay
2.5	3	Silty Sand
3	5	Silty Clay
5	6	Clayey Silt

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-8

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/8/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)

☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map

(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 12

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Top	Bottom	Ft.	Diameter	Thickness/ Weight	Material
0	7		3/4"	40	PVC

8. GROUT:

Top	Bottom	Ft.	Material	Method
0	4		Portland	

9. SCREEN:

Top	Bottom	Ft.	Diameter	Slot Size	Material
7	12		3/4 in.	.010 in.	PVC
			in.	in.	
			in.	in.	

10. SAND/GRAVEL PACK:

Top	Bottom	Ft.	Size	Material
6	12		#2	sand

11. DRILLING LOG

Top	Bottom	Formation Description
0	2.5	Clayey Silt
2.5	5	Silty Clay
5	6	Silty Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-9

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/7/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 8660354614 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 22

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 17 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 13 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 17	Bottom 22 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 15	Bottom 22 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-10

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/7/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 86603546146 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 17.5

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 12.5 Ft.	3/4"	40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 9.5 Ft.	Portland	
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 12.5	Bottom 17.5 Ft.	3/4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 11.5	Bottom 17.5 Ft.	#2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	2	Silty Sand
2	4	Silty Clay
4	6	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3379-A

1. WELL CONTRACTOR:

Jason Chiorazzi
Well Contractor (Individual) Name

VERCO
Well Contractor Company Name

2047 Industrial Blvd.
Street Address

Lexington SC 29072
City or Town State Zip Code

(803) 429-5001
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) HF-11

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☑ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3/7/12

4. WELL LOCATION:

3029 E. Cornwallis Rd
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Durham COUNTY Durham

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☑ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other

LATITUDE 35 ° ' " DMS OR 9180107116 DD

LONGITUDE 78 ° ' " DMS OR 86603546146 DD

Latitude/longitude source: ☐ GPS ☑ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

GSK
Facility Name Facility ID# (if applicable)

3029 E. Cornwallis Rd
Street Address

Durham NC 27709
City or Town State Zip Code

Jeremy DeVore
Contact Name

5B Oak Branch Drive
Mailing Address

Greensboro NC 27407
City or Town State Zip Code

(336) 852-4903
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 19

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 14	Ft. 3/4"	40	PVC
Top	Bottom	Ft.		
Top	Bottom	Ft.		

8. GROUT:

Depth		Material	Method
Top 0	Bottom 11	Ft. Portland	
Top	Bottom	Ft.	
Top	Bottom	Ft.	

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 14	Bottom 19	Ft. 3/4 in.	.010 in.	PVC
Top	Bottom	Ft. in.	in.	
Top	Bottom	Ft. in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 13	Bottom 19	Ft. #2	sand
Top	Bottom	Ft.	
Top	Bottom	Ft.	

11. DRILLING LOG

Top	Bottom	Formation Description
0	2	Silty Sand
2	4	Silty Clay
4	6	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3/29/12 DATE

Jason Chiorazzi
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

Golder Associates NC, Inc.
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