Clean Water 2020 Program

CONSENT DECREE QUARTERLY REPORT

July 1, 2020 - September 30, 2020





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Section 1 Introduction

1.1 Summary of Reporting Requirements

On May 21, 2014, the City of Columbia (City) entered into a Consent Decree (CD) with the United States Environmental Protection Agency (EPA), the United States Department of Justice (DOJ) and the South Carolina Department of Health and Environmental Control (SCDHEC). To fulfill the reporting requirements as defined in Section IX.39.a of the CD, the City has prepared this *Quarterly Report* that includes the following information (as excerpted from the CD):

- A description of all projects and activities conducted during the most recently completed calendar quarter to comply with the requirements of this Consent Decree, in Gantt chart or similar format. This description shall include completion percentages of early action capital improvement projects under Paragraph 10, continuing sewer assessments under the CSAP, and the subsequent remedial actions under the IR Report;
- The date, time, location, source, duration, estimated volume, receiving water (if any), cause, and actions taken to repair or otherwise resolve the cause of all SSOs for the most recently completed quarter in a tabulated electronic format;
- The anticipated projects and activities that will be performed in the next quarter to comply with the requirements of this Consent Decree, in Gantt chart or similar format;
- 4. Any additional information that demonstrates that Columbia is implementing the remedial measures required in this Consent Decree; and
- 5. The results of water quality monitoring conducted during the previous Calendar Quarter as part of the SEP described in Appendix I of the Consent Decree.

1.2 Report Organization

This Quarterly Report is organized as follows:

Section 1 - Introduction

This section includes a summary of the reporting requirements and describes the report organization.

Section 2 - Schedule of Projects and Activities

This section addresses the requirements of Sections IX.39.a.(i) and IX.39.a.(iii) of the Consent Decree. The section includes the projects and activities conducted during the most recently completed calendar

quarter to comply with the requirements of the CD as well as the anticipated projects and activities that will be performed in the next quarter to comply with the requirements of the CD. A Gantt chart schedule of these activities is provided and includes completion percentages of continuing sewer assessments under the CSAP and the subsequent remedial actions under the IR Report, as applicable.

Section 3 - Additional Information Demonstrating Implementation of Consent Decree Requirements

This section addresses the requirements of Section IX.39.a.(iv) of the Consent Decree and includes additional information that demonstrates that Columbia is implementing the remedial measures required in the CD. Information supplemental to that which is provided in Section 2 is provided in this section.

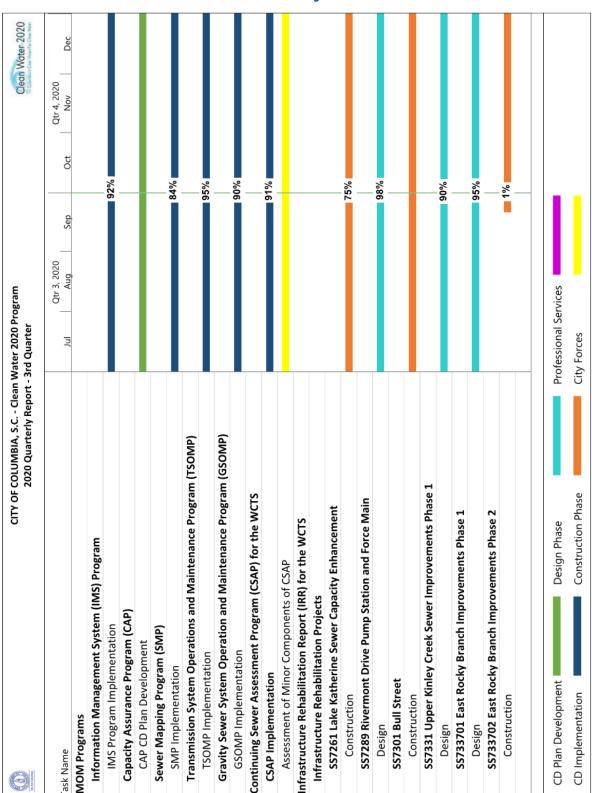
Section 4 – Quarterly SSO Report

This section addresses the requirements of Section IX.39.a.(ii) of the Consent Decree and provides a tabular listing of sanitary sewer overflows (SSOs). The table includes the date, time, location, source, duration, estimated volume, receiving water (if any), cause, and actions taken to repair or otherwise resolve the cause of all SSOs that occurred during the most recently completed calendar quarter.

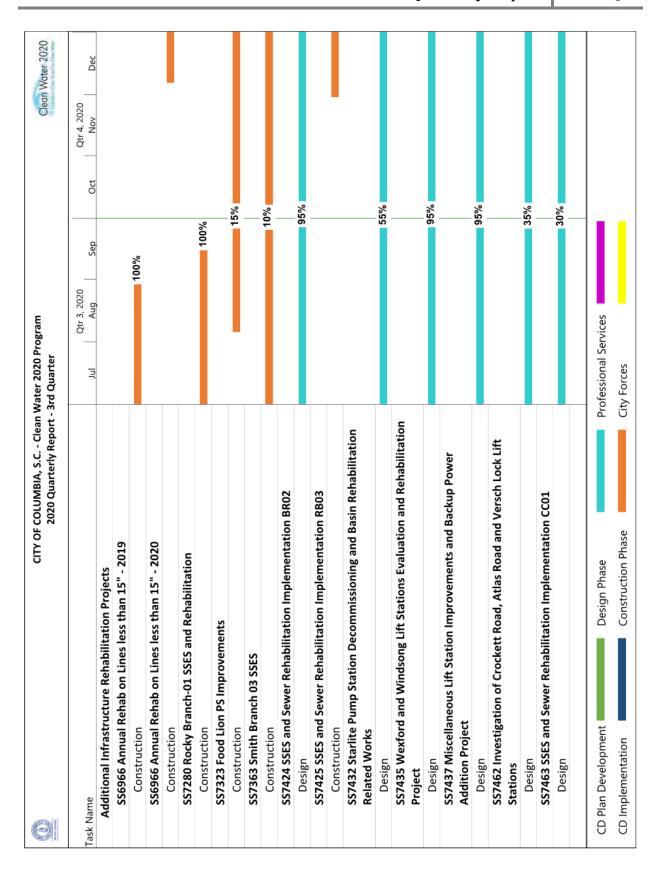
Section 5 – SEP Water Quality Monitoring Results

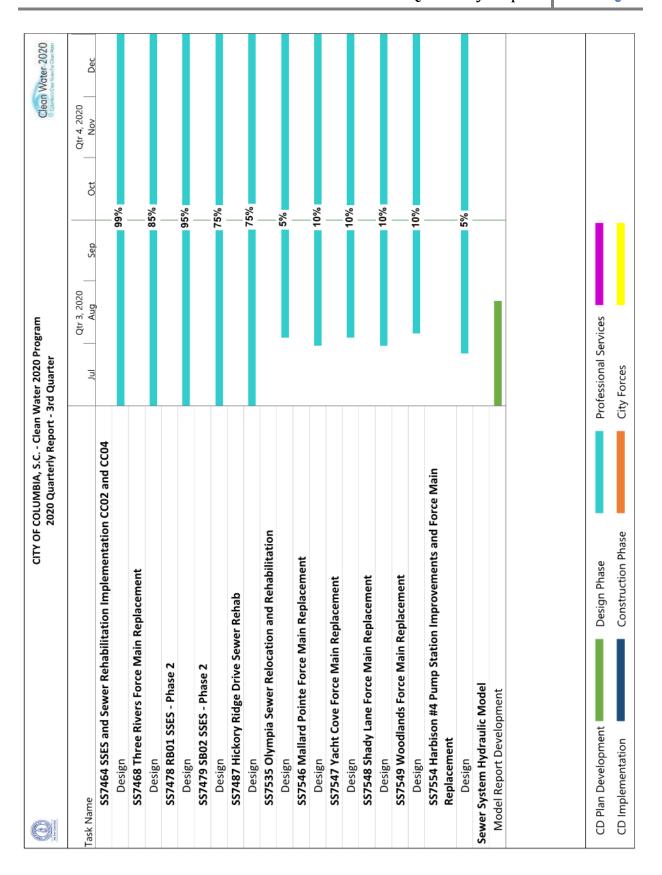
This section addresses the requirements of Section IX.39.a.(v) of the Consent Decree and provides the results of water quality monitoring conducted during the previous Calendar Quarter as part of the SEP described in Appendix I of the CD.

Schedule of Projects and Activities Section 2









Section 3 Additional Information Demonstrating Implementation of Consent Decree Requirements

In accordance with Section IX.39.a.(iv) of the CD, the following section provides additional information that demonstrates that the City is implementing the remedial measures required in the CD.

3.1 MOM Programs

In accordance with Section V.12 of the CD, the City is developing and implementing specific Management, Operations, and Maintenance (MOM) programs. The Program elements addressed in this section provide information regarding activities involving the Metro WWTP as well as the City's Wastewater Collection and Transmission System (WCTS).

Information Management System (IMS) Program 3.1.1

The IMS Program was submitted to EPA and SCDHEC on January 4, 2016. The City received final approval of the IMS Program from EPA and SCDHEC on May 23, 2016.

The activities completed or in progress during the current reporting period are as follows:

Sewer Mapping Program – 84% Complete

Sewer Mapping Program 3.1.2

In accordance with the requirements of the CD, the City was to develop and submit a Sewer Mapping Program (SMP) to EPA and SCDHEC within 60 days of the date of entry of the CD. The City received final approval of the SMP from EPA and SCDHEC on December 9, 2014.

Projects and significant activities completed during the current reporting period:

- The City continues to complete the electronic mapping of each Sewer Basin in accordance with the approved SMP implementation plan. Progress for each WCTS Minor Gravity Mapping basin is as follows:
 - West Columbia Basin 100% complete (Mapping complete as of June 9, 2020)
 - Smith Branch Basin 89% complete
 - o Saluda River Basin 96% complete
 - o Rocky Branch Basin 82% complete
 - o Mill Creek Basin 28% complete
 - o Gills Creek Basin 51% complete
 - o Crane Creek Basin 71% complete
 - Broad River Basin 47% complete

3.1.3 Transmission System Operations and Maintenance Program (TSOMP)

The TSOMP was submitted to EPA and SCDHEC on May 18, 2015. The City received final approval of the TSOMP from EPA and SCDHEC on September 2, 2016.

The activities completed or in progress during the current reporting period are as follows:

• Force Main and Easement Maintenance (Easement survey and marking and initial clearing to the surveyed limits, where practical) – 85% Complete

3.1.4 Gravity Sewer System Operation and Maintenance Program (GSOMP)

The GSOMP was submitted to EPA and SCDHEC on November 20, 2015. The City received final approval of the GSOMP from EPA and SCDHEC on May 23, 2016. The GSOMP was revised and resubmitted to EPA and SCDHEC on May 8, 2019.

The activities completed or in progress during the current reporting period are as follows:

 Gravity Sewer Easement survey and marking and initial clearing to survey the limits, where practical – 70% Complete

3.2 Continuing Sewer Assessment Program (CSAP) for the WCTS

The CSAP was submitted to EPA and SCDHEC on June 9, 2015. The City received final approval of the CSAP from EPA and SCDHEC on May 23, 2016. The CSAP was revised and resubmitted to EPA and SCDHEC on October 3, 2018. The City received approval of the revised CSAP from EPA and SCDHEC on February 6, 2019.

The activities under the Minor Components of the CSAP completed or in progress during the current reporting period are as follows:

- Minor Gravity Sewer and Manholes Condition Assessment 73% Complete
- Minor Pump Stations Condition Assessment 73% Complete
- Minor Force Mains Field Assessment 73% Complete

3.3 Infrastructure Rehabilitation Report (IRR) for the WCTS

In accordance with Section V.16 of the CD, the City shall submit an Infrastructure Rehabilitation Report (IRR) summarizing the results of the CSAP of the major components of the WCTS and a description of proposed rehabilitation projects. The IRR was submitted to EPA and SCDHEC on November 22, 2019. The City is awaiting EPA and SCDHEC review and approval of the IRR.

As rehabilitation projects are identified through the assessments described in Section 3.2 and in the normal course of operations and maintenance, the City is proceeding with design and construction of those projects. Completion percentages of projects currently in progress are as follows:

- SS7261 Lake Katherine Sewer Capacity Enhancement Construction 75% Complete
- SS7289 Rivermont Drive Pump Station and Force Main Design 98% Complete
- SS7301 Bull Street Construction in Progress; a completion percentage cannot be provided due
 to a varying scope of work and timeline for this project.
- SS7331 Upper Kinley Creek Sewer Improvements Phase 1 Design 90% Complete
- SS733701 East Rocky Branch Improvements Phase 1 Design 95% Complete
- SS733702 East Rocky Branch Improvements Phase 2 Construction 1% Complete
- SS735003 Crane Creek Lower North Branch Capacity Upgrade Phase 1 Design 95% Complete
- SS7428 Lower Saluda River Relief Sewer and Major Pipe Rehabilitation Design 99% Complete
- SS7433 Cunningham Rd/Johnson Ave/Cramer Dr/Summerlea Dr Sewer Relocation Design 98%
 Complete
- SS7450 Crane Creek Lower North Branch Capacity Upgrade Phase 2 Design 90% Complete
- SS7454 Broad River Force Main Replacement and Gravity Sewer Capacity Improvements –
 Design 30% Complete
- SS7467 North Columbia Pump Station Upgrade Design 30% Complete
- SS7474 Upper North Branch Crane Creek Sewer Improvements Phase 1 Design 60% Complete
- SS7497 Mill Creek Pump Station Miscellaneous Improvements 20% Design Complete
- SS753902 CIPP Major Pipe Rehabilitation 10% Design Complete
- SS753903 Geopolymer Major Pipe Rehabilitation 10% Design Complete
- SS7555 Lower Crane Creek Relief Sewer Phase 2 Design 30% Complete
- SS7560 Lower Crane Creek Equalization Storage 10% Design Complete

In accordance with Section V.16.c of the CD, the City shall submit a Supplemental Infrastructure Rehabilitation Report (SIRR) which shall update all portions of the IRR to reflect additional information developed by the City through completion of the CSAP of the minor components of the WCTS. The SIRR is to be submitted within six months after the City has assessed the remainder of the entire WCTS pursuant to the CSAP. As rehabilitation projects are identified through the assessments described in Section 3.2 and in the normal course of operations and maintenance, the City is proceeding with design and construction of those projects. Completion percentages of projects currently in progress are as follows:

- SS6966 Annual Rehab on Lines less than 15" 2019 Construction 100% Complete, 2020
 Construction 0% Complete
- SS7280 Rocky Branch-01 SSES and Rehabilitation Construction 100% Complete
- SS7323 Food Lion PS Improvements Construction 15% Complete
- SS7363 Smith Branch 03 SSES Construction 10% Complete
- SS7424 SSES and Sewer Rehabilitation Implementation BR02 Design 95% Complete
- SS7425 SSES and Sewer Rehabilitation Implementation RB03 Construction 0% Complete

- SS7432 Starlite PS Decommissioning and Basin Rehabilitation Related Works Design 55%
 Complete
- SS7435 Wexford and Windsong Lift Stations Evaluation and Rehabilitation Project Design 95%
 Complete
- SS7437 Miscellaneous Lift Station Improvements and Backup Power Addition Project Design 95% Complete
- SS7462 Investigation of Crockett Road, Atlas Road and Versch Lock Lift Stations Design 35%
 Complete
- SS7463 SSES and Sewer Rehabilitation Implementation CC01 Design 30% Complete
- SS7464 SSES and Sewer Rehabilitation Implementation CC02 and CC04 Design 99% Complete
- SS7468 Three Rivers Force Main Replacement Design 85% Complete
- SS7478 Rocky Branch 01 SSES Phase 2 Design 95% Complete
- SS7479 Smith Branch 02 SSES Phase 2 Design 75% Complete
- SS7487 Hickory Ridge Drive Sewer Rehab Design 75% Complete
- SS7535 Olympia Sanitary Sewer Relocation and Rehabilitation 5% Design Complete
- SS7546 Mallard Pointe Force Main Replacement 10% Design Complete
- SS7547 Yacht Cove Force Main Replacement 10% Design Complete
- SS7548 Shady Lane Force Main Replacement 10% Design Complete
- SS7549 Woodlands Force Main Replacement 10% Design Complete
- SS7554 Harbison #4 Pump Station Improvements and Force Main Replacement Design 5% Complete

3.4 Sewer System Hydraulic Model

In accordance with Section V.17.d of the CD, the City is to submit to EPA and SCDHEC for review, comment, and approval a Hydraulic Model Report that explains how the Model meets the capabilities required in Section V.17.a. The Hydraulic Model Report is to be submitted within fifteen months after completion of the CSAP for Major components of the WCTS. As of May 23, 2019, all activities under the Major components of the CSAP were completed. Therefore, the deadline for submittal of the Hydraulic Model Report to EPA and SCDHEC is August 23, 2020.

The activities completed or in progress during the current reporting period are as follows:

The Hydraulic Model Report was submitted to EPA and SCDHEC on August 21, 2020.

Quarterly SSO Report Section 4

In accordance with Section IX.39.a.(ii) of the CD, the City is to provide a list of all SSOs that occurred during the reporting period in a tabular format along with information on the date, time, location, source, duration, estimated volume, receiving water, cause, and actions taken to resolve the SSO.

Table 1 - SSO Report, 3rd Quarter 2020

	City of Columbia, SC								
	Quarterly SSO Listing								
						rter 2020			
Date	Time	Location	Source	Date of Corrective Action	Time of Corrective Action	Estimated Volume (gallons)	Receiving Water (if any)	Cause	Actions Taken
7/6/2020	12:45	1860 Cunningham Rd, Columbia, SC 29210	Manhole	7/8/2020	10:00	4425	Trib To Broad River	Collapsed Line	Removed Blockage To Resume Normal Flow. Main Line Repair.
7/7/2020	12:00	102 Rocky Point Dr, Columbia, SC 29212	Pump Station	7/7/2020	12:30	1500	Storm Drain	Pump Station Failure	Reset Pump #1 At Lift Station.
7/10/2020	13:00	2217 Lorick Ave, Columbia, SC 29203	Line Segment	TE	BD	737		Collapsed Line	Set Up Bypass Pump. Main Line Repair.
7/13/2020	11:45	1665 Woodlake Dr, Columbia, SC 29206	Line Segment	TI	BD	38250	Lake Katherine	Collapsed Line	Set Up Bypass Pump. Main Line Repair.
7/17/2020	12:30	1665 Woodlake Dr, Columbia, SC 29206	Other	7/17/2020	12:35	30	Lake Katherine	Equipment Failure	Replaced Bypass Pump Hose.
7/19/2020	11:00	204 Lincolnshire North Dr, Columbia, SC 29203	Manhole	7/19/2020	13:22	940	Storm Drain	Grease	Removed Blockage To Resume Normal Flow. Main Line Wash To Remove Grease.
7/20/2020	10:50	50 Palmetto Wood Ct, Irmo, SC 29063	Cleanout	TI	3D	5		Collapsed Line	Removed Stoppage To Resume Normal Flow. Emergency Service Line Repair.
7/22/2020	16:00	524 Briercliff Dr, Columbia, SC 29203	Cleanout	TE	BD	6		Collapsed Line	Washed Service Line 60 Feet To Clear Blockage. Service Line Repair.
7/22/2020	13:53	116 Larchwood Dr, Columbia, SC 29203	Cleanout	TI	BD	41		Collapsed Line	Service Line Wash To Remove Blockage. Service Line Repair.
7/26/2020	15:00	426 Biddle Rd, Columbia, SC 29212	Cleanout	TI	BD	8		Roots	Removed Blockage To Resume Normal Flow. Service Line Repair.
7/31/2020	11:20	169 Mariners Row, Columbia, SC 29212	Manhole	7/31/2020	11:30	90		Roots	Removed Blockage To Resume Normal Flow. Main Line Root Cut.
8/3/2020	13:35	820 Blue Ridge Ter, Columbia, SC 29203	Manhole	8/3/2020	14:05	1500	Trib To Crane Creek	Debris	Removed Blockage To Resume Normal Flow. Washed Main Line 100 Feet.
8/7/2020	18:00	336 Brookshire Dr, Columbia, SC 29210	Cleanout	TE	3D	2337	Storm Drain	Roots	Removed Stoppage Causing Spill. Tap Renewal.
8/8/2020	10:34	406 Bosworth Field Ct, Columbia, SC 29212	Manhole	hole TBD		603	Trib To Koon Branch	Roots	Removed Blockage To Resume Normal Flow. Main Line Repair.
8/10/2020	19:30	2791 The Blvd, Columbia, SC 29209	Manhole	TI	BD	18		Roots	Removed Stoppage To Resume Normal Flow. Emergency Main Line Repair.
8/11/2020	11:15	1203 Jackson Ave, Columbia, SC 29203	Cleanout	TI	BD	11		Roots	Removed Stoppage To Resume Normal Flow. Service Line Repair.
8/12/2020	08:35	4441 Bentley Dr, Columbia, SC 29210	Manhole	8/12/2020	09:00	375	Storm Drain	Debris	Removed Blockage To Resume Normal Flow. Washed Main Line.
8/13/2020	09:30	102 Rocky Point Dr, Columbia, SC 29212	Forcemain	8/13/2020	09:45	497	Storm Drain	Force Main	Shut Pump Station Down. Replaced ARV.
8/14/2020	16:30	2007 Cedarbrook Ct, Columbia, SC 29212	Cleanout	8/18/2020	12:00	18	Storm Drain	Roots	Removed Stoppage To Resume Normal Flow. Emergency Service Line Repair.
8/15/2020	22:45	1100 Key Rd, Columbia, SC 29201	Manhole	TI	BD	1875	Storm Drain	Collapsed Line	Removed Blockage To Resume Normal Flow. Main Line Repair.
8/18/2020	08:00	3900 Bentley Dr, Columbia, SC 29210	Manhole	TI	BD	1250	Trib To Broad River	Collapsed Line	Removed Stoppage To Resume Normal Flow. Main Line Repair.
8/20/2020	01:54	1200 Simmon Tree Ln, Columbia, SC 29201	Manhole	8/20/2020	02:20	50	Storm Drain	Debris	Sand Was Removed From Manhole Via Vactor Truck.
8/20/2020	11:00	7321 Fontana Dr, Columbia, SC 29209	Line Segment	8/20/2020	15:00	50	Unnamed Creek	Collapsed Line	Ceased Washing The Line. Mainline Repair.
8/22/2020	20:02	6025 Sinclair Dr, Columbia, SC 29203	Cleanout	8/23/2020 11:00		40	Stormwater Ditch	Collapsed Line	Ceased Washing The Line. Service Line Repair.
8/27/2020	09:58	3632 Truman St, Columbia, SC 29204	Cleanout	8/27/2020 09:58		15		Debris	Removed Blockage To Resume Normal Flow. Washed Service Line 25 Feet To Remove Blockage.
8/27/2020	16:45	770 Maryland St, Columbia, SC 29201	Other	8/27/2020	17:30	15		Debris	Removed Blockage To Resume Normal Flow. Washed Main Line.

					City of Co	lumbia, SC							
					Quarterly	SSO Listing							
					3rd Qua	rter 2020							
Date	Time	Location	Source	Date of Corrective Action	Time of Corrective Action	Estimated Volume (gallons)	Receiving Water (if any)	Cause	Actions Taken				
8/28/2020	20:56	621 Winter Wren Ln, Blythewood, SC 29016	Cleanout	9/1/2020 08:00		9/1/2020 08:00		9/1/2020 08:00		25		Collapsed Line	Removed Roots To Restore Flow. Cleanout Repair.
8/31/2020	08:15	321 Maple View Dr, Columbia, SC 29212	Cleanout	TE	BD	15		Roots	Removed Blockage To Resume Normal Flow Service Line Repair.				
9/1/2020	15:30	1228 Harden St, Columbia, SC 29204	Manhole	9/1/2020	9/1/2020 15:45		Storm Drain	Debris	Removed Blockage To Resume Normal Flov Washed Main Line 150 Feet To Clear Blockage.				
9/5/2020	20:00	2140 Rolling Hills Rd, Columbia, Sc 29210	Manhole	TE	BD	4600	Trib To Broad River	Collapsed Line	Removed Stoppage To Resume Normal Flov Main Line Repair.				
9/8/2020	18:45	1515 Hyatt Ave, Columbia, SC 20203	Cleanout	TE	BD	6		Collapsed Line	Removed Stoppage To Resume Normal Flow Emergency Service Line Repair.				
9/11/2020	10:49	1619 York Dr, Columbia, SC 29204	Cleanout	TE	BD	40		Roots	Removed Blockage To Resume Normal Flov Service Line Repair / Cleanout Install.				
9/11/2020	14:00	626 Galway Ln, Columbia, SC 29209	Cleanout	9/11/2020 14:16		9/11/2020 14:16		4		Debris	Removed Stoppage To Resume Normal Flow Washed Service Line.		
9/16/2020	11:25	105 Paul St, Columbia, SC 29203	Cleanout	9/16/2020	12:00	68		Grease	Removed Stoppage To Resume Normal Flor Washed Service Line To Remove Grease.				
9/16/2020	21:05	1118 Brandon Ave, Columbia, SC 29209	Cleanout	9/16/2020	21:15	23		Roots	Removed Blockage To Resume Normal Flov Root Cut Service Line To Remove Roots Causing Blockage.				
9/17/2020	13:50	6306 Kemberly St, Columbia, SC 29209	Manhole	TE	BD	60		Collapsed Line	Removed Blockage To Resume Normal Flow Main Line Repair.				
9/17/2020	14:37	5609 Bush River Rd, Columbia, SC 29212	Manhole	N	/A	373	Rawls Creek	Wet Weather	Wet Weather; Observation Only.				
9/24/2020	09:30	1112 Crane Church Rd, Columbia, SC 29203	Cleanout	TBD		TBD		25		Collapsed Line	Washed Service Line 20 Feet From City Cleanout To Resume Normal Flow. Emergency Service Line Repair.		
9/28/2020	18:18	1228 Harden St, Columbia, SC 29204	Manhole	TBD		72	Storm Drain	Collapsed Line	Removed Blockage To Resume Normal Flow Main Line Repair.				

As noted in Section IV.8.a of the CD, a Building Backup is defined as a release of wastewater into a building or onto private property that is caused by blockages, flow conditions, or other malfunctions in the WCTS.

Separate from the SSO listing provided in Table 1 above, the following table identifies building backups within the City's system for the current reporting period.

Table 2 – Building Backup Report, 3rd Quarter 2020

	City of Columbia, SC									
	Quarterly Building Backup Listing									
	3rd Quarter 2020									
Date	Time	Location	Source Date of Corrective Corrective Volume Water Cause Actions Taken Action Action (gallons) (if any)					Actions Taken		
7/9/2020	19:14	804 Hemphill St, Columbia, SC 29205	City	7/10/2020	7/10/2020 08:00 30 Collansed Line -		Removed Blockage To Resume Normal Flow. Service Line Repair.			
7/14/2020	20:23	528 Newburgh Dr, Columbia, SC 29203	City	TBD		15		Collapsed Line	Removed Blockage To Resume Normal Flow. Service Line Repair.	
9/5/2020	11:30	4735 Heath Hill Rd, Columbia, SC 29206	City	9/5/2020	12:45	1		Roots	Removed Blockage To Resume Normal Flow. Root Cut Service Line.	

Section 5 SEP Water Quality Monitoring Results

In accordance with Section IX.39.a.(v) of the CD, the following section provides a summary of the results of water quality monitoring conducted during the previous calendar quarter as part of the Supplemental Environmental Project (SEP) described in Appendix I of the CD.

5.1 Sampling Conducted and Results

As a part of the SEP requirements established in Section VIII and Appendix I of the CD, the City is to conduct water quality monitoring at three locations to assist in evaluation of the environmental benefits of the SEP in improving water quality in Smith Branch and Gills Creek. The City is to implement a program for ambient monitoring of dissolved oxygen (DO), total suspended solids (TSS), temperature, and E. coli at the following monitoring sites:

- Gills Creek at Garner's Ferry Road
- Smith Branch at North Main Street
- Gills Creek at Bluff Road

In accordance with the requirements of the CD, the City was to submit a Quality Assurance Project Plan (QAPP) to SCDHEC within 60 days of the date of entry of the CD. The City originally submitted the QAPP to SCDHEC on July 18, 2014 in advance of the deliverable deadline. The City subsequently received comments from SCDHEC and resubmitted the QAPP to SCDHEC on January 13, 2015. The City received final approval of the QAPP from EPA and SCDHEC on January 15, 2016. The QAPP was revised and resubmitted to SCDHEC on May 31, 2017 and on December 19, 2018 to reflect changes in City personnel. The revised QAPP was approved on January 9, 2019. The QAPP was subsequently revised and resubmitted to SCDHEC on January 22, 2019 to reflect a change in the testing laboratory. Following comments from SCDHEC and additional resubmittals, the City received approval of the revised QAPP from EPA and SCDHEC on April 2, 2019.

The City monitored quarterly for the first three years under the CD (through January 15, 2019) and will monitor monthly (or every other month at the Gills Creek at Bluff Road site) from years four through six under the CD.

Water quality monitoring for 2020 Q3 was completed on July 24, 2020, August 31, 2020, and September 28, 2020. Monitoring results are provided below for the following samples:

C-001: Gills Creek at Garner's Ferry Road

B-280: Smith Branch at North Main Street

C-017: Gills Creek at Bluff Road

<u>City of Columbia Quality Assurance Project Plan (QAPP) Data</u> <u>Verification and Validation Form</u>

City of Columbia Supplemental Environmental Projects QAPP

November 2015, Revised May 2017, Revised December 2018, Revised January 2019

Laboratory Report Date: 7/24/2020						
The undersigned verifies the data in Muranda S. Styples	the above referenced report, per the QAPP requirements. 8/12/2020					
Project Verifier/QA Manager	Date					
Miranda S. Staples Printed Name						
The undersigned validates the data	in the above referenced report, per the QAPP requirements.					
As Dessee	8/12/2020					
Project Manager/Project Validator	Date					
AJ Jessee						

Printed Name





Laboratory Services

Laboratory Report

Client Woolpert Inc. - City of Columbia

Michael Long

2000 Center Point Road Ste 2200

Columbia, SC 29210

Project:

Work Order:

0071169

Water Quality Testing

Received: 07/22/2020 12:05

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on July 22, 2020. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

Privileged / Confidential information may be contained in this report and is intended only for the use of the addressee. If you are not the addressee, or the person responsible for delivering to the person addressed, you may not copy or deliver this message to anyone else. If you receive this message by mistake, please notify Rogers and Callcott immediately.

We strive to provide excellent service to our clients. Please contact Lauren Hollister, your Project Manager, at lhollister@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Trevor Gauron

Report Approved By:

Lauren Hollister

Lauren Hollister Project Manager

PO Box 5655 | Greenville, SC 29606 | 426 Fairforest Way | Greenville, SC 29607 | main 864.232.1556 | fax 864.232.6140 rogersandcallcott.com

an employee-owned company





Certificate of Analysis

South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

Client Woolpert Inc. - City of Columbia

Michael Long

2000 Center Point Road Ste 2200

Columbia, SC 29210

Water Quality Testing Project:

Work Order: 0071169

Received: 07/22/2020 12:05

Sample Number	Sample Description	Matrix	Sampled	Type
0071169-01	DHEC B-280 Smith Branch @ N. Main St	Wastewater	07/22/20 09:14	Grab
0071169-02	DHEC B-280 Smith Branch @ N. Main St	Wastewater	07/22/20 09:15	Grab
0071169-03	DHEC C-001 Gills Creek @ Garners Ferry Rd	Wastewater	07/22/20 09:51	Grab
0071169-04	DHEC C-001 Gills Creek @ Garners Ferry Rd	Wastewater	07/22/20 09:52	Grab
0071169-05	DHEC C-017 Gills Creek @ Bluff Road	Wastewater	07/22/20 10:15	Grab
0071169-06	DHEC C-017 Gills Creek @ Bluff Road	Wastewater	07/22/20 10:16	Grab



Woolpert Inc. - City of Columbia 2000 Center Point Road Ste 2200

Columbia, SC 29210

Project:

Water Quality Testing

Work Order: Reported: 0071169 07/24/20 14:45

Sample Data

Sample Number

0071169-01

Sample Description

DHEC B-280 Smith Branch @ N. Main St collected on 07/22/20 09:14

Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Field Parameters											
Dissolved Oxygen		6.7	0.1	mg/L	1.00	07/22/20 09:15	SM 4500 OG-2011		MBW	B0G1027	RC-C
Temperature		20.6	0.0	°C	1.00	07/22/20 09:15	SM 2550B-2010		MBW	B0G1027	RC-C
Sample Number Sample Description	0071169-02 DHEC B-280 Smi	ith Branc	ch @ N. Mair	1 St collected	l on 07/22	2/20 09:15					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Microbiological Param	neters										
E. Coli		2708	20	MPN/100 mL	20.0	07/22/20 15:08	SM 9223B-2004		MBW	B0G1104	RC-C
General Chemistry Pa	rameters										
Total Suspended Solids		8.8	1.0	mg/L	1.00	07/23/20 08:33	SM 2540D-2011		RAM	B0G1058	RC-C
Sample Number Sample Description	0071169-03 DHEC C-001 Gill	ls Creek	@ Garners F	erry Rd colle	ected on (07/22/20 09:51					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Field Parameters											
Dissolved Oxygen		6.4	0.1	mg/L	1.00	07/22/20 09:56	SM 4500 OG-2011		MBW	B0G1027	RC-C
Temperature		24.8	0.0	°C	1.00	07/22/20 09:56	SM 2550B-2010		MBW	B0G1027	RC-C
Sample Number Sample Description	0071169-04 DHEC C-001 Gill	ls Creek	@ Garners F	erry Rd colle	ected on (07/22/20 09:52					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Microbiological Param	ieters										
E. Coli		2878	20	MPN/100 mL	20.0	07/22/20 15:08	SM 9223B-2004		MBW	B0G1104	RC-C
General Chemistry Pa	rameters										
Total Suspended Solids		56.8	4.0	mg/L	4.00	07/23/20 08:33	SM 2540D-2011		RAM	B0G1058	RC-C

PO Box 5655 | Greenville, SC 29606 | 426 Fairforest Way | Greenville, SC 29607 | main 864.232.1556 | fax 864.232.6140 rogersandcallcott.com an employee-owned company



Woolpert Inc. - City of Columbia 2000 Center Point Road Ste 2200 Columbia, SC 29210

Water Quality Testing Project:

0071169 Work Order: 07/24/20 14:45 Reported:

Sample Number 0071169-05

Sample Description DHEC C-017 Gills Creek @ Bluff Road collected on 07/22/20 10:15

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Field Parameters										
Dissolved Oxygen	5.6	0.1	mg/L	1.00	07/22/20 10:20	SM 4500 OG-2011		MBW	B0G1027	RC-C
Grab	Complete				07/22/20 10:15	Grab		MBW	B0G1027	RC-C
Temperature	27.2	0.0	°C	1.00	07/22/20 10:20	SM 2550B-2010		MBW	B0G1027	RC-C
Sample Number 0071169-06 Sample Description DHEC C-017 Gills Creek @ Bluff Road collected on 07/22/20 10:16										
Parameter	Result	Reporting	Units	DF	Analyzed	Method	Flag	Analyst	Ratch	Lab

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Microbiological Parameters E. Coli	7308	20	MPN/100 mL	20.0	07/22/20 15:08	SM 9223B-2004		MBW	B0G1104	RC-C
General Chemistry Parameters Total Suspended Solids	41.7	3.3	mg/L	3.33	07/23/20 08:33	SM 2540D-2011		RAM	B0G1058	RC-C



Woolpert Inc. - City of Columbia 2000 Center Point Road Ste 2200 Columbia, SC 29210

Water Quality Testing Project:

Work Order: 0071169 07/24/20 14:45 Reported:

Data Qualifiers and Definitions

Analyte NOT DETECTED at or above the reporting limit ND

NR Not reported

Laboratory Reference:

RC-G = Rogers and Callcott, 426 Fairforest Way, Greenville, SC 29607 / SC Lab ID 23105 RC-C = Rogers and Callcott, 215B Stoneridge Drive, Columbia, SC 29210 / SC Lab ID 40572

PO Box 5655 Address:

SLANNE Sample Source (WW, GW, DW, SW, S, Other) I - Zn Acetate K - NaH₂PO₄ H - Ascorbic Acid L - NH₄Cl J - H₃PO₄ mg/L Preservation Code(s) Sample Type (Grab/Composite) Analyzed @ 0415 Container Type (Plastic/Glass) Collected @ ०१1प COMMENTS Weather- 84 F WORK ORDER OOT 1169 G - Boric Acid Container Volume (mL) F - Na₂S₂O₃ Temp- 20.4 D.O.- 6.74 E-H Filtered (Yes/No) Cooled (Yes/No) B - HNO₃ C-H₂SO₄ D - NaOH A - None 0 CHAIN OF CUSTODY RECORD 120 ≶ E. Coli 9 \leftarrow ۵ ш > 0.56 ≷ 9 SSI \triangleleft \vdash ۵ > Parameter(s) ↓ Total Number of Containers \leftarrow $\overline{}$ DHEC B-280 (Smith Branch @ N. Main St) DHEC B-280 (Smith Branch @ N. Main St) Project # Water Quality Testing 215B Stoneridge Drive Phone (803) 509-8999 Columbia, SC 29210 SAMPLE DESCRIPTION 2000 Center Point Road Suite 2200 Half a century of commitment and quality Shipping 426 Fairforest Way Address: Greenville, SC 29607 ENVIRONMENTAL Fax (864) 232-6140 Woolpert - City of Columbia Michael.long@woolpert.com Columbia, SC 29210 2115 25.50 TIME 803-214-5936 Michael Long 27.4 2.5 AR B Phone (864) 232-1556 Greenville, SC 29606 **Email Address WORK ORDER** Telephone # Client Name 3 20% Report To: Address PO #

Temperature of blank or representative sample

Initials:

Time or Flow (Circle one)

Composite End Date/Time:

Composite Start Date/Time:

1205

7-22-20

DATE/TIME:

DATE/TIME:

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

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Page 6 of 9

RECEIVED BY:

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SAMPLER - RELIMOUTSHEP BY

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321 02 12.E DATE/TIME: ပ

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At time of lab receipt

At time of collection

DATE/TIME:

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Form Revised March, 2019 Page __

bssible Hazards associated with samples: O Non-Hazard O Flammable O Skin Irritant O Poison O Unknown O Other _

CHAIN OF CUSTODY RECORD

WORK ORDER CO71169

ENVENONMENTAL Half a century of commitment and quality

Sample Source (WW, GW, DW, SW, S, Other) Sund I - Zn Acetate K - NaH₂PO₄ Temperature of blank or representative sample ပ J - H₃PO₄ H - Ascorbic Acid L - NH₄Cl M mg/L Sample Type (Grab/Composite) Preservation Code(s) Analyzed @ 095% Container Type (Plastic/Glass) Collected @ ०१५(COMMENTS of Initials: Weather- 85° F 3 - Boric Acid Container Volume (mL) F - Na₂S₂O₃ φ Temp- 24.8 E- HC D.O.- 6.38 Filtered (Yes/No) Cooled (Yes/No) Time or Flow (Circle one) Composite Start Date/Time: Composite End Date/Time: At time of lab receipt At time of collection 103 D - NaOH C-H₂SO₄ Form Revised March, 2019 B-HNO3 A - None 7-22-20 7205 DATE/TIME: DATE/TIME: DATE/TIME: DATE/TIME: sssible Hazards associated with samples: O Non-Hazard O Flammable O Skin Irritant O Poison O Unknown O Other_ 120 ≶ E. Coli α 9 ш 0.56 SST 9 Д ⋖ \vdash Parameter(s) **小** Total Number of Containers DHEC C-001 (Gills Creek @ Garners Ferry Rd) DHEC C-001 (Gills Creek @ Garners Ferry Rd) Project # Water Quality Testing RECEIVED BY: RECEIVED BY: RECEIVED BY: RECEÍVED BY: 215B Stoneridge Drive Phone (803) 509-8999 Columbia, SC 29210 SAMPLE DESCRIPTION 9 5021 02-22-F DATE/TIME: DATE/TIME: DATE/TIME: DATE/TIME: 2000 Center Point Road Suite 2200 Shipping 426 Fairforest Way Address: Greenville, SC 29607 Fax (864) 232-6140 Woolpert - City of Columbia Michael.long@woolpert.com Columbia, SC 29210 75/0 /27:4 7.52 0452 TIME 803-214-5936 Michael Long SAMPLER - RELINCOISHED BY: YR 23 Phone (864) 232-1556 DATE Greenville, SC 29606 RELINQUISHED BY: RELINQUISHED BY: RELINQUISHED BY: PO Box 5655 300 **Email Address WORK ORDER** Felephone # Client Name 70 Report To: 301 Address Address: B 0 Page 7 of 9

WORK ORDER OCTILLY

CHAIN OF CUSTODY RECORD

Summed Sample Source (WW, GW, DW, SW, S, Other) I - Zn Acetate K - NaH₂PO₄ Temperature of blank or representative sample ပ J - H₃PO₄ H - Ascorbic Acid L - NH₄Cl W) mg/L Sample Type (Grab/Composite) Preservation Code(s) Container Type (Plastic/Glass) Analyzed @ 1020 COMMENTS 1015 of Initials: Weather- 88°F G - Boric Acid Container Volume (mL) F - Na₂S₂O₃ B Temp- 27.2 Collected @ D.O. 5.60 E-HC Filtered (Yes/No) Cooled (Yes/No) Time or Flow (Circle one) Composite Start Date/Time: Form Revised March, 2019 Page Composite End Date/Time: At time of lab receipt At time of collection , B C - H₂SO₄ D - NaOH B-HNO₃ A - None DATE/TIME: DATE/TIME: DATE/TIME: DATE/TIME: 22 20 ossible Hazards associated with samples: O Non-Hazard O Hammable O Skin Irritant O Poison O Unknown O Other 120 9 ≷ E. Coli \leftarrow 1 Д ш **≷** 0.56 SST G Z \triangleleft --- Parameter(s) 🗸 Total Number of Containers DHEC C-017 (Gills Creek @ Bluff Road) DHEC C-017 (Gills Creek @ Bluff Road) RECEIVED BY: Project # Water Quality Testing RECEIVED BY: RECEIVED BY: recéivéd By: 215B Stoneridge Drive Phone (803) 509-8999 Columbia, SC 29210 SAMPLE DESCRIPTION 2. 7-22-20 1205 DATE/TIME: DATE/TIME: DATE/TIME: DATE/TIME: 2000 Center Point Road Suite 2200 ENSENDAENTAL Half a century of commitment and quality Shipping 426 Fairforest Way Address: Greenville, SC 29607 Fax (864) 232-6140 Woolpert - City of Columbia Michael.long@woolpert.com Columbia, SC 29210 2101 2 TIME 803-214-5936 Michael Long SAMPLER - RELINGUISHED BY: 27:4 22.E Phone (864) 232-1556 YR 22 DATE Greenville, SC 29606 RELINQUISHED BY: RELINQUISHED BY: RELINQUISHED BY: PO Box 5655 **Email Address** WORK ORDER Telephone # Client Name ま 301 ج م Report To: Address Mailing Address: # Od Page 8 of 9



Revised March 2019

Sample Receipt Verification

Client: Woolpert	Date Received:	7	. 27	2.2	Work Order: 0071169
Carrier Name: Client FedEx (to Columbia) Tracking Number:	UPS US	Mail		Cou	urier Field Services Other:
Carrier Name: Client FedEx (to Greenville) Tracking Number:	. 1.4	Mail		Cou	urier Field Services Other:
Receipt Criteria		Y e s	No	N A	Comments
Shipping container / cooler intact?		X			Damaged Leaking Other:
Custody seals intact?				×	
COC included with samples?		X			
COC signed when relinquished and received?		X			
Sample bottles intact?		x			Damaged Leaking Other:
Sample ID on COC agree with label on bottle(s)?		x			
Date / time on COC agree with label on bottle(s)?		X			
Number of bottles on COC agrees with number of bottl	es received?	×			
Samples received within holding time?		X			
Sample volume sufficient for analysis?		ኦ			
VOA vials free of headspace (<6mm bubble)?				X	
Samples requiring pH preservation at proper pH? Note: Samples for metals analysis may be preserved upon Note: Samples for O&G and VOA analysis – preservation	checked at bench.			X	
Samples dechlorinated for parameters requiring chlorin of sample collection? Note: Chlorine checked at bench for samples requiring Ba analysis.		X			
Samples cooled when received in Temp at time of rec	th IR SN: 36301069WS	X			Ice Cold Packs Dry Ice None
Samples cooled when received in Greenville? Temp at time of received in Temp measured with Temp measured wi	th IR SN: 97050067				Ice Cold Packs Dry Ice None
I	f in-house preservation		- rec	ord L	ot #
HCL		PO ₄ OH			
H ₂ SO ₄ HNO ₃		her			
Comments:					
Were non-conformance issues noted at initial sam Non-Conformance issue other than noted above:	nple receipt? Ye	es or		No	
Note: Samples received initially in Columbia Facility. Sampl	e preservation checks per	formed	l at Co	lumbi	ia Facility.

Completed by: MBh

<u>City of Columbia Quality Assurance Project Plan (QAPP) Data</u> <u>Verification and Validation Form</u>

City of Columbia Supplemental Environmental Projects QAPP

November 2015, Revised May 2017, Revised December 2018, Revised January 2019

Laboratory Report Date: 8/31/2020							
The undersigned verifies the data in the about	ove referenced report, per the QAPP requirements.						
Mirande S. Steples	9/11/2020						
Project Verifier/QA Manager	Date						
Miranda Staples Printed Name							
The undersigned validates the data in the a	bove referenced report, per the QAPP requirements.						
as Dessee	9/11/2020						
Project Manager/Project Validator	Date						
AJ Jessee							

Printed Name





Laboratory Services

Laboratory Report

Client Woolpert Inc. - City of Columbia

Michael Long

2000 Center Point Road Ste 2200

Columbia, SC 29210

Project: Water Quality Testing

Work Order: 0081127

Received: 08/21/2020 13:15

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on August 21, 2020. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

Privileged / Confidential information may be contained in this report and is intended only for the use of the addressee. If you are not the addressee, or the person responsible for delivering to the person addressed, you may not copy or deliver this message to anyone else. If you receive this message by mistake, please notify Rogers and Callcott immediately.

We strive to provide excellent service to our clients. Please contact Lauren Hollister, your Project Manager, at lhollister@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Trevor Gauron

Report Approved By:

Lauren Hollister

Lauren Hollister Project Manager

PO Box 5655 | Greenville, SC 29606 | 426 Fairforest Way | Greenville, SC 29607 | main 864.232.1556 | fax 864.232.6140 rogersandcallcott.com

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South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

Client Woolpert Inc. - City of Columbia

Certificate of Analysis

Michael Long

2000 Center Point Road Ste 2200

Columbia, SC 29210

Water Quality Testing Project:

Work Order: 0081127

Received: 08/21/2020 13:15

Sample Number	Sample Description	Matrix	Sampled	Type
0081127-01	DHEC B-280 Smith Branch @ N. Main St	Wastewater	08/21/20 10:50	Grab
0081127-02	DHEC B-280 Smith Branch @ N. Main St	Wastewater	08/21/20 10:45	Grab
0081127-03	DHEC B-280 Smith Branch @ N. Main St	Wastewater	08/21/20 10:47	Grab
0081127-04	DHEC C-001 Gills Creek @ Garners Ferry Rd	Wastewater	08/21/20 12:15	Grab
0081127-05	DHEC C-001 Gills Creek @ Garners Ferry Rd	Wastewater	08/21/20 12:10	Grab
0081127-06	DHEC C-001 Gills Creek @ Garners Ferry Rd	Wastewater	08/21/20 12:13	Grab
0081127-07	DHEC C-017 Gills Creek @ Bluff Road	Wastewater	08/21/20 12:45	Grab
0081127-08	DHEC C-017 Gills Creek @ Bluff Road	Wastewater	08/21/20 12:40	Grab
0081127-09	DHEC C-017 Gills Creek @ Bluff Road	Wastewater	08/21/20 12:43	Grab



Woolpert Inc. - City of Columbia 2000 Center Point Road Ste 2200 Columbia, SC 29210 Project:

Water Quality Testing

Work Order: Reported: 0081127 08/31/20 10:52

Sample Data

Sample Number

0081127-01

Sample Description

DHEC B-280 Smith Branch @ N. Main St collected on 08/21/20 10:50

Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Field Parameters											
Dissolved Oxygen		6.7	0.1	mg/L	1.00	08/21/20 10:50	SM 4500 OG-2011		CDT	В0Н0992	RC-C
Grab		Complete				08/21/20 10:50	Grab		CDT	В0Н0992	RC-C
Temperature		25.0	0.0	°C	1.00	08/21/20 10:50	SM 2550B-2010		CDT	В0Н0992	RC-C
Sample Number Sample Description	0081127-02 DHEC B-280 S	Smith Branc	h @ N. Maiı	n St collected	d on 08/2	1/20 10:45					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
General Chemistry Para	ameters										
Total Suspended Solids		2.0	1.0	mg/L	1.00	08/25/20 09:45	SM 2540D-2011		RAM	В0Н1077	RC-C
Sample Number Sample Description	0081127-03 DHEC B-280 S	Smith Branc	h @ N. Maiı	n St collected	d on 08/2	1/20 10:47					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Microbiological Parame	eters										
E. Coli		3700	20	MPN/100 mL	20.0	08/21/20 14:25	SM 9223B-2004		HBB	B0H1015	RC-C
Sample Number Sample Description	0081127-04 DHEC C-001 C	Gills Creek (@ Garners F	erry Rd colle	ected on (08/21/20 12:15					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Field Parameters											
Dissolved Oxygen		6.8	0.1	mg/L	1.00	08/21/20 12:15	SM 4500 OG-2011		CDT	В0Н0992	RC-C
Temperature		29.3	0.0	°C	1.00	08/21/20 12:15	SM 2550B-2010		CDT	В0Н0992	RC-C



Woolpert Inc. - City of Columbia 2000 Center Point Road Ste 2200

Columbia, SC 29210

Project:

Water Quality Testing

Work Order:

0081127

Reported:

08/31/20 10:52

Sample Number

0081127-05

Sample Description

DHEC C-001 Gills Creek @ Garners Ferry Rd collected on 08/21/20 12:10

Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
General Chemistry Par	ameters										
Total Suspended Solids		36.0	2.9	mg/L	2.86	08/25/20 09:45	SM 2540D-2011		RAM	В0Н1077	RC-C
Sample Number Sample Description	0081127-06 DHEC C-001 G	ills Creek	@ Garners Fo	erry Rd colle	ected on (08/21/20 12:13					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Microbiological Paramo	eters										
E. Coli		1056	20	MPN/100 mL	20.0	08/21/20 14:25	SM 9223B-2004		НВВ	B0H1015	RC-C
Sample Number Sample Description	0081127-07 DHEC C-017 G	ills Creek	@ Bluff Road	d collected o	on 08/21/2	20 12:45					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Field Parameters											
Dissolved Oxygen		5.2	0.1	mg/L	1.00	08/21/20 12:45	SM 4500 OG-2011		CDT	В0Н0992	RC-C
Temperature		27.1	0.0	°C	1.00	08/21/20 12:45	SM 2550B-2010		CDT	В0Н0992	RC-C
Sample Number Sample Description	0081127-08 DHEC C-017 G	ills Creek	@ Bluff Road	d collected o	on 08/21/2	20 12:40					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
General Chemistry Par	ameters										
Total Suspended Solids		11.8	1.5	mg/L	1.50	08/25/20 09:45	SM 2540D-2011		RAM	B0H1077	RC-C
Sample Number Sample Description	0081127-09 DHEC C-017 G	ills Creek	@ Bluff Road	d collected o	on 08/21/2	20 12:43					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Microbiological Paramo	eters										
E. Coli		370	20	MPN/100 mL	20.0	08/21/20 14:25	SM 9223B-2004		НВВ	B0H1015	RC-C

PO Box 5655 | Greenville, SC 29606 | 426 Fairforest Way | Greenville, SC 29607 | main 864.232.1556 | fax 864.232.6140 | rogersandcallcott.com



Woolpert Inc. - City of Columbia 2000 Center Point Road Ste 2200 Columbia, SC 29210

Water Quality Testing Project:

Work Order: 0081127 08/31/20 10:52 Reported:

Data Qualifiers and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

NR Not reported

Laboratory Reference:

RC-G = Rogers and Callcott, 426 Fairforest Way, Greenville, SC 29607 / SC Lab ID 23105 RC-C = Rogers and Callcott, 215B Stoneridge Drive, Columbia, SC 29210 / SC Lab ID 40572

•		Rogers & Callcott	S S	& Callcott	せ	CHAIN	OF (SUS	0	AIN OF CUSTODY RECORD	WOR	WORK ORDER OOTINZ	Γ
T	Half a century of commitment and quality	of comr	nitmen	t and a				2	Z			Filtered (Yes/No)	
2	Y O D Box 5655	, ,	Shinning			S Stoneridge Drive		>	>			Cooled (Yes/No)	
≥ ∢		Greenville, SC 29606	Address:	Greenville, SC 29607	<u> </u>	Columbia, SC 29210 Dhone (802) 500-8000		ட	Д			Container Type (Plastic/Glass)	
•	(80	1) 737-755	į	rdx (904)	140	11e (oco) 303-9333		0.5G	120			Container Volume (mL)	
,	ame	Woolpert – City of Columbia	- CITY 0	or colum	Dia			5	ŋ			Sample Type (Grab/Composite)	
4	Address	2000 Center Point Road Suite 2200	er Point	Koad Sul	re 2200		SLS	%	MM	-		Sample Source (WW, GW, DW, SW, S, Other)	
		Columbia, SC 29210	SC 2921	0			anis:	⋖	4				
<u>.r</u>	Report To:	Michael Long	ong				tuoC					Preservation Code(s)	
لی	Email Address	Michael.long@woolpert.com	ng@woc	olpert.co	٤			1				F - Na ₂ S ₂ O ₃	
_	Telephone #	803-214-5936	936	- Anna Anna Anna Anna Anna Anna Anna Ann				(s) 12				C - H ₂ SO ₄ G - Boric Acid K - NaH ₂ PO ₄ D - NaOH H - Ascorbic Acid I - NH ₂ CI	
ш.	PO #	1		۾ ا	oject # Water (Project # Water Quality Testing	inN le	təmı	ilo				
	R & C WORK ORDER	YR 200	TIME		SAMPLE DESCRIPTION	RIPTION		SST	E. C			COMMENTS	
<u> </u>	9	1/2/8	1048	DHEC B-2	DHEC B-280 (Smith Branch @ N. Main	th @ N. Main St)	\vdash	\vdash			9	D.O 10, 167 mg/L	
	9		Cho,	DHEC B-2	DHEC B-280 (Smith Branch @ N. Main	h @ N. Main St)	1		1			Temp- <i>35.0</i> °C	
L												Collected @ 1080	
								en neseratus 1000as				Analyzed @/og/	
•												Weather- 79° Synny	T
·													
				,									
	SAMPLER REU 1.	REUNQUISHED BY:	BY:	A	POATE/TIME:	RECEIVED BY:			·	DATE/TIME:	Composite	Composite Start Date/Time:	
	RELINQUISHED BY:	BY:			DATE/TIME:	RECEIVED BY:				DATE/TIME:	Composite	Composite End Date/Time:	1
F	3.				1 to	4.					Time or	Flow (Circle one) Initials:	
Page	RELINQUISHED BY: 5.	ВҮ:			UATE/TIME:	KECEIVED BY: 6.				DATE/TIME:	Temper	Temperature of blank or representative sample	
6 of 9	RELINQUISHED BY: 7.	BY:			DATE/TIME:	RECEIVED BY: 8.				DATE/TIME:	At tim At tim	At time of lab receipt 2.8 °C	
_				-			-						٦

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Page

Form Revised March, 2019

pssible Hazards associated with samples: O Non-Hazard O Flammable O Skin Irritant O Poison O Unknown O Other

CHAIN OF CUSTODY RECORD

WORK ORDER OUTILZ?

215B Stoneridge Drive Columbia, SC 29210 Phone (803) 509-8999 0.56
פפפס־פטט (נטטן פווה
uper c
Project # Water Quality Testing
SAMPLE DESCRIPTION
DHEC C-001 (Gills Creek @ Garners Ferry Rd)
DHEC C-001 (Gills Creek @ Garners Ferry Rd)
Kecelynd By
RECEIVED BY:
RECEIVED BY: 6.
RECEIVED BY: 8.

of

Form Revised March, 2019

Jossible Hazards associated with samples: O Non-Hazard O Flammable O Skin Irritant O Poison O Unknown O Other

WORK ORDER

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL

Greenville, SC 29606 PO Box 5655 Address: Mailing

Sample Source (WW, GW, DW, SW, S, Other) I - Zn Acetate K - NaH₂PO₄ Sunny J-H3PO4 H - Ascorbic Acid L - NH₄Cl mg/L Sample Type (Grab/Composite) Preservation Code(s) Container Type (Plastic/Glass) Analyzed @/みどく 5001 COMMENTS Initials: G - Boric Acid B Container Volume (mL) F - Na₂S₂O₃ Collected @ D.O. 5.20 E-HC Temp- 27. Filtered (Yes/No) Cooled (Yes/No) Weather-Time or Flow (Circle one) Composite Start Date/Time: Composite End Date/Time: C - H₂SO₄ D - NaOH B - HNO₃ A - None DATE/TIME: DATE/TIME: DATE/TIME: 120 ≶ E. Coli G \leftarrow ட > Д 0.56 **≫** Z G **SST** > ۵. ⋖ \vdash Parameter(s) 🛧 Total Number of Containers DHEC C-017 (Gills Creek @ Bluff Road) DHEC C-017 (Gills Creek @ Bluff Road) Project # Water Quality Testing Phone (803) 509-8999 RECEIVED BY: 215B Stoneridge Drive RECEIVED RECEIVED BY Columbia, SC 29210 SAMPLE DESCRIPTION SPATE/TIME: DATE/TIME: DATE/TIME: 2000 Center Point Road Suite 2200 Shipping 426 Fairforest Way Address: Greenville, SC 29607 Fax (864) 232-6140 Half a century of commitment and quality Woolpert - City of Columbia Michael.long@woolpert.com Columbia, SC 29210 (243 TIME 803-214-5936 Michael Long SAMPLER_RECINQUISHED BY: YR 25 Phone (864) 232-1556 RELINQUISHED BY: RELINQUISHED BY: **Email Address WORK ORDER** Client Name Telephone # R&C Report To: Address # Od

Temperature of blank or representative sample

At time of lab receipt At time of collection

DATE/TIME:

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

Page 8 of 9

Form Revised March, 2019

O Unknown O Other

O Non-Hazard O Flammable O Skin Irritant O Poison

lossible Hazards associated with samples:

of



Sample Receipt Verification

Client:	colper	7	Date Received:	8	1	2/.	2	Work Order:	08/	127
Carrier Name: (to Columbia)	Client Tracking	FedEx UPS Number:	US	Mail		Cou	rier Fie	ld Services	Other:	
Carrier Name: (to Greenville)	Client Tracking	FedEx UPS Number:	US	Mail A	14	Cou	rier Fie	ld Services	Other:	
Receipt Criter	ia			Y e s	No	N A	Comment	3		
Shipping contain	er / cooler intact?			X			Damaged	Leaking Otl	ner:	
Custody seals int	act?					X				
COC included w	ith samples?			X						
COC signed whe	n relinquished and re	ceived?		X						
Sample bottles in	tact?			X			Damaged	Leaking Otl	ner:	
Sample ID on CO	OC agree with label or	n bottle(s)?		V						
Date / time on Co	OC agree with label o	n bottle(s)?		V						
Number of bottle	s on COC agrees with	number of bottles received	?	X				-		
Samples received	l within holding time	,		X						
Sample volume s	ufficient for analysis	,		X						
VOA vials free o	f headspace (<6mm b	ubble)?				X				
Note: Samples:	for O&G and VOA anal	t at proper pH? be preserved upon receipt in the ysis – preservation checked at be requiring chlorine removal a	ench.			X				
of sample collect	ion?	amples requiring Bacterial, VOA		X						
Samples cooled v	when received in	Temp at time of receipt Temp measured with IR SN: 363	01069WS	X			Ice	Cold Packs	Dry Ice	None
Samples cooled v Greenville?	when received in	Temp at time of receipt Temp measured with IR SN: 970	NHe_	-			Ice	Cold Packs	Dry Ice	None
		If in-house p	oreservation	used	- rec	ord Lo	ot#			
HCL				PO ₄	_					
H ₂ SO ₄				OH her	+					
HNO ₃				1101				i .		
Comments:										
	ormance issues not nce issue other than	ed at initial sample receipn noted above:	ot? Ye	es or	Z*	0)			

Note: Samples received initially in Columbia Facility. Sample preservation checks performed at Columbia Facility. Revised March 2019

Completed by:_

<u>City of Columbia Quality Assurance Project Plan (QAPP) Data</u> <u>Verification and Validation Form</u>

City of Columbia Supplemental Environmental Projects QAPP

November 2015, Revised May 2017, Revised December 2018, Revised January 2019

Laboratory Report Date: 9-28-2020	
The undersigned verifies the data in the ab	pove referenced report, per the QAPP requirements.
Miranda S. Styles	10/12/2020
Project Verifier/QA Manager	Date
Miranda Staples Printed Name	
The undersigned validates the data in the	above referenced report, per the QAPP requirements.
as Dessee	10-10-2020
Project Manager/Project Validator	Date
AJ Jessee	

Printed Name





Laboratory Services

Laboratory Report

Client Woolpert Inc. - City of Columbia

Michael Long

2000 Center Point Road Ste 2200

Columbia, SC 29210

Project: Water Quality Testing

Work Order: 0091084

Received: 09/21/2020 14:32

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on September 21, 2020. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

Privileged / Confidential information may be contained in this report and is intended only for the use of the addressee. If you are not the addressee, or the person responsible for delivering to the person addressed, you may not copy or deliver this message to anyone else. If you receive this message by mistake, please notify Rogers and Callcott immediately.

We strive to provide excellent service to our clients. Please contact Lauren Hollister, your Project Manager, at lhollister@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Trevor Gauron

Report Approved By:

Lauren Hollister

Lauren Hollister Project Manager





South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

Client Woolpert Inc. - City of Columbia

Certificate of Analysis

Michael Long

2000 Center Point Road Ste 2200

Columbia, SC 29210

Water Quality Testing Project:

Work Order: 0091084

Received: 09/21/2020 14:32

Sample Number	Sample Description	Matrix	Sampled	Type
0091084-01	DHEC B-280 Smith Branch @ N. Main St	Wastewater	09/21/20 09:10	Grab
0091084-02	DHEC B-280 Smith Branch @ N. Main St	Wastewater	09/21/20 09:12	Grab
0091084-03	DHEC B-280 Smith Branch @ N. Main St	Wastewater	09/21/20 09:15	Grab
0091084-04	DHEC C-001 Gills Creek @ Garners Ferry Rd	Wastewater	09/21/20 13:05	Grab
0091084-05	DHEC C-001 Gills Creek @ Garners Ferry Rd	Wastewater	09/21/20 13:08	Grab
0091084-06	DHEC C-001 Gills Creek @ Garners Ferry Rd	Wastewater	09/21/20 13:10	Grab
0091084-07	DHEC C-017 Gills Creek @ Bluff Road	Wastewater	09/21/20 13:35	Grab
0091084-08	DHEC C-017 Gills Creek @ Bluff Road	Wastewater	09/21/20 13:38	Grab
0091084-09	DHEC C-017 Gills Creek @ Bluff Road	Wastewater	09/21/20 13:41	Grab



Woolpert Inc. - City of Columbia 2000 Center Point Road Ste 2200 Columbia, SC 29210

Project:

Water Quality Testing

Work Order: Reported:

0091084 09/28/20 16:12

Sample Data

Sample Number

0091084-01

Sample Description

DHEC B-280 Smith Branch @ N. Main St collected on 09/21/20 09:10

Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
General Chemistry Pa	rameters										
Total Suspended Solids		2.4	1.0	mg/L	1.00	09/24/20 09:10	SM 2540D-2011		SMN	B0I1151	RC-C
Sample Number Sample Description	0091084-02 DHEC B-280 S	Smith Branc	h @ N. Mair	1 St collected	l on 09/2	1/20 09:12					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Microbiological Param	neters										
E. Coli		914	20	MPN/100 mL	20.0	09/21/20 16:00	SM 9223B-2004		MBW	B0I1093	RC-C
Sample Number Sample Description	0091084-03 DHEC B-280 S	Smith Branc	h @ N. Mair	1 St collected	l on 09/2	1/20 09:15					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Field Parameters											
Dissolved Oxygen		8.2	0.1	mg/L	1.00	09/21/20 09:15	SM 4500 OG-2011		CDT	B0I1011	RC-C
Grab		Complete				09/21/20 09:15	Grab		CDT	B0I1011	RC-C
Temperature		17.9	0.0	°C	1.00	09/21/20 09:15	SM 2550B-2010		CDT	B0I1011	RC-C
Sample Number Sample Description	0091084-04 DHEC C-001 C	Gills Creek	@ Garners F	erry Rd colle	ected on (09/21/20 13:05					
Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
General Chemistry Pa	rameters										



Woolpert Inc. - City of Columbia 2000 Center Point Road Ste 2200

Columbia, SC 29210

Project:

Water Quality Testing

Work Order: Reported: 0091084 09/28/20 16:12

Sample Number

0091084-05

Sample Description

DHEC C-001 Gills Creek @ Garners Ferry Rd collected on 09/21/20 13:08

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Microbiological Paramet	ters									
E. Coli	218	20	MPN/100 mL	20.0	09/21/20 16:00	SM 9223B-2004		MBW	B0I1093	RC-C
Sample Number Sample Description	0091084-06 DHEC C-001 Gills Creel	x @ Garners F	erry Rd colle	ected on (09/21/20 13:10					
Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Field Parameters										
Dissolved Oxygen	8.1	0.1	mg/L	1.00	09/21/20 13:10	SM 4500 OG-2011		CDT	B0I1011	RC-C
Temperature	22.7	0.0	°C	1.00	09/21/20 13:10	SM 2550B-2010		CDT	B0I1011	RC-C
Sample Number Sample Description	0091084-07 DHEC C-017 Gills Creel	c @ Bluff Roa	d collected o	on 09/21/2	20 13:35					
Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
General Chemistry Para	meters									
Total Suspended Solids	11.3	1.7	mg/L	1.67	09/24/20 09:10	SM 2540D-2011		SMN	B0I1151	RC-C
Sample Number Sample Description	0091084-08 DHEC C-017 Gills Creel	x @ Bluff Roa	d collected o	on 09/21/2	20 13:38					
Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Microbiological Paramet	ters									
E. Coli	124	20	MPN/100 mL	20.0	09/21/20 16:00	SM 9223B-2004		MBW	B0I1093	RC-C
Sample Number Sample Description	0091084-09 DHEC C-017 Gills Creek	x @ Bluff Roa	d collected c	on 09/21/2	20 13:41					
Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch	Lab
Field Parameters										
Dissolved Oxygen	7.4	0.1	mg/L	1.00	09/21/20 13:41	SM 4500 OG-2011		CDT	B0I1011	RC-C
Temperature	20.6	0.0	°C	1.00	09/21/20 13:41	SM 2550B-2010		CDT	B0I1011	RC-C



Woolpert Inc. - City of Columbia 2000 Center Point Road Ste 2200 Columbia, SC 29210 Project: Water Quality Testing

Work Order: 0091084 Reported: 09/28/20 16:12

Data Qualifiers and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

NR Not reported

Laboratory Reference:

RC-G = Rogers and Callcott, 426 Fairforest Way, Greenville, SC 29607 / SC Lab ID 23105 RC-C = Rogers and Callcott, 215B Stoneridge Drive, Columbia, SC 29210 / SC Lab ID 40572

CHAIN OF CUSTODY RECORD

01/11/10 Sample Source (WW, GW, DW, SW, S, Other) I - Zn Acetate K - NaH₂PO₄ H - Ascorbic Acid L - NH₄Cl J - H₃PO₄ Weather- 57 5cm ng mg/L Sample Type (Grab/Composite) Preservation Code(s) Container Type (Plastic/Glass) 100 COMMENTS Analyzed @ 0908 Initials: WORK ORDER OCO 1084 G - Boric Acid Container Volume (mL) F - Na₂S₂O₃ Collected @ Temp- 17.9 E-HC D.O.- %./% Filtered (Yes/No) Cooled (Yes/No) Time or Flow (Circle one) 9.21.26 1432 Composite Start Date/Time: Composite End Date/Time: C - H₂SO₄ D - NaOH A - None B - HNO₃ 09 DATE/TIME: DATE/TIME: 120 ≷ E. Coli \vdash ۵. G ш **}** 0.56 SST 5 Д ⋖ Parameter(s) 小 Total Number of Containers 2. Newste DHEC B-280 (Smith Branch @ N. Main St) DHEC B-280 (Smith Branch @ N. Main St) RECEIVED BY: RECEIVED BY: Project # Water Quality Testing 215B Stoneridge Drive Phone (803) 509-8999 Columbia, SC 29210 SAMPLE DESCRIPTION 4. 9/21/20 1432 DATE/TIME: Shipping 426 Fairforest Way Address: Greenville, SC 29607 2000 Center Point Road Suite 2200 ENVIRONMENTAL Half a century of commitment and quality Fax (864) 232-6140 Woolpert - City of Columbia Michael.long@woolpert.com Columbia, SC 29210 0000 250 TIME 803-214-5936 SAMPLERY, RECINAUISHED BY: Michael Long YR 20 DATE Phone (864) 232-1556 Greenville, SC 29606 RELINQUISHED BY: PO Box 5655 **Email Address** WORK ORDER Telephone # 102 Client Name Report To: ۵ Address Address: PO #

Temperature of blank or representative sample

DATE/TIME:

RECEIVED BY:

DATE/TIME:

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

RELINQUISHED BY:

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At time of lab receipt

At time of collection

DATE/TIME:

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Form Revised March, 2019

Possible Hazards associated with samples: O Non-Hazard O Flammable O Skin Irritant O Poison O Unknown O Other

WORK ORDER CO9 1084

CHAIN OF CUSTODY RECORD

PO Box 5655 Address: Mailing

1210 9/20 13/0 9/0//20 Sample Source (WW, GW, DW, SW, S, Other) I - Zn Acetate K - NaH₂PO₄ Temperature of blank or representative sample Summe H - Ascorbic Acid L - NH4Cl J - H₃PO₄ mg/L Sample Type (Grab/Composite) Preservation Code(s) Container Type (Plastic/Glass) COMMENTS Initials: Ó 3 - Boric Acid Container Volume (mL) - - Na₂S₂O₃ Analyzed @ Temp- 32.7 30 Collected @ E- HC Filtered (Yes/No) Cooled (Yes/No) Weather-Time or Flow (Circle one) Composite Start Date/Time: Composite End Date/Time: At time of lab receipt At time of collection D.O.-201 B-HNO₃ D - NaOH A - None C - H₂SO₄ 4.25 54.20 DATE/TIME: DATE/TIME: DATE/TIME: DATE/TIME: 120 9 ≶ E. Coli Δ. 7 ш 0.56 **≫** Z G ⋖ SST \leftarrow Parameter(s) 🗸 Total Number of Containers \vdash RECEIVED BY: DHEC C-001 (Gills Creek @ Garners Ferry Rd) DHEC C-001 (Gills Creek @ Garners Ferry Rd) Project # Water Quality Testing RECEIVED BY: RECEIVED BY: RECEIVED BY: 215B Stoneridge Drive Phone (803) 509-8999 Columbia, SC 29210 SAMPLE DESCRIPTION PATE/TIME: RECT 4 DATE/TIME: DATE/TIME: DATE/TIME: Shipping 426 Fairforest Way Address: Greenville, SC 29607 2000 Center Point Road Suite 2200 ENVIRONMENTAL Half a century of commitment and quality Fax (864) 232-6140 Woolpert - City of Columbia Michael.long@woolpert.com Columbia, SC 29210 Sign Sign TIME 1305 803-214-5936 SAMPLER RELINQUISHED BY: Michael Long 10% Phone (864) 232-1556 YR Z Greenville, SC 29606 RELINQUISHED BY: RELINQUISHED BY: RELINQUISHED BY: **Email Address WORK ORDER** Telephone # 70 B Client Name Report To: Address PO#

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Form Revised March, 2019

Possible Hazards associated with samples: O Non-Hazard O Flammable O Skin Irritant O Poison O Unknown O Other_

CO91684

WORK ORDER

CHAIN OF CUSTODY RECORD

)	× 0 0000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
Half a century of commitment and quality	ENVIRONMENTAL ment and quality	Z		Filtered (Yes/No)
Mailiam DO Box 5555	426 Eairforest Wav 715R Stroneridge Drive	\ \ \		Cooled (Yes/No)
Greenville, SC 29606		А		Container Type (Plastic/Glass)
†oo) ;	2	0.56 120	0	Container Volume (mL)
ame	r Columbia	9 9		Sample Type (Grab/Composite)
Address 2000 Center Point Road Suite 2200	Road Suite 2200	WW WW		Sample Source (WW. GW. DW. SW. S. Other)
Columbia, SC 29210	0	enie.		
Report To: Michael Long				Preservation Code
Email Address Michael.long@woolpert.com	lpert.com			A - None E - HCl - Zn Acetate B - HNO ₃ F - Na ₂ S ₂ O ₃ J - H ₃ PO ₄
Telephone # 803-214-5936		mber ter(e		
PO#	Project # Water Quality Testing	əwe		
R&C YRZC WORK ORDER DATE TIME	SAMPLE DESCRIPTION			COMMENTS
-07 9/2/ 1335	DHEC C-017 (Gills Creek @ Bluff Roa	(oad) 1 1		D.O 7, 44 mg/L
-08 / 1338	DHEC C-017 (Gills Creek @ Bluff Roa	(oad) 1 1		Temp- 20. b °C
				Collected @ (34) 9/2/2
				Analyzed @ 134/ 9/21/20
				Weather-72 Sunna
SAMPLER – REMAQUISHED BY:	PATE/PIME: RECEIVED BY: (21 /20 1432 2.) LINCL	さいのでは	Pare/TIME:	Composite Start Date/Time:
RELINQUISHED BY:	DATE/TIME: RECEIVED BY: 4.	0	DATE/TIME:	Composite End Date/Time:
RELINQUISHED BY:	DATE/TIME: RECEIVED BY:		DATE/TIME:	(clicle olic)
5.	6.			Temperature of blank or representative sample

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Page

Form Revised March, 2019

Possible Hazards associated with samples: O Non-Hazard O Flammable O Skin Irritant O Poison O Unknown O Other _

RECEIVED BY: 8.

DATE/TIME:

RELINQUISHED BY:

At time of lab receipt At time of collection

DATE/TIME:



Revised March 2019

Sample Receipt Verification

Client: Woolpert-City of Co		Date eived:		7.2	1.21		Work Order:	009 1084	
Carrier Name: Client FedEx (to Columbia) Tracking Number:	UPS	USN	Mail		Cou	rier Fiel	d Services	Other:	
Carrier Name: Client FedEx (to Greenville) Tracking Number:	UPS N	US N	Mail		Cou	rier Fiel	d Services	Other:	
Receipt Criteria			Y e s	No	N A	Comments			
Shipping container / cooler intact?			Х			Damaged	Leaking	Other:	
Custody seals intact?					×				
COC included with samples?			1					11	
COC signed when relinquished and received?			×						
Sample bottles intact?			X			Damaged	Leaking	Other:	
Sample ID on COC agree with label on bottle(s)?			X						
Date / time on COC agree with label on bottle(s)?			X						
Number of bottles on COC agrees with number of bott	les received?		×						
Samples received within holding time?			×						
Sample volume sufficient for analysis?			X						
VOA vials free of headspace (<6mm bubble)?					X				
Samples requiring pH preservation at proper pH? Note: Samples for metals analysis may be preserved upon Note: Samples for O&G and VOA analysis – preservation	receipt in the late checked at benched	ch			×				
Samples dechlorinated for parameters requiring chloring of sample collection? Note: Chlorine checked at bench for samples requiring B analysis.	ne removal at t	he time	K						
Samples cooled when received in Temp at time of re	ceipt 1. (ith IR SN: 363010		X			Ice	Cold Packs	Dry Ice	None
Samples cooled when received in Greenville? Temp at time of received when Temp at time of received in Temp measured when Temp measured when Temp measured when Temp measured when Temp at time of received in Temp measured when the time of received in Temp measured when the time of received in Temp measured when the time of received in th	ith IR SN: 970500					Ice	Cold Packs	Dry Ice	None
	If in-house pre	servation	used	– rec	ord L	ot#			
HCL		H ₃ I		_					
H ₂ SO ₄		Nat	OH her	+					
HNO ₃		Ou	nei						
Comments:									
Were non-conformance issues noted at initial san	mple receipt?	Ye	s o		No				
Non-Conformance issue other than noted above:						-			
Note: Samples received initially in Columbia Facility. Samp	ole preservation	checks per	forme	d at Co	olumbi	a Facility.	ad by:	NBL	

Completed by: