

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
Columbia Division

THE UNITED STATES OF AMERICA)	Civil Action No. 3:13-2429-TLW
)	
and)	
)	
STATE OF SOUTH CAROLINA by and)	
through the DEPARTMENT OF HEALTH)	
AND ENVIRONMENTAL CONTROL,)	
)	
Plaintiffs,)	
)	
v.)	
)	
THE CITY OF COLUMBIA,)	<u>CONSENT DECREE</u>
)	
)	
Defendant.)	

TABLE OF CONTENTS

I. JURISDICTION AND VENUE.....6

II. APPLICABILITY.....6

III. OBJECTIVES.....8

IV. DEFINITIONS.....8

V. COMPLIANCE REQUIREMENTS.....15

VI. REVIEW OF DELIVERABLES.....65

VII. CIVIL PENALTY.....69

VIII. SUPPLEMENTAL ENVIRONMENTAL PROJECT.....70

IX. REPORTING REQUIREMENTS.....74

X. STIPULATED PENALTIES.....77

XI. FORCE MAJEURE.....82

XII. DISPUTE RESOLUTION.....84

XIII. RIGHT OF ENTRY AND INFORMATION COLLECTION AND RETENTION.....87

XIV. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS.....89

XV. COSTS.....91

XVI. NOTICES.....91

XVII. EFFECTIVE DATE.....94

XVIII. RETENTION OF JURISDICTION.....94

XIX. MODIFICATION.....94

XX. TERMINATION.....95

XXI. PUBLIC PARTICIPATION.....96

XXII. SIGNATORIES/SERVICE.....96

XXIII. INTEGRATION.....97

XXIV. FINAL JUDGMENT.....97

XXV. APPENDICES.....97

WHEREAS, Plaintiff, the United States of America (“United States”), by the authority of the Attorney General of the United States and through its undersigned counsel, acting at the request and on behalf of the United States Environmental Protection Agency (“EPA”), has filed a Complaint contemporaneously with the lodging of this Consent Decree alleging that Defendant, the City of Columbia, South Carolina (“Columbia”), has violated and continues to violate Section 301 of the Clean Water Act (“CWA”), 33 U.S.C. § 1311, and the terms and conditions of its National Pollutant Discharge Elimination System (“NPDES”) permit issued under Section 402 of the CWA, 33 U.S.C. § 1342;

WHEREAS, Plaintiff, the South Carolina Department of Health and Environmental Control (“DHEC”), on behalf of the State of South Carolina (“State”), has joined in the Complaint and seeks injunctive relief and civil penalties for Columbia’s alleged violations of the South Carolina Pollution Control Act (“SCPCA”), S.C. Code Ann. §§ 48-1-10 *et seq.*, and the regulations promulgated pursuant thereto. Section 309(e) of the CWA, 33 U.S.C. § 1319(e), requires the state in which a municipality is located to be joined as a party whenever the municipality is a party to a civil action brought by the United States under Section 309 of the CWA;

WHEREAS, Columbia is a “municipality” pursuant to Section 502 of the CWA, 33 U.S.C. § 1362;

WHEREAS, DHEC has been authorized by EPA to administer the NPDES program pursuant to Section 402(b) of the CWA, 33 U.S.C. § 1342(b);

WHEREAS, Columbia’s Wastewater Collection and Transmission System (“WCTS”) transports wastewater to a publicly owned wastewater treatment plant (“WWTP”),

the Columbia Metro WWTP, which is operated by Columbia pursuant to NPDES Permit Number SC0020940. A map of the service area for the Sewer System is attached hereto as Appendix A;

WHEREAS, Columbia has reported to EPA and DHEC numerous Sanitary Sewer Overflows (“SSOs”) and other violations of the NPDES Permit in the past five years. The United States and the State contend that these reported events are violations of the CWA, SCPCA, and Columbia’s NPDES Permit;

WHEREAS, Columbia has voluntarily undertaken various capital improvement projects intended to improve its WCTS and WWTP as well as reduce the occurrence of SSOs, which, over the past five years, have resulted in significant expenditures of resources by Columbia;

WHEREAS, this Consent Decree requires Columbia to develop, submit, finalize, and implement existing and additional plans for the continued improvement of its WCTS and WWTP, with the goal of eliminating future SSOs and other violations of the NPDES Permit;

WHEREAS, the Parties to this Consent Decree have negotiated in good faith and have reached a settlement of the issues raised in the Complaint;

WHEREAS, Columbia does not admit any liability to the United States or the State arising out of the transactions or occurrences alleged in the Complaint;

WHEREAS, the Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation among the Parties and that this Consent Decree is fair, reasonable, and in the public interest;

NOW THEREFORE, with the consent of the Parties, it is hereby ORDERED, ADJUDGED and DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and over the Parties. This Court has supplemental jurisdiction over the state law claims asserted by the State pursuant to 28 U.S.C. § 1367. Venue is proper in the District of South Carolina pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and 28 U.S.C. §§ 1391(b) and 1395(a), because the violations alleged in the Complaint are alleged to have occurred in this judicial district, and pursuant to 28 U.S.C. § 1391. For purposes of this Decree, or any action to enforce this Decree, Columbia consents to the Court's jurisdiction over this Decree and any such action and over Columbia and consents to venue in this judicial district.

2. For purposes of this Consent Decree, Columbia agrees that the Complaint states claims upon which relief may be granted pursuant to Sections 301 and 402 of the CWA, 33 U.S.C. §§ 1311 and 1342, and 28 U.S.C. §§ 516 and 519 and SCPCA, S.C. Code Ann. §§ 48-1-10 *et seq.*

II. APPLICABILITY

3. The obligations of this Consent Decree apply to and are binding upon the United States and the State, and upon Columbia and any successors, assigns, or other entities or persons otherwise bound by law.

4. No transfer of ownership or operation of any part of the Sewer System, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Columbia of its obligation to ensure that the terms of the Consent Decree are implemented, unless (1) the

transferee agrees in writing to be bound by and assume responsibility for compliance with applicable provisions of this Consent Decree and to submit to the jurisdiction of the Court for its enforcement by becoming a Party under the Consent Decree and (2) the United States, in consultation with DHEC, approves the substitution of the transferee and consents to relieve Columbia of the applicable obligations. The United States' decisions shall not be subject to judicial review. At least thirty (30) Days prior to such proposed transfer, Columbia shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to EPA Region IV, the United States Attorney for the District of South Carolina, the United States Department of Justice and DHEC, in accordance with Section XVI of this Decree (Notices). Any attempt to transfer ownership or operation of the Sewer System without complying with this Paragraph constitutes a violation of this Decree. This Paragraph will not apply to the transfer of a portion of the WCTS to Richland County pursuant to the Lower Richland Sewer Service Agreement attached hereto as Appendix B.

5. Columbia shall provide a copy of this Consent Decree to all officers, employees, and agents with responsibility for overseeing implementation of work required under this Consent Decree, as well as to any consultant or contractor retained to perform Work required under this Consent Decree. Columbia shall condition any such contract upon performance of the Work in conformity with the terms of this Consent Decree.

6. In any action to enforce this Consent Decree, Columbia shall not raise as a defense the failure by any of its officers, directors, employees, agents or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. OBJECTIVES

7. The objective of the plans, measures, reports, construction, maintenance, operational requirements, and other obligations in this Consent Decree or resulting from the activities required by this Consent Decree is to cause Columbia to achieve and maintain full compliance with the CWA, the SCPCA, and the NPDES Permit, including the goal of eliminating all future SSOs.

IV. DEFINITIONS

8. Terms used in this Consent Decree that are defined in the CWA or in regulations promulgated pursuant to the CWA shall have the meanings assigned to them in the CWA, 33 U.S.C. §§ 1251 *et seq.*, and regulations promulgated under the CWA, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

a. “Building Backup” shall mean a release of wastewater into a building or onto private property that is caused by blockages, flow conditions, or other malfunctions in the WCTS. A wastewater backup or release that is caused by blockages, flow conditions, or other malfunctions of a Private Lateral or other piping/conveyance system that is not owned or operationally controlled by Columbia is not a Building Backup.

b. “Bypass” shall have the meaning set forth at 40 C.F.R. § 122.41(m).

c. “Calendar Quarter” shall mean the three-month period ending on March 31, June 30, September 30, or December 31.

d. “Calendar Year” shall mean the 12-month period starting on January 1 and

ending on December 31.

e. “Certification” or “Certify” shall mean compliance with the certification requirements in Section VI (Review of Deliverables) of this Consent Decree.

f. “Columbia” shall mean the City of Columbia, South Carolina, including all of its departments, agencies, instrumentalities such as the Public Works Department, and any successor thereto.

g. “Complaint” shall mean the complaint filed by the United States and the State in this action.

h. “Consent Decree” or “Decree” shall mean this consent decree document and all appendices attached hereto (listed in Section XXV). In the event of a conflict between this document and any appendix, this document shall control.

i. “CWA” shall mean the Clean Water Act, as amended, 33 U.S.C. §§ 1251, *et seq.*

j. “Date of Entry” shall mean the date on which this Consent Decree is entered by the United States District Court for the District of South Carolina.

k. “Date of Lodging” shall mean the date this Consent Decree is lodged with the Clerk of the Court for the United States District Court for the District of South Carolina.

l. “Day” shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall

on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.

m. “Defendant” shall mean the City of Columbia, South Carolina and any successor thereto.

n. “Deliverable” shall mean any written document required to be prepared and/or submitted by or on behalf of Columbia pursuant to this Consent Decree.

o. “DHEC” shall mean the South Carolina Department of Health and Environmental Control and any successor departments or agencies of the State.

p. “Discharge Monitoring Report” or “DMR” shall mean the monitoring report which Columbia is required to submit to DHEC on a monthly basis pursuant to its NPDES Permit.

q. “DOJ” shall mean the United States Department of Justice.

r. “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.

s. “Effective Date” shall have the definition provided in Section XVII.

t. “Excessive Inflow / Infiltration” or “Excessive I/I” shall have the meaning provided in 40 C.F.R. § 133.103(d) and 40 C.F.R. § 35.2005(b)(16).

u. “Force Main” shall mean any pipe that receives and conveys, or whose purpose is to receive and convey, wastewater under pressure from the discharge side of a pump.

v. “Gravity Sewer Line” or “Gravity Sewer” shall mean any pipe that receives, contains and conveys, or whose purpose is to receive, convey, and contain, wastewater not normally under pressure, but unassisted under the influence of gravity.

w. “Infiltration” shall mean water other than wastewater that enters the WCTS (including sewer service connections and foundation drains) from the ground through such means as, but not limited to, defective pipes, pipe joints, connections, or manholes. Infiltration does not include and is distinguishable from Inflow.

x. “Inflow” shall mean water other than wastewater that enters the WCTS (including sewer service connections) from sources such as, but not limited to, roof leaders, cellar drains, yard drains, sump pumps, foundation drains, area drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, cooling towers, storm water, surface runoff, street wash waters, or drainage. Inflow does not include and is distinguished from Infiltration.

y. “I/I” shall mean the total quantity of water from Inflow, Infiltration, and rainfall induced Infiltration.

z. “Major Gravity Sewer Line” shall mean any of the following:

(i). a Gravity Sewer Line that is fifteen (15) inches in diameter or larger;

(ii). a Gravity Sewer Line that conveys wastewater from one pumping station service area to another pumping station service area; and

(iii). a Gravity Sewer Line that has caused or contributed to, or that Columbia knows or should know will likely cause or contribute to, capacity-related unpermitted overflows.

aa. “Major Pump Station” shall mean a pump station receiving flow from a sewer line of 15 inches in diameter or greater.

bb. “MOM” or “Management, Operations, and Maintenance” shall mean a program of accepted industry practices to properly manage, operate and maintain sanitary wastewater collection, transmission and treatment systems, investigate capacity-constrained areas of these systems, and respond to SSO events.

cc. “NPDES” shall mean the National Pollutant Discharge Elimination System authorized under Section 402 of the CWA, 33 U.S.C. § 1342.

dd. “NPDES Permit” shall mean NPDES permit number SC0020940 issued to Columbia Metro WWTP pursuant to Section 402 of the Clean Water Act, 33 U.S.C. § 1342, and any future extended, modified, or reissued permits.

ee. “Paragraph” shall mean a portion of this Consent Decree identified by an Arabic numeral.

ff. “Parties” shall mean the United States of America on behalf of EPA, the State of South Carolina by and through DHEC, and Columbia.

gg. “Plaintiffs” shall mean the United States of America on behalf of EPA and the State of South Carolina by and through DHEC.

hh. “Private Lateral” shall mean that portion of a sanitary sewer conveyance pipe that extends from the wastewater right-of-way or utility easement to the single-family, multi-family, apartment, or other dwelling unit or commercial or industrial structure to which Columbia’s wastewater service is or has been provided.

ii. “Publicly Owned Treatment Works” or “POTW” shall mean a publicly owned treatment works or POTW as defined in 40 C.F.R. § 403.3(q), and includes the WCTS and the WWTP as defined in this Consent Decree.

jj. “Pump Station” shall mean facilities comprised of pumps which lift wastewater to a higher hydraulic elevation, including all related electrical, mechanical, and structural systems necessary to the operation of the facilities.

kk. “Sanitary Sewer Overflow” or “SSO” shall mean an overflow, spill, or release of wastewater from Columbia’s Sewer System including: (a) Unpermitted Discharges; (b) overflows, spills, or releases of wastewater that may not have reached waters of the United States or the State of South Carolina; and (c) all Building Backups.

ll. “Section” shall mean a portion of this Consent Decree identified by a Roman numeral.

mm. “Sewerbasin” shall mean all hydraulically linked portions of Columbia’s Wastewater Collection and Transmission System that are tributary to a trunk sewer which directly leads to the WWTP. Each Sewerbasin is independent of other Sewerbasins. The Sewerbasins in Columbia’s WCTS are shown on the map attached as Appendix C.

nn. “Sewer System” shall mean the WCTS and the WWTP.

oo. “State” shall mean the State of South Carolina.

pp. “SORP” shall mean the Sewer Overflow Response Plan that Columbia has developed and which is attached as Appendix D to this Consent Decree.

qq. “Subbasin” shall mean a subdivision of a Sewerbasin which consists of hydraulically linked sewers that are tributary to a common point in the sewer system. Sewer system evaluation techniques are undertaken on a Subbasin basis. A Subbasin typically consists of 10,000 to 50,000 linear feet of sewer. The Subbasins in Columbia’s WCTS are shown on the map attached as Appendix C.

rr. “Subparagraph” shall mean a portion of a paragraph identified by lowercase letters.

ss. “SCPCA” shall mean the South Carolina Pollution Control Act, South Carolina Code Ann. §§ 48-1-10 *et seq.*

tt. “United States” shall mean the United States of America, acting on behalf of EPA.

uu. “Unpermitted Discharge” shall mean a discharge of pollutants which reaches waters of the United States or the State from (a) the Sewer System, (b) the WWTP through a point source not specified in an NPDES Permit, or (c) the WWTP which constitutes a prohibited Bypass.

vv. “Wastewater Collection and Transmission System” or “WCTS” shall mean the municipal wastewater collection, retention and transmission system, including all pipes, Force Mains, Gravity Sewer Lines, Pump Stations, pumps, manholes, and appurtenances thereto, which are owned or operated by Columbia and which flow to the Columbia Metro WWTP.

ww. “Wastewater Treatment Plant” or “WWTP” shall mean all facilities, devices, or systems which are owned, managed, operated, or maintained by Columbia for the storage, treatment, recycling, or reclamation of municipal wastewater, including the Columbia Metro WWTP located at 1200 Simon Tree Lane, Columbia, South Carolina, and all components of such wastewater treatment facility.

xx. “Work” shall mean all activities Columbia is required to perform under this Consent Decree.

V. COMPLIANCE REQUIREMENTS

9. Obligation to Perform Work. Upon the Date of Entry, Columbia shall implement the Work pursuant to this Consent Decree. Columbia is responsible for ensuring that any contractors hired to perform Work pursuant to this Consent Decree comply with all applicable laws and with this Consent Decree. All Work shall be performed using sound engineering practices, which may include, but are not limited to, appropriate provisions of South Carolina Regulation 61-67 (wastewater construction standards); South Carolina Regulation 61-9 (discharge standards); the *Handbook: Sewer System Infrastructure Analysis and Rehabilitation*, EPA/625/6-91/030, 1991; *Existing Sewer Evaluation and Rehabilitation*, WEF MOP FD-6,

1994, Third Edition 2009; and the most recent edition of “Recommended Standards for Wastewater Facilities” by the Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers (commonly known as the “Ten State Standards.”).

10. Early Action Capital Improvement Projects. Subject to receiving all necessary permits and approvals, Columbia shall implement and complete the following capital and short term SSO measures:

a. Capital Improvement Program for Columbia Metro WWTP. Columbia has underway a Capital Improvement Program for the Columbia Metro WWTP, as described further on Appendix E. The projects included in this Program are: (1) Metro Headworks Project (Capital Improvement Project (“CIP”) SS6722); (2) Metro WWTP Aeration Improvements (CIP No. SS7182); (3) Disinfection Improvements at the WWTP (CIP No. SS7058); (4) Secondary Clarifier Improvements at the WWTP (CIP No. SS6871); (5) Train 2 Pump Station Improvements (CIP No. SS7155); and (6) DAF Improvements (CIP No. SS7197). These capital improvements include construction of new Equipment as well as the upgrade and rehabilitation of existing Equipment. The schedule for the Capital Improvement Program for Columbia Metro WWTP is included in Appendix E , and such schedule shall be enforceable under this Consent Decree.

b. Capital Improvement Projects for WCTS. Columbia has underway a Capital Improvement Program for the Wastewater Collection and Transmission System, as described further on Appendix F. The projects included in this Program are: (1) Broad River Pump Station

Improvements (CIP No. SS7101); (2) North Columbia Pump Station Improvements; (3) West Columbia Pump Station Improvements (CIP No. SS711501); (4) Installation of 20,000 Linear Feet of 42-inch Forcemain from West Columbia Pump Station to WWTP (CIP No. SS711502); and (5) Saluda River Pump Station Improvements (CIP No. SS7116. The schedule for the Capital Improvement Program for Columbia's WCTS is included in Appendix F, and such schedule shall be enforceable under this Consent Decree.

11. Wastewater Treatment Plant Programs. Columbia shall develop and implement the specific Wastewater Treatment Plant Programs set forth below and ensure that each Program has a written, defined purpose; a written, defined goal; is documented in writing with specific detail as required herein; is implemented by trained personnel; has established performance measures; and has written procedures for periodic review.

a. Maintenance Management System. Within one (1) year after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a Maintenance Management System ("MMS") for the WWTP. The objectives of the MMS are to ensure that preventive and corrective maintenance is conducted at the WWTP and that WWTP equipment integral to proper operation and maintenance, treatment units, and tanks is maintained with the goal of achieving compliance with the NPDES Permit. At minimum, the MMS shall include, and Columbia shall implement, the requirements set forth in Paragraphs 11.a.(i) through (xi) below.

(i). Identification of equipment integral to proper operation and maintenance, treatment units, and tanks used in the treatment of wastewater liquids and biosolids

(hereafter referred to as “Equipment”).

(ii). Standard procedures to conduct periodic preventive maintenance of the Equipment (hereafter referred to as “Standard Maintenance Procedures”).

(iii). Standard Maintenance Procedures, which include the frequencies of preventative maintenance, necessary to ensure that Equipment is properly maintained.

(iv). Adequate training and education for maintenance personnel to perform the Standard Maintenance Procedures.

(v). Procedures for recognition of indicators that corrective maintenance on Equipment is necessary.

(vi). Procedures for the generation of work orders associated with preventive and corrective maintenance of the Equipment.

(vii). Procedures for the generation of purchase orders associated with preventive and corrective maintenance of the Equipment.

(viii). An Inventory Management System that requires Columbia to maintain:

(A) lists of critical equipment and critical spare parts for the operation of the WWTP;

(B) an inventory of critical spare parts stored at the WWTP and a list of where the remaining critical spare parts not stored at the WWTP may be obtained to

enable the repair or replacement of Equipment in a minimum amount of time and to ensure proper operation of the WWTP; and

(C) written procedures for maintaining and updating the information in the Inventory Management System.

(ix). An accessible system for tracking preventive and corrective maintenance activities and histories at the WWTP including the generation of summary reports each month that identify:

(A) Equipment failures occurring in the previous month; and

(B) the end-of-month status of preventive and corrective maintenance work orders issued or outstanding in the previous month for Equipment.

(x). Procedures to ensure that failures of Equipment and/or loss of power supply during abnormal and emergency conditions are corrected in a timely fashion so as to limit the downtime of the facility or component.

(xi). The updated WWTP Operations Program shall include an implementation schedule specifying dates and actions.

b. WWTP Operations Program. Columbia currently has a WWTP Operations Program in place. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval an updated WWTP Operations Program. The goal of the updated WWTP Operations Program is to ensure that all Equipment is operated to achieve compliance with the NPDES Permit. At

minimum, the updated WWTP Operations Program shall include an Operations Plan, a Process Control Plan, and Compliance Monitoring Plan.

(i). Operations Plan. The updated WWTP Operations Program shall include an Operations Plan. At minimum, the Operations Plan shall include:

- (A) the operations manuals for all Equipment;
- (B) descriptions of the operational controls at the WWTP;
- (C) the maximum flow that each process unit may treat before effluent quality is expected to exceed NPDES Permit limits;
- (D) a peak flow operations plan;
- (E) schematics of the solids and liquids treatment processes;
- (F) a procedure for review and update on an annual basis of an organizational chart consisting of the names, positions, and telephone numbers of the operations personnel at the WWTP;
- (G) detailed procedures for the year-round disposal of biosolids which include alternative disposal methods should the primary disposal method not be employable;
- (H) a detailed operations training program for WWTP operations personnel and supervisors; and
- (I) detailed procedures for adding operating information for new Equipment into the WWTP Operations Program prior to the date on which Columbia

commences operation of that Equipment.

(ii). Process Control Plan. The updated WWTP Operations Program shall include a Process Control Plan. At minimum, the Process Control Plan shall include:

(A) Parameters for each treatment unit that is monitored for the purpose of process control, including the appropriate frequency of monitoring and guidelines for interpreting the data in order to implement modification(s) and adjustment(s) to the systems and Equipment;

(B) Tasks associated with the operation of the WWTP, including overall process control strategy and unit-specific tasks, an analysis of the level of personnel assigned to the task and the frequency and duration associated with the tasks;

(C) Procedures for unit-specific tasks and overall process control (hereafter referred to as “Standard Operating Procedures”); and

(D) Standard Operating Procedures (including emergency response plans, as necessary) for abnormal operational conditions (e.g., power outages and weather-related events) to ensure that Equipment is operated to achieve compliance with the NPDES Permit, ensure safety of all personnel, and ensure proper communication among WWTP personnel of the current operational state of the WWTP (hereafter referred to as “Contingency Operating Procedures”).

(iii). Compliance Monitoring Plan. The updated WWTP Operations Program shall include a Compliance Monitoring Plan. At minimum, the Compliance Monitoring Plan shall include:

(A) procedures for proper calibration of compliance monitoring equipment which also identify the frequencies required by the manufacturer and Columbia;

(B) procedures to ensure that representative compliance sampling is conducted at the WWTP in accordance with the requirements of NPDES permits and 40 C.F.R. Part 136;

(C) descriptions of all compliance sampling locations;

(D) schematics showing the compliance sampling locations;

(E) procedures for collecting compliance samples from the designated locations;

(F) procedures for obtaining compliance sample containers, preservatives, and/or monitoring equipment from the laboratory;

(G) procedures for collecting compliance samples in containers as described in 40 C.F.R. Part 136; and

(H) procedures to ensure that all compliance samples requiring immediate (e.g., within fifteen (15) minutes) analyses are either monitored in the field or transported to the laboratory within proper holding times for analysis.

(iv). An implementation schedule specifying dates and actions.

c. WWTP Training Program. Columbia currently has a training program in place at the WWTP. Within twenty-four (24) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval an

updated WWTP Training Program. Columbia shall update the Program by evaluating the personnel, tasks, equipment, and facilities associated with the operation and maintenance of the Columbia Metro WWTP. The updated Program shall include the following:

(i). WWTP Maintenance Training Program. A training program to address the methods, processes, procedures, and techniques required to perform the duties and tasks necessary for the maintenance of the Equipment. At minimum, the WWTP Maintenance Training Program shall be updated to include:

(A) Training to be provided to maintenance supervisors and personnel regarding the MMS in Paragraph 11.a. above;

(B) Schedules for the training of maintenance supervisors and personnel; and

(C) A system for tracking the training activities described in (A) and (B) above.

(ii). WWTP Operations Training Program. Columbia shall provide training to address the methods, processes, procedures, and techniques required to perform the duties and tasks necessary for the proper operation of the Equipment. At minimum, the WWTP Operations Training Program shall be updated to include:

(A) Training for operations supervisors and personnel regarding the use of the Operations Program in Paragraph 11.b. above;

(B) Training that ensures operations personnel are

knowledgeable about the Standard Operating Procedures and how to implement each task of the Standard Operating Procedures assigned to them or their subordinates efficiently and effectively on a day-to-day basis;

(C) Training that ensures all operations personnel are knowledgeable about the Contingency Operating Procedures and how to respond efficiently and effectively to atypical operational situations; and

(D) A system for tracking the training activities described in (A) through (C) above; and

(iii). An implementation schedule specifying dates and actions.

12. Management, Operations and Maintenance (“MOM”) Programs. Columbia shall develop and implement the specific MOM Programs set forth below and ensure that each MOM Program has a written, defined purpose; a written, defined goal; is documented in writing with specific detail as required herein; is implemented by trained personnel; has established performance measures; and has written procedures for periodic review.

a. Sewer Overflow Response Program. Columbia has developed and maintains a Sewer Overflow Response Plan (“SORP”), a copy of which is attached hereto as Appendix D. Columbia shall continue to implement its SORP, as may be revised by Columbia from time to time, during the term of this Consent Decree.

b. Contingency and Emergency Response Plan. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall develop in consultation with DHEC and submit to EPA and DHEC for review, comment, and approval a Contingency and

Emergency Response Plan (“CERP”). The CERP shall address both routine and catastrophic emergencies. Routine emergencies include such situations as overflowing manholes, line breaks, localized electrical failure and Pump Station outages. Catastrophic emergencies include floods, tornados, earthquakes or other natural events, serious chemical spills and widespread electrical failure. The CERP shall address areas of vulnerability and determine the effect of such a failure to operations, equipment and public safety and health based upon such factors as topography, weather, sewer system size, and other site-specific factors. The CERP shall include standard forms. The CERP shall have the following components:

(i). WWTP. The WWTP component of the CERP shall establish standard operating procedures for use in emergency situations, including changes in process controls.

(ii). WCTS. The WCTS component of the CERP shall include the SORP; the evaluation of, and acquisition plan for, additional Pump Station standby power and emergency equipment needs; and the written standard operating procedures for use in specific anticipated emergency activities, which include identification of the specific actions which staff should take and the instructions for operating equipment and systems. At a minimum, the standard operating procedures shall: identify criteria for initiating and ceasing the anticipated activities; identify the appropriate service/repair equipment and sources for that equipment; and describe the emergency planning for, and emergency use of, the following: stand-by power (e.g., generators or dual power feeds), portable pumps, maintenance equipment (e.g., vacuum truck, jet washing truck and/or combination truck), and each Pump Station.

(iii). Public Notification of Emergencies. In addition to the reporting

requirements set forth in Section IX (Reporting Requirements), Columbia shall establish, in coordination with DHEC:

(A) criteria to be used as the basis for immediately notifying the public and other impacted entities, such as users with a downstream water intake, of an emergency situation caused by an SSO, diversion, Bypass, or effluent limit violation;

(B) a list identifying, by name, phone number and pager number, all Columbia staff who are responsible for notifying the public;

(C) a list identifying, by name and phone number, all public contacts, including local media outlets, who must be contacted during an emergency situation;

(D) a list identifying Columbia staff who are authorized to make public statements during emergency situations; and

(E) pre-scripted news releases for various types of emergency situations.

(iv). Notification of Regulatory Authorities. In addition to the notification requirements set forth in the NPDES Permit, and the reporting requirements set forth in Section IX (Reporting Requirements), Columbia shall establish, in coordination with DHEC:

(A) criteria to be used as the basis for immediately notifying DHEC of any emergency situation caused by an SSO, diversion, Bypass, or effluent limit violation; (B) a list identifying, by name, phone number and pager number, all Columbia staff who are responsible for notifying DHEC;

(C) a list identifying, by name and phone number, all officials who must be contacted; and (D) standard reporting forms.

(v). An implementation schedule specifying dates and actions.

c. WCTS Training Program. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a WCTS Training Program. Columbia shall develop the Program by evaluating the personnel, tasks, equipment, and facilities associated with the operation and maintenance of Columbia's WCTS. The Program shall include, and Columbia shall implement:

(i). General Training. Columbia shall provide general training to address tasks undertaken by Columbia's wastewater personnel. General training would include, for example, employee orientations, training in the basic principles of wastewater collection and transmission, and training in the rules and regulations affecting Columbia's Wastewater Maintenance Division. The general training component of the Program shall provide the content of the initial training, and the frequency and content of the refresher training, to be required for all personnel responsible for management, operations, or maintenance of Columbia's WCTS.

(ii). Position Specific Training. Columbia shall provide training for tasks undertaken by Columbia's wastewater personnel to address the methods, processes, procedures, and techniques required to perform the duties and tasks necessary for the proper operation and maintenance of the collection and transmission system. Collection system training would include, as appropriate, training in equipment operation, pipe installation/replacement, pipe cleaning, pipe inspection, and reading as-built drawings. Transmission system training would include, as appropriate, training in equipment operation, pump/ejector inspection, pump/ejector maintenance, and pump/ejector repair. Columbia's collection system training and transmission system training program shall include:

(A) identification of the related tasks, equipment, and facilities;

(B) description of the technical knowledge necessary to properly conduct the individual tasks and properly operate the individual equipment and facilities;

(C) description of the underlying purposes and technical reasons for conducting the individual tasks or operating the individual equipment and facilities;

(D) standard procedures which personnel shall follow when conducting the individual tasks or operating the individual equipment and facilities;

(E) the content of the initial training, and the frequency and content of the refresher training, to be required for personnel conducting the individual tasks, or operating the individual equipment and facilities; and

(F) training designed to provide trainees with a thorough understanding of the individual procedures, underlying technical reasons, and underlying purposes associated with the individual tasks they may conduct, or the specific equipment and facilities they may operate, and to provide this in a consistent manner to all trainees.

(iii). Tracking. The Training Program shall include a description of the common data management system to be used for tracking personnel participation in, and completion of, the initial general training, collection system training, and/or transmission system training, and the corresponding refresher training.

(iv). Implementation Schedule. The Training Program shall include an

implementation schedule specifying dates and actions.

d. Information Management System Program. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval an Information Management System (IMS) Program. The IMS Program shall include, but may not be limited to the following: a description of what information is entered into the system, how it is entered and by what means it is recorded; types of work reports prepared and submitted, including examples; a description of the management reports generated from the input data (i.e. work reports), including examples; standard forms used by both field personnel and management for the program, where applicable; a detailed description of how the records are maintained; if computer software is utilized, a description of the software used with cited references for software training and procedures for utilizing the software; and a procedure for periodic quality assurance/quality control checks of the system. The Program shall include the following sub-programs:

(i). Management IMS. The IMS Program shall include a Management IMS to provide WCTS managers guidance and instruction to adequately evaluate operations, maintenance, customer service, and system rehabilitation activities so that overall system performance can be determined and WCTS planning can be conducted.

(ii). Operations IMS. The IMS Program shall include an Operations IMS to provide managers and field supervisors the guidance to adequately track scheduled operational activities and to enhance operational performance. The system shall utilize operating reports and standard operation forms used by field personnel and provide for field supervisor

review. While the Operations IMS need not be computer based, it shall be capable of feeding information into the Management IMS.

(iii). Maintenance IMS. The IMS Program shall include a Maintenance IMS to provide managers and field supervisors the guidance to adequately track scheduled maintenance activities and to enhance maintenance performance. The system shall utilize maintenance reports and standard maintenance forms used by field personnel and for field supervisor review. While the Maintenance IMS need not be computer based, it shall be capable of feeding information into the Management IMS.

(iv). Complaint Tracking IMS. The IMS Program shall include a Complaint Tracking IMS to provide managers the guidance to adequately assess and manage complaint information. The system shall utilize standard complaint forms used by personnel and provide for supervisor review. While the Complaint Tracking IMS need not be computer based, it shall be capable of feeding information into the Management Programs IMS.

(v). An implementation schedule specifying dates and actions.

e. Capacity Assurance Program. Within one hundred and eighty (180) Days after EPA approval of the Hydraulic Model Report, Columbia shall submit to EPA and DHEC for review, comment, and approval a Capacity Assurance Program (“CAP”). The CAP shall identify each Sewerbasin with insufficient capacity under peak wet weather, average conditions, or both. It shall also analyze all portions of the WCTS that have experienced SSOs either due to, or exacerbated by, an excessive hydraulic contribution. The CAP shall assess peak flow capacity of all major Sewer System components for existing and proposed flows. At minimum, the CAP

shall include, and Columbia shall implement, the requirements set forth in Paragraphs 12.e.(i) through 12.e.(iii), below.

(i). Adequate Capacity Certifications. Except as otherwise provided in Paragraphs 12.e.(ii)(F) through 12.e.(ii)(I), below, after sixty (60) Days following EPA's approval of the CAP, Columbia shall authorize a new sewer service connection, or additional flow from an existing sewer service connection, only after it certifies that the analysis procedures contained in the approved CAP have been used and that Columbia has determined, based on those procedures, that there is Adequate Treatment Capacity, Adequate Transmission Capacity and Adequate Collection Capacity as set forth below. Notwithstanding the foregoing, the standards contained in the Capacity Assurance Program shall not be construed as standards for the ultimate design or rehabilitation of Columbia's WCTS.

(A) Treatment Capacity. For the purposes of Columbia's Capacity Assurance Program, "Adequate Treatment Capacity" shall exist when the WWTP would not be in "non-compliance" for quarterly reporting as defined in 40 C.F.R. § 123.45, Appendix A, if the WWTP were to receive the flow from the new connection or the increased flow from an existing sewer service connection(s), combined with the flow predicted to occur from all other authorized sewer service connections (including those which have not begun to discharge into the WCTS).

(B) Transmission Capacity. For the purposes of Columbia's Capacity Assurance Program, "Adequate Transmission Capacity" shall exist when each Pump Station through which the proposed additional flow would pass has the capacity to transmit,

with its largest pump out of service, the existing one (1) hour peak flow passing through such Pump Station, plus the additional one (1) hour peak flow predicted to occur from the new connection(s) or from the increased flow from an existing sewer service connection(s), plus the additional one (1) hour peak flow predicted to pass through such Pump Station from all other authorized sewer service connections which have not begun to discharge into the WCTS.

(C) Collection Capacity. For the purposes of Columbia's Capacity Assurance Program, "Adequate Collection Capacity" shall exist when each Gravity Sewer Line through which the proposed additional flow would pass has the capacity, without causing a Surcharge Condition, to carry the existing one (1) hour peak flow passing through such Gravity Sewer Line, plus the additional one (1) hour peak flow predicted to occur from the new connection(s) or from the increased flow from an existing sewer service connection(s), plus the additional one (1) hour peak flow predicted to pass through such Gravity Sewer Line from all other authorized sewer service connections which have not begun to discharge into the WCTS.

(D) "One (1) Hour Peak Flow." For purposes of Columbia's Capacity Assurance Program, the term "one (1) hour peak flow" shall mean the greatest flow in a sewer averaged over a sixty (60) minute period at a specific location expected to occur as a result of a representative 2 year-24 hour storm event.

(E) "Surcharge Condition." Except as otherwise set forth in Paragraph 12(e)(i)(F), below, the term "Surcharge Condition" shall mean:

(1) For two years from the date of EPA's approval of the CAP, the condition that exists when the supply of wastewater resulting from the one (1) hour peak flow is greater than

the capacity of the pipes to carry it and the surface of the wastewater rises to an elevation within two (2) feet of the rim of any manhole, and the gravity sewer pipe is under pressure or head, rather than at atmospheric pressure. Columbia agrees to not construct additional manholes and to not increase the elevation of existing manholes except to ensure that the elevation is no higher than five (5) feet above the Base Flood elevation as that term is defined at 44 C.F.R. § 59.1.

(2) After two years from the date of EPA's approval of the CAP, the condition that exists when the wastewater resulting from the one (1) hour peak flow is greater than the capacity of the pipes to carry it and the surface of the wastewater in manholes rises to an elevation greater than twenty-four (24) inches above the top of the pipe or within two (2) feet of the rim of the manhole, and the gravity sewer pipe is under pressure or head, rather than at atmospheric pressure, unless Columbia has, pursuant to Paragraph 12.e.(ii)(A), identified that pipe segment and manhole as designed to operate in that condition, in which case the identified level of surcharge for that pipe segment and manhole will be used to define a Surcharge Condition.

(F) Exception to Definition of Surcharge Condition. Notwithstanding the definition of "Surcharge Condition" in Paragraph 12(e)(i)(E), any rise in elevation above the top of the pipe shall be considered a Surcharge Condition if the manhole has experienced a capacity-related wet weather SSO during the previous twelve (12) month period (excluding those SSOs caused by severe natural conditions such as hurricanes, tornados, widespread flooding, earthquakes, or rainfall events greater than a representative 2 year-24 hour storm event), unless Columbia can certify that the cause of the SSO has been corrected through improvements to the WCTS.

(ii). Capacity Assurance Program Content

(A) The CAP shall identify the technical information, methodology and analytical techniques to be used by Columbia to determine Adequate Treatment Capacity, Adequate Transmission Capacity and Adequate Collection Capacity. Protocols for evaluating adequate capacity shall include identification of modeling software, standard design flow rate rules of thumb regarding pipe roughness, manhole head losses, as-built drawing accuracy (distance and slope), and water use (gallons per capita per day); projected flow impact calculation techniques; and flow metering. Columbia may identify sewer line segments which have been specifically designed and constructed to operate under surcharge conditions (e.g., with welded or bolted joints) and identify the level of acceptable surcharge for those segments.

(B) The CAP shall identify the technical information, methodology and analytical techniques, including the model or software, by which Columbia will calculate the net (cumulative) increase or decrease in volume of wastewater introduced to the WCTS as a result of Columbia's authorization of new service connections and increases in flows from existing connections and the completion of specific projects that add or restore capacity to the WCTS or WWTPs ("Capacity Enhancing Projects"), specific projects that reduce peak flow through removal of I/I ("I/I Projects"), and permanent removal of sewer connections ("Removal of Connections").

(C) The CAP shall identify the process by which Columbia will integrate its certification of Adequate Treatment Capacity, Adequate Transmission Capacity and

Adequate Collection Capacity into the authorization of new sewer service connections and increases in flow from existing connections.

(D) The CAP will describe the CAP Information Management System to be used to track the accumulation of available capacity, from completion of Capacity Enhancing Projects, I/I Projects and Removal of Connections, and the reduction in capacity from authorized increases in flow from new and existing sewer service connections.

(E) Capacity Certifications. Except as otherwise provided in Paragraphs 12(e)(ii)(F), (G), (H), and (I), below, after sixty (60) Days of EPA's approval of the CAP, Columbia may authorize new sewer service connections, or additional flow from existing sewer service connections, only after it certifies that the analysis procedures contained in the approved CAP have been used and that Columbia has determined, based on those procedures, that there is Adequate Treatment Capacity, Adequate Transmission Capacity and Adequate Collection Capacity. All certifications pursuant to this Paragraph 12.e.(ii)(E) shall be made by a registered professional engineer (P.E.) in the State of South Carolina and shall be approved by a responsible official of Columbia as defined by 40 C.F.R. § 122.22(b). Columbia shall maintain Capacity Assurance Program certifications, and all data on which the certifications are based, in its offices for inspection by EPA and DHEC. EPA and DHEC may request, and Columbia shall provide, any and all documentation necessary to support any certification made by Columbia pursuant to the approved CAP, and make available, to the extent possible, individuals providing such certifications to meet with EPA and DHEC.

(F) Minor Sewer Connections. The CAP may include

provisions for authorization of Minor Sewer Connections. For the purposes of the CAP, a “Minor Sewer Connection” is a connection with an average flow not to exceed four thousand (4,000) gallons per day. For minor sewer service connections, Columbia may elect to perform a quarterly capacity analysis for each Sewerbasin or Subbasin by certifying that the Sewerbasin or Subbasin has Adequate Treatment Capacity, Adequate Transmission Capacity, and Adequate Collection Capacity to carry existing flows and the additional flows generated by all such minor sewer service connections projected to be approved since the last capacity analysis. For any Sewerbasin or Subbasin which can be so certified, Columbia may approve these projected minor sewer service connections without performing individual capacity analysis for each connection.

(G) Capacity for Treatment, Transmission, and Collection in Lieu of Certification. Columbia may authorize a new sewer service connection, or additional flow from an existing sewer service connection, even if it cannot satisfy the requirements of Paragraph 12.e.(ii)(E), above, provided Columbia certifies that all of the following provisions, where applicable, are satisfied:

- (1) Columbia is in substantial compliance with this Consent Decree.
- (2) The sewer lines which will convey the proposed additional flow from new or existing sewer service connections have not experienced dry weather SSOs due to inadequate capacity within the previous twelve (12) months; or, in the alternative, the causes of any dry weather SSOs due to inadequate capacity have been eliminated.
- (3) Columbia has identified the sewer line segment(s), Pump Station(s) and/or wastewater treatment systems that do not meet the conditions for certification

of Adequate Treatment Capacity, Adequate Collection Capacity and/or Adequate Transmission Capacity.

(4) Columbia shall have completed, after June 10, 2010, and prior to the time the proposed additional flow from new or existing sewer connections is introduced into the WCTS, specific Capacity Enhancing Projects, I/I Projects and/or Removal of Connections which will add sewer capacity or reduce peak flows to the identified sewer line segment(s), lift station(s), and/or wastewater treatment system(s) in accordance with the requirements set forth below:

i. Where Columbia has undertaken specific Capacity Enhancing Projects that provide for additional off-line storage and/or specific Removal of Connections to satisfy the requirements of this Paragraph 12.e.(ii)(G)(4), the estimated added capacity resulting from such projects must be equal to or greater than the estimated amount of any proposed additional flow.

ii. Where Columbia has undertaken specific Capacity Enhancing Projects, other than those that provide for additional off-line storage, to satisfy the requirements of this Paragraph 12.e.(ii)(G)(4), the estimated reduction in peak flows or added capacity resulting from such projects must exceed the estimated amount of any proposed additional flow by a factor of 2:1.

iii. Where Columbia has undertaken specific I/I Projects to satisfy the requirements of this Paragraph 12.e.(ii)(G)(4), the estimated reduction in peak flows or added capacity resulting from such projects must exceed the estimated amount of any proposed additional flow by a factor of 3:1.

(5) Commencing one year after EPA approval of the CAP and annually thereafter, Columbia has performed a review of specific Capacity Enhancing Projects and I/I Projects undertaken to determine if actual added capacity and peak flow reductions are in line with what Columbia originally estimated for such projects; and Columbia has used the results of this review to adjust future estimates as necessary.

(6) Any new sewer service connection or increase in flow to an existing connection authorized prior to the completion of a necessary added capacity or peak flow reduction project as set forth above shall be conditioned upon completion of such project prior to the time that the new sewer service connection or flow increase is introduced into the WCTS.

(H) Essential Services. The CAP may contain provisions for Columbia to authorize a new sewer service connection, or additional flow from an existing sewer service connection, in cases where there is not Adequate Transmission Capacity, Adequate Collection Capacity and/or Adequate Treatment Capacity for health care facilities, public safety facilities and public schools and, subject to EPA review and approval, for government facilities; and in those cases where a pollution or sanitary nuisance condition exists, as determined by the Richland or Lexington County Health Department, as the result of a discharge of untreated wastewater from an on-site septic tank. All such new service connections, or additions to flow from an existing connection, shall be tracked in the CAP Information Management System.

(I) Existing Illicit Connections. The CAP may contain provisions for Columbia to authorize a new sewer service connection, or additional flow from an existing sewer service connection in cases where there is not Adequate Transmission Capacity and/or Adequate Collection Capacity and/or Adequate Treatment Capacity for any illicit connections or discharge of wastewater to the stormwater system. All such new service connections or additions to flow from an existing connection created after the Date of Entry that result from the elimination of such illicit connections or discharges shall be tracked in the CAP Information Management System.

(iii). Capacity Procedures Prior to CAP Approval. Within ninety (90) Days after the Date of Entry of this Consent Decree, Columbia shall establish a list of all authorized new sewer service connections or increases in flow from existing service connections, which flows have not yet been introduced into the WCTS. The following information shall be recorded for each such authorized connection: street address, estimated average daily flow, estimated peak flow, Sewerbasin or Subbasin, date authorized, and estimated Calendar Quarter when the additional flow from the connection will begin. Columbia shall update and maintain this list as necessary until full implementation of the CAP, as approved by EPA. In addition, upon execution of this Consent Decree and until EPA approves the CAP as required by Paragraph 12.e., Columbia agrees to continue to implement its current capacity program.

f. Sewer Mapping Program. Columbia currently has a sewer mapping program. Within sixty (60) days after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a Sewer Mapping Program to update its Sewer System maps and update the capabilities and procedures for utilization of Columbia's existing Geographic Information System ("GIS") map of Columbia's WCTS. At minimum, the Sewer Mapping Program shall:

- (i). enable Columbia to produce maps of the WCTS using GIS technology;
- (ii). be designed in such a manner so as to allow electronic integration with Columbia's computer-based collection system model and computer-based operations and maintenance information management system;

(iii). enable Columbia to produce maps showing the location of all manholes, Gravity Sewer Lines, Pump Stations, Force Mains, valves, inverted siphons and the WWTP;

(iv). enable Columbia to produce maps capable of integrating electronically the locations of sewer service connections on lines that are televised;

(v). enable Columbia to produce maps that include attribute data for Columbia's WCTS including, but not limited to, size, material, estimated age or age range, slope, invert elevation, and rim elevation;

(vi). enable Columbia to produce maps that delineate the spatial boundaries of all Sewerbasins and Subbasins;

(vii). enable Columbia to produce maps that can integrate electronically available maps that show the location of surface streets and street addresses, permitted FOG customers, surface water bodies and political boundaries;

(viii). enable Columbia to produce maps in a manner that will allow use by all Sewer System operation and maintenance crew leaders in the field;

(ix). allow entry and mapping of work orders to identify and track problems geographically such as stoppages, service interruptions, and SSOs, and to assist in the planning and scheduling of maintenance;

(x). include written standard operating procedures for use of the program, the acquisition and entry of updated mapping data for new assets or changes to existing

assets, and updates to system software;

(xi). include locations of each permitted FOG establishment; and

(xii). include a schedule for the completion of the electronic mapping of each Sewerbasin in Columbia's WCTS.

g. Fats, Oil, and Grease ("FOG") Management Program. Columbia has developed and maintains a FOG Management Program, a copy of which is attached hereto as Appendix G. Columbia will continue to implement its FOG Management Program, as revised by Columbia from time to time, during the term of this Consent Decree.

h. Transmission System Operations and Maintenance Program.

Within one (1) year after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a Transmission System Operations and Maintenance Program ("TSOMP"). The goal of the TSOMP is to facilitate proper operation and maintenance activities associated with the Pump Stations and Force Mains within the WCTS. At minimum, the TSOMP shall include, and Columbia shall implement, the requirements set forth in Paragraph 12.h.(i). through (x). below.

(i). Means and modes of communication between Pump Stations, field crews, and supervising staff.

(ii). Technical specifications of each Pump Station within the WCTS.

(iii). Columbia currently has a Pump Station monitoring system which continuously monitors, reports, and transmits information for each Pump Station. The TSOMP

shall provide that Columbia will continue to operate and maintain Supervisory Control and Data Acquisition (“SCADA”) systems at all Pump Stations with a rated capacity of greater than 1,000 gallons per minute as identified on Appendix H, attached hereto and incorporated herein by reference. In addition, with the goal of eliminating future SSOs due to Pump Station failure(s), Columbia shall evaluate the need for installation of SCADA systems at all other Pump Stations, and install them where necessary in accordance with the approved TSOMP implementation schedule required under paragraph 12(h)(x) .

(iv). Written preventive operations and maintenance schedules and procedures for the following routine activities:

(A) Service and calibration of instrumentation such as flow meters, liquid level sensors, alarm systems, elapsed time meters, and remote monitoring equipment.

(B) Inspection and service for air release valves.

(C) Predictive (non-physical) and/or physical inspection and service for all Pump Stations including, but not limited to:

(1) reading, recording and maintaining records of information from the elapsed time meters and pump start counters;

(2) observing and documenting wet well conditions, including grease and/or debris accumulation;

(3) checking and re-setting, as necessary to improve system

performance, wet well pumping points (e.g. floats);

- (4) checking, recording and maintaining records of system pressure(s);
- (5) checking SCADA and/or alarm components;
- (6) checking stand-by power sources; and
- (7) identifying maintenance needs and any emergency planning needs.

(D) Engineering evaluation of Force Mains and Pump Stations for potential sulfide and corrosion control needs. The TSOMP shall require, and Columbia shall generate, a summary report of findings with the sulfide and corrosion control method(s) and the schedule for implementation of selected measures, where applicable.

(E) Inspection of Force Main easements, including inspection of creek crossings, stream bank encroachment toward Force Mains, and easement accessibility (including the need to control vegetative growth or encroachment of man-made structures or activities that could threaten the integrity of the affected Force Mains). Inspections shall include written reports, and where appropriate, representative photographs or videos of appurtenances being inspected (Force Mains, creek crossings, etc.). The TSOMP shall require inspectors to promptly report any observed SSOs, and any evidence of SSOs which may have occurred since the last inspection, to their area supervisors and document the findings. Columbia shall report any observed SSO in accordance with the SORP and the NPDES Permit.

(F) A schedule for the maintenance of easements.

(G) Resource commitments such as staffing, contractual support and equipment.

(v). Data attributes for the Sewer Mapping Program allowing program data to be compared in Columbia's GIS system against other pertinent data such as the occurrence of SSOs, including repeat SSO locations, and permit violations.

(vi). An inventory management system that requires Columbia to maintain:

(A) Lists of critical equipment and critical spare parts.

(B) An inventory of the critical spare parts and critical equipment stored at Columbia's facilities, and a list of where the remaining critical spare parts and critical equipment not stored at Columbia's facilities may be obtained to allow repairs in a reasonable amount of time; and

(C) Written procedures for updating the critical spare parts and equipment inventories in the inventory management system.

(vii). A common information system that Columbia will use to track implementation of the TSOMP, track maintenance activities (including Pump Station equipment histories), and track management, operation, and maintenance performance indicators.

(viii). The key performance indicators ("KPIs") Columbia will track to measure performance of the WCTS using the information system referenced in Paragraph 12.h.(vii) above. These KPIs shall include, but are not limited to, the number of SSOs related to

Force Mains per mile of Force Main and/or the number of SSOs related to Pump Stations per number of Pump Stations; and maintenance activities tracked by type (corrective, preventive, and emergency).

(ix). Reports which list equipment problems and the status of work orders generated during the prior month.

(x). An implementation schedule specifying dates and actions.

i. Gravity Sewer System Operation and Maintenance Program. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval, a Gravity Sewer System Operation and Maintenance Program (“GSOMP”) with the goal of eliminating future SSOs, particularly those caused by FOG, roots and/or debris obstructions. At a minimum, the GSOMP Program shall include, and Columbia shall implement, the requirements set forth in Paragraph 12.i.(i) through (xii) below.

(i). Written procedures for inspection and maintenance of Columbia’s Gravity Sewer systems (i.e., Gravity Sewer Lines, manholes, inverted siphons, etc.).

(ii). Written preventive operations and maintenance schedules and procedures including, but not be limited to, the following routine activities:

(A) Inspection and maintenance of all Gravity Sewers, manholes and inverted siphons.

(B) Observing and documenting Gravity Sewer, manhole and

inverted siphon conditions, including grease, roots and/or debris accumulation.

(C) Identifying and documenting maintenance needs and any emergency planning needs.

(D) Scheduling preventive maintenance work/cleaning on a WCTS-wide basis. At a minimum, Columbia shall prioritize, inspect, and, if necessary, clean its Gravity Sewers, manholes and inverted siphons on a regular basis (i.e. such that, while priority portions of the WCTS may be inspected with more frequency, the entire Gravity Sewer system is inspected, and cleaned where necessary, at a frequency designed to prevent future SSOs).

(iii). Engineering evaluation of potential sulfide and corrosion control needs. The GSOMP shall require, and Columbia shall generate, a summary report of findings with the sulfide and corrosion control methods and the schedule for implementation of selected measures, where applicable.

(iv). Inspection of Gravity Sewer, manhole, and inverted siphon easements, including inspection of: creek crossings, stream bank encroachment toward Gravity Sewers, manholes and inverted siphons, and easement accessibility (including the need to control vegetative growth or encroachment of man-made structures or activities that could threaten the integrity of the affected Gravity Sewer, manholes or inverted siphon). Inspections shall include written reports, and where appropriate, representative photographs or videos of appurtenances being inspected (Gravity Sewers, manholes, inverted siphons, creek crossings, etc.). The GSOMP shall require inspectors to promptly report any observed SSOs to their area supervisors and to record any evidence of SSOs which may have occurred since the last inspection.

Columbia shall report any observed SSO in accordance with the SORP and the NPDES Permit.

(v). A schedule for the maintenance of easements.

(vi). A description of resource commitments such as staffing, contractual support and equipment.

(vii). Data attributes for the Sewer Mapping Program allowing program data to be compared in Columbia's GIS system against other pertinent data such as the occurrence of SSOs, including repeat SSO locations, and permit violations.

(viii). An inventory management system that requires Columbia to maintain:

(A) Lists of critical equipment and critical spare parts;

(B) An inventory of the critical spare parts and critical equipment stored at Columbia's facilities, and a list of where the remaining critical spare parts and critical equipment not stored at Columbia's facilities may be obtained to allow repairs in a reasonable amount of time; and

(C) Written procedures for updating the critical spare parts and equipment inventories in the inventory management system.

(ix). A common information system that Columbia will use to track implementation of the GSOMP, track maintenance activities, and track management, operation, and maintenance performance indicators.

(x). The key performance indicators (“KPIs”) Columbia will track to measure performance of the WCTS using the information system referenced in Paragraph 12.i.(ix). above. These KPIs shall include, but are not limited to:

(A) The linear footage of Gravity Sewer inspections, the linear footage of Gravity Sewers cleaned, the number of manholes inspected, the number of manholes cleaned/maintained, the number of inverted siphons inspected, the number of inverted siphons cleaned/maintained and the number of SSOs per mile of Gravity Sewer; and

(B) Maintenance activity tracked by type (corrective, preventive, and emergency).

(xi). Reports which list equipment problems and the status of work orders generated during the prior month.

(xii). An implementation schedule specifying dates and actions.

j. Financial Analysis Program. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a Financial Analysis Program which establishes and tracks the sufficiency of funds for operations and maintenance, capital projects financing, and debt service coverage associated with the WCTS. At minimum, the Financial Analysis Program shall include, and Columbia shall implement, the requirements set forth in Paragraph 12.j.(i) through (v).

(i). Cost Analysis. Protocols to regularly analyze and project future utility management, operations, and maintenance costs integral to proper management, operation,

and maintenance of the WCTS and WWTP. The cost analyses should include, at a minimum: capital infrastructure improvements; staffing levels; replacement of equipment and materials integral to the proper management, operation and maintenance of the WCTS and WWTP; outsourced activities; and services provided by organizational departments or agencies outside Columbia's Department of Utilities and Engineering.

(ii). Capital Improvement Financing Program. Protocols to analyze, project, plan, and finance capital improvement needs established through engineering studies; WCTS condition assessments; historical WCTS management, operations, and maintenance cost data; and sound sewer infrastructure asset management programs. Capital improvement financing should be planned using a five (5) year planning horizon with annual updates.

(iii). Budget and Customer Rate Setting Analysis. The Financial Analysis Program shall project the annual utility budget and customer rates periodically. The program should predict the budget and funding provided by customer rates that will meet the cost and financing needs for the management, operation, and maintenance of the WCTS as identified pursuant to the procedures set forth in Subparagraph j.(i) through (ii) above.

(iv). The ability to directly track and report operation and maintenance costs by the type of activity (corrective, preventative, and emergency) and capital improvement costs.

(v). An implementation schedule specifying dates and actions.

13. Satellite Sewer System Agreements. Within one (1) year after the Date of Entry

of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a proposed form of Satellite Sewer System Agreement for new or the renewal of existing agreements that cover the collection, conveyance and treatment of sewage by Columbia from satellite sewer systems as that term is defined in South Carolina Regulation 61-9.122.2.

The Parties acknowledge that DHEC continues to be responsible in all respects for enforcing the requirements of any state operating permits for satellite sewer systems. Columbia shall not be responsible for enforcement of any such permits or for management or oversight of any such satellite sewer systems.

a. At minimum, the form of Satellite Sewer System Agreement shall include the following:

(i). Requirements on the satellite sewer system to properly manage, operate and maintain its sewage collection and conveyance systems so as to minimize peak flows into Columbia's Sewer System by excluding, to the maximum practicable extent, the intrusion of surface and ground water and other extraneous flows.

(ii). Requirements on the satellite sewer system to ensure compliance with the legal authorities and procedures required in 40 CFR Section 403.8(f) with regard to equivalent control, monitoring and enforcement of non-domestic dischargers into Columbia's Sewer System from satellite sewer systems. Columbia should consider the "Multijurisdictional Pretreatment Programs Guidance Manual" published by EPA (833-B-94-005, June 1994) when developing these requirements.

(iii). Provisions addressing the term or life of these agreements;

mechanisms for appropriate modification of the agreements; and mechanisms for enforcement of the agreements such as provisions permitting termination of the agreement and physical disconnection from Columbia's Sewer System within a reasonable time not exceeding two (2) years upon the failure of the satellite sewer system to comply with its management, operations and maintenance obligations.

b. When any of Columbia's currently existing agreements expire or terminate, Columbia may, but shall not be required to, renew any such agreement or enter into a new agreement covering the collection, conveyance and treatment of sewage from such satellite sewer systems. In the event Columbia does renew such an agreement or enters into any such new agreement, each agreement shall be consistent with the form of Satellite Sewer System Agreement. If the owner/operator of a satellite sewer system refuses to sign a Satellite Sewer System Agreement that is consistent with the approved form of Satellite Sewer System Agreement, Columbia will notify EPA.

14. Continuing Sewer Assessment Program ("CSAP") for the WCTS

a. Within six (6) months after the Date of EPA and DHEC approval of the Sewer Mapping Program required under Paragraph 12.f. of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a Continuing Sewer Assessment Program ("CSAP") that provides for an analysis of Columbia's WCTS infrastructure. The approved CSAP shall be implemented by Columbia in accordance with the schedules contained therein, and in accordance with the deadlines established in this Paragraph. The CSAP shall establish procedures for setting priorities and schedules for undertaking the continual assessment

of the WCTS using, as appropriate, the methods described in Paragraphs 14.b. (i) through (ix), below, and other appropriate methods identified by Columbia. Columbia shall develop these priorities and schedules taking into consideration factors including, but not limited to: age and type of materials; the nature and extent of customer complaints; flow monitoring, including flow isolation studies; locations and causes of SSOs; any remediation work already ongoing; field crew work orders; any preliminary sewer assessments, such as midnight flow monitoring; and any other relevant information. Where Columbia's implementation of the CSAP results in a determination that a Private Lateral is a source of I/I to the WCTS or is a source of a release, Columbia shall notify the property owner of its determination but shall not be responsible for repairs to the Private Lateral. For purposes of being able to develop the Infrastructure Rehabilitation Report set forth in Paragraph 16 below, the schedules set forth in the CSAP shall provide for the major components of the WCTS (to include all pipes 15 inches in diameter or larger and their appurtenances, such as manholes and Pump Stations) to be assessed at least once by no later than 24 months from the date of EPA/DHEC approval of the CSAP. The schedules set forth in the CSAP shall also provide for the remainder of the entire WCTS to be assessed at least once by no later than 60 months from the date of EPA/DHEC approval of the CSAP.

b. At a minimum, the CSAP shall include, and Columbia shall have the ability to implement, the assessment methods set forth in Paragraphs 14.b.(i) through (ix), below. When implementing the CSAP to assess specific portions of the WCTS, Columbia shall use methods that are appropriate for the portion of the WCTS being assessed.

(i) Physical Condition. Standard Procedures for evaluating the physical condition of the WCTS, including, but not limited to, consideration of age, construction

material and durability.

(ii) Dyed Water Flooding. Standard procedures for conducting dyed water testing to locate sources of I/I to the WCTS ("Dyed Water Flooding"). The Dyed Water Flooding component shall include standard forms for recording information derived from dyed water testing.

(iii) Corrosion Defect Identification. Standard procedures for inspecting and identifying sewer infrastructure that is either corroded or at risk of corrosion ("Corrosion Defect Identification"). This Corrosion Defect Identification component shall include a system for prioritizing repair of corrosion defects, corrosion identification forms, and procedures for a corrosion defect analysis.

(iv) Routine Manhole Inspection. Standard procedures and frequencies for routine inspection of manholes within the WCTS ("Routine Manhole Inspection"). This Routine Manhole Inspection component shall include manhole inspection forms and procedures for a manhole defect analysis, and may provide for less frequent inspection of newer manholes.

(v) Flow Monitoring. Standard procedures for routine flow monitoring during dry and wet weather to support engineering analyses related to WCTS capacity and peak flow studies ("Flow Monitoring"). Dry weather monitoring shall be carried out so as to allow the characterization of base flows and I/I rates. Wet weather monitoring shall be conducted periodically during events of sufficient duration and intensity that cause significant I/I into the WCTS. This Flow Monitoring component shall identify areas susceptible to I/I into the WCTS. This Flow Monitoring Program shall also establish, and Columbia shall implement,

a process for determining the number and locations of permanent and temporary flow meters; a program for sewer cleaning associated with flow monitoring; and a procedure for adequate rainfall measurement. The Flow Monitoring Program will contain an initial determination of the number and location of permanent and temporary flow meters, with a map showing such locations.

(vi) Video Inspection. Standard procedures for routine use of closed circuit television (“CCTV”) and/or zoom camera video inspections to support sewer assessment activities, including procedures for video-assisted cleaning and a process for the retention and access of video data.

(vii) Gravity System Defect Analysis. Standard procedures for analysis of Gravity Sewer Line defects (“Gravity Sewer Line Defect Analysis”). This Gravity Sewer Line Defect Analysis component shall establish standard defect codes; defect identification procedures and guidelines; and a standardized process for cataloging Gravity Sewer Line defects.

(viii) Smoke Testing. Standard procedures for smoke testing of Gravity Sewer Lines to identify sources of I/I to the WCTS, including cross connections and other unauthorized connections (“Smoke Testing”). This Smoke Testing component shall include establishing and implementing smoke testing forms and procedures for smoke testing defect analysis.

(ix) Pump Station Performance and Adequacy. Standard procedures for the evaluation of Pump Station performance and Pump Station adequacy (“Pump Station Performance and Adequacy”), including:

(A) The use of pump run time meters; pump start counters; computation of Nominal Average Pump Operating Time ("NAPOT"); root cause failure analysis protocols; and appropriate remote sensing such as Supervisory Control and Data Acquisition ("SCADA").

(B) The evaluation of Pump Station capacity, as described in the "Pumping Systems" chapter of the most current version of WEF's Manual of Practice FD-4, "Design of Wastewater and Stormwater Pumping Stations."

(C) The evaluation of critical response time, defined as the time interval between activation of the high wet well level alarm and the first SSO, under peak flow conditions.

(D) The evaluation of Pump Station conditions, based upon both physical inspection and recent operating and mechanical failure history during at least the past five years; and

(E) The evaluation of Pump Station design and equipment, including redundancy of pumps and electrical power supply, and other equipment installed, based upon South Carolina Regulation 61-67 (wastewater construction standards). The evaluation of the ability of maintenance personnel to take corrective action within the critical response time calculated for each Pump Station.

c. Information and Management System. The CSAP shall include standard procedures for a CSAP Information Management System and performance goals for each

component of the CSAP set forth in Paragraphs 14.b. (i) through (ix), above.

15. Infrastructure Rehabilitation Program ("IR Program") for the WCTS. Within six (6) months after EPA approval of the CSAP, Columbia shall submit to EPA and DHEC for review, comment, and approval an Infrastructure Rehabilitation Program ("IR Program"). The IR Program shall describe policies and procedures for implementing rehabilitation measures to address I/I, structural issues in the WCTS and the other conditions causing SSOs, with the goal of eliminating future SSOs. The IR Program shall take into account all previous information Columbia has gathered, including any information gathered pursuant to the Work under this Consent Decree. For purposes of developing schedules under Paragraphs 15.a. through 15.e, the IR Program shall include procedures for Columbia to prioritize rehabilitation measures based upon relative likely human health and environmental impact risks, SSO frequencies, and SSO volumes. At minimum, the IR Program shall include the requirements set forth in Paragraphs 15.a. through 15.e. The IR Program may also provide for implementation of line and other small-scale repairs on a "find and fix" basis, where, if feasible, Columbia may implement rehabilitation measures at the time defects are identified.

a. Gravity Sewer Line Rehabilitation. For all Gravity Sewer Lines and related appurtenances, including city-owned laterals, that are identified as in need of rehabilitation under the CSAP, the IR Program shall include procedures for: setting Gravity Sewer Line rehabilitation priorities and schedules; maintaining an ongoing inventory of Gravity Sewer Line rehabilitation projects already performed, scheduled to be performed, and needing to be scheduled and performed, including identification of the rehabilitation techniques used on completed projects; and analyzing the effectiveness of completed rehabilitation projects.

b. Manhole Rehabilitation. For all manholes that are identified as in need of rehabilitation under the CSAP, the IR Program shall include procedures for: setting manhole rehabilitation priorities and schedules; maintaining an ongoing inventory of manhole rehabilitation projects already performed, scheduled to be performed, and needing to be scheduled and performed, including identification of the rehabilitation techniques used on completed projects; and analyzing the effectiveness of completed rehabilitation projects.

c. Pump Station Rehabilitation. For all Pump Stations that are identified as in need of rehabilitation under the CSAP, the IR Program shall include procedures for: setting Pump Station rehabilitation priorities and schedules; maintaining an ongoing inventory of Pump Station rehabilitation projects already performed, scheduled to be performed, and needing to be scheduled and performed, including identification of the rehabilitation techniques used on completed projects; and analyzing the effectiveness of completed rehabilitation projects.

d. Force Main Rehabilitation. For all Force Mains and related appurtenances that are identified as in need of rehabilitation under the CSAP, the IR Program shall include procedures for: setting Force Main rehabilitation priorities and schedules; maintaining an ongoing inventory of Force Main rehabilitation projects already performed, scheduled to be performed, and needing to be scheduled and performed, including identification of the rehabilitation techniques used on completed projects; and analyzing the effectiveness of completed rehabilitation projects.

e. Each component of the IR Program set forth in Paragraphs 15.a. through 15.d. above shall include standard procedures for an IR Program information management

system, standard procedures for inspecting and documenting the quality of new construction and rehabilitated work for warranty and other purposes, and procedures for analysis of the effectiveness of completed rehabilitation.

16. IR Report for the WCTS. Within six (6) months after Columbia has assessed the major components of the WCTS once pursuant to the CSAP, Columbia shall submit to EPA and DHEC for review, comment, and approval an IR Report setting forth a summary of the results of the CSAP of the major components of the WCTS and a description of Columbia's proposed rehabilitation projects, including rehabilitation projects currently underway. The summary of the results of the CSAP shall contain a thorough analysis of historical and current flow monitoring, inspection, rainfall and other data, including data collected during the CSAP.

a. Results of the CSAP. At minimum, the CSAP results summary portion of the IR Report shall include the components set forth in Paragraphs 16.a.i through 16.a.viii. below.

(i). A determination of existing flows for each Subbasin within the WCTS including average and peak daily dry weather flow.

(ii). A determination of the average dry weather Infiltration rate (in gpd/inch diameter-mile).

(iii). A determination of peak wet weather flow and peaking factors (the ratio of peak flow to average dry weather flow).

(iv). Identification of the portions of the WCTS experiencing levels of I/I that cause or contribute to SSOs.

(v). A summary of identified sources of I/I to the WCTS organized by Subbasins, or portions of Subbasins, that indicates the specific types of defects found, and the quantity of each defect type with a given National Association of Sewer System Contractors (NAASCO) defect rating. The summary shall also estimate the total I/I contributions to such Subbasins or portions of Subbasins.

(vi). A summary of flow monitoring activities, that include, at a minimum, a map showing the delineation of the Subbasin, the location and type of each flow meter, problems encountered and deviations from the CSAP, and a description of quality control and quality assurance activities, including the use of scattergraphs, to ensure accurate flow measurement.

(vii). A description of the methods used to estimate I/I, an identification of the locations where the methods were used, and an explanation of the assumptions, rainfall events, and other variables used in estimating I/I.

(viii). A summary of the status of Columbia's development of the hydraulic Model Report required under Paragraph 17.d. of this Consent Decree, including a description of the completed activities and the remaining tasks and activities to be carried out in development of the hydraulic Model Report, and the anticipated dates of completion of such remaining tasks and activities.

b. Rehabilitation of Infrastructure. In accordance with the IR Program, the IR Report shall identify all specific rehabilitation measures and projects, including those currently underway and those additional rehabilitation projects identified through the assessment of the major components of the WCTS pursuant to the CSAP, as needed to address I/I and other conditions causing SSOs. The IR Report will also state the quantity of I/I that Columbia estimates will be removed through each identified rehabilitation project, and describe the methods used to quantify the I/I projected to be removed, including an explanation of the variables used in estimating the I/I projected to be removed. The IR Report shall include a schedule for completion of all identified rehabilitation projects. Based on the results of the initial assessment of major components of the WCTS pursuant to the CSAP, the IR Report shall group the additional rehabilitation projects into three scheduling categories (“Group 1,” “Group 2,” and “Group 3”) according to priority of the projects. The rehabilitation projects in the IR Report shall be prioritized according to their ability to resolve the most serious problems related to capacity overflows and problems related to WCTS segments with the highest defect ratings, as determined by the CSAP’s initial assessment of major components of the entire WCTS. The schedule shall provide for completion of rehabilitation measures identified in the IR Report by the dates listed in Subparagraph b.(i) – (iii) below. Upon approval of the IR Report by EPA and DHEC, Columbia shall complete all rehabilitation projects identified in the IR Report in accordance with the schedule contained therein.

(i). Group 1 rehabilitation projects shall be completed no later than 3 years following EPA and DHEC approval of the IR Report;

(ii). Group 2 rehabilitation projects shall be completed no later than 5 years after EPA and DHEC approval of the IR Report;

(iii). Group 3 rehabilitation projects shall be completed no later than 7 years after EPA and DHEC approval of the IR Report.

c. Supplemental IR Report. Within six (6) months after Columbia has assessed the remainder of the entire WCTS pursuant to the CSAP, as required by Paragraph 14.a, Columbia shall submit to EPA and DHEC for review, comment, and approval a supplemental IR Report which shall update all portions of the IR Report to reflect additional information developed by Columbia through completion of the assessment of the remainder of the entire WCTS. The Supplemental IR Report shall include an updated description of remedial projects that have been completed, including line repairs and small scale repairs completed on a find and fix basis, and shall identify any additional rehabilitation projects identified through ongoing implementation of the CSAP, as needed to address I/I and other conditions causing SSOs. The Supplemental IR Report shall include a schedule for completion of any additional rehabilitation projects no later than five years after EPA/DHEC approval of the Supplemental IR Report. Upon approval of the Supplemental IR Report by EPA and DHEC, Columbia shall complete all additional rehabilitation projects identified in the Supplemental IR Report in accordance with the schedule contained therein.

17. Sewer System Hydraulic Model. Columbia shall develop and maintain a

calibrated hydraulic model of its Sewer System (“the Model”) to establish existing hydraulic conditions and plan for future capacity needs of the Sewer System. The Model shall be developed on a Subbasin basis concurrent with the CSAP schedule for the initial assessment of major components of the WCTS in Paragraph 14 above. The model development schedule will be established based on system attribute data collected as part of the Sewer Mapping Program described in Paragraph 12.f. and flow and rainfall data collected as part of the flow monitoring program described in Paragraph 14.b.(v).

a. Capabilities. At a minimum, the Model shall be capable of:

(i). Accurately predicting the flow rate and hydraulic grade line of wastewater in Force Mains from Major Pump Stations and the Major Gravity Sewer Lines under any historical dry or wet weather condition;

(ii). Accurately predicting the location and severity of SSOs from the WCTS under any historical dry or wet weather condition;

(iii). Fully dynamic temporal analysis, including an accounting of downstream backwater impacts on upstream flows;

(iv). Accurately predicting the impacts of changes to Pump Station capacities on upstream and downstream flow rates and hydraulic grade lines, including hydraulic losses which may result from either full or partial Pump Station failures; and

(v). Generating hydrographs depicting baseline wastewater flow and I/I for the Subbasins for various storm recurrence intervals. The Model shall include methods for

accurately estimating the baseline wastewater flows and I/I components in each Subbasin using quality-controlled flow data obtained for the Sewer System.

b. Implementation. At a minimum, Columbia shall employ the Model to:

(i). Assist with the development and implementation of operation and maintenance procedures that optimize collection and transmission capacity;

(ii). Evaluate the impacts which Infiltration/Inflow rehabilitation projects, proposed system modifications, and upgrades and expansions have on collection and transmission capacity and the performance of Columbia's Sewer System;

(iii). Prioritize the continuing evaluation of the WCTS pursuant to the CSAP in Paragraph 14 above,

(iv). Prioritize rehabilitation projects; and

(v). Implement the Capacity Assurance Program described in Paragraph 12.e., above.

c. Procedures and Protocols. Columbia shall develop and employ written procedures, protocols, and schedules to routinely perform:

(i). Calibrations of the Model to account for age-related and other changes to Sewer System hydraulics, and to obtain and manage updated data from physical field observations and measurements for this purpose;

(ii). Verification of the Model's accuracy and performance; and

(iii). Sensitivity analyses to determine how the Model responds to changes in input parameters and variables.

d. Model Report. Fifteen (15) months after completion of the CSAP for major components of the WCTS described in Paragraph 14 above, Columbia shall submit a report (“Model Report”) to EPA and DHEC which:

(i). Identifies the functional attributes, characteristics, and limitations specific to the Model’s software as compared to other products evaluated by Columbia, and explains how the Model meets the capabilities required in Paragraph 17.a., above;

(ii). Identifies the date that the Model was deemed to be calibrated and functional;

(iii). Identifies all input and output parameters, constants, and assumed values used by the Model;

(iv). Explains the bases for the input parameters used in each Subbasin to characterize baseline wastewater flows and I/I, the quality assurance procedures used in acquiring the input data, and the engineering bases for the selections of constants (e.g., friction factors) and assumed values; and

(v). Provides a brief description of each procedure and protocol developed pursuant to Paragraph 17.c., above, provides the associated schedules, and identifies the individual(s) with their qualifications who are employed to implement the procedures and protocols.

e. Site Audit. Following receipt of the Model Report in Paragraph 17.d., above, EPA and DHEC may conduct compliance audits of the capabilities of the Model, the implementation of the Model, and the use of written procedures and protocols as required by this Paragraph.

VI. REVIEW OF DELIVERABLES

18. Public Review Requirement. Columbia shall post on its website instructions to the public for receiving email notice of future Deliverables. Prior to the submission of each Deliverable to EPA and DHEC, Columbia shall post a copy of the Deliverable on its website and provide notice of such action by email to all parties who have requested such notice. Columbia shall also send to the Reference Librarian at the Richland County Main Library, currently located at 1431 Assembly Street in Columbia, notice of the Deliverable to be submitted, a flyer containing a brief synopsis of the Deliverable, and instructions on how to find the document on Columbia's website. Columbia shall post on its website instructions for submitting comments, and shall allow the public a period of thirty (30) Days to comment on, the following Deliverables: (i) the CSAP required under Paragraph 14; (ii) the IR Program required under Paragraph 15; (iii) the IR Report and Supplemental IR Report required under Paragraph 16; (iv) the CERP required under Paragraph 12.b.; (v) the CAP required under Paragraph 12.e.; (vi) the TSOMP required under Paragraph 12.h.; and (vii) the GSOMP required under Paragraph 12.i. After the 30-day period, Columbia shall consider public comments for a period of up to fifteen (15) Days. Within seven (7) Days after submitting a Deliverable to EPA and DHEC, Columbia shall place a copy of the submitted version of the Deliverable on its website and at the library. Within seven (7) Days after EPA's approval, approval contingent upon conditions, or

modification by EPA, Columbia shall place a copy of such final version of the Deliverable on its website and at the library. Columbia shall maintain all versions of Deliverables on its website, along with all written comments received from the public, EPA, and DHEC, until termination of this Consent Decree.

19. Government Review of Deliverables.

a. Timing of Review of Deliverables. EPA and DHEC agree to use best efforts to expeditiously review and comment on Deliverables. If EPA issues written comments and decisions on the IR Report or Supplemental IR Report more than one-hundred and twenty (120) Days after receipt of such submission, or on any other Deliverable more than sixty (60) Days after receipt of such submission, any subsequent deadline or milestone dependent upon such review and comment shall be extended by the number of days beyond the one-hundred and twenty (120) day or sixty (60) day period that is applicable to the Deliverable, as specified in this Subparagraph a., for EPA's review of Columbia's submittals. Within thirty (30) days after the date that Columbia has reason to believe that a deadline or milestone is extended under this Subparagraph a., Columbia shall inform EPA and DHEC, in writing, of its belief and the amount of time Columbia believes the deadlines or milestones are extended. If EPA disagrees with Columbia's determination that a deadline is dependent upon such comments or decisions, EPA shall inform Columbia in writing. Columbia may dispute EPA's conclusion regarding whether a deadline is dependent upon such comments or decision pursuant to Section XII (Dispute Resolution).

b. EPA Action on Deliverables. After review of any Deliverable that is

required to be submitted pursuant to this Consent Decree, EPA, after consultation with DHEC, shall in writing: (i) approve the submission; (ii) approve the submission upon specified conditions; (iii) approve part of the submission and disapprove the remainder; or (iv) disapprove the submission. If EPA conditionally approves, approves only in part or disapproves entirely a submission, EPA shall provide a written explanation.

20. Approved Deliverables. If a Deliverable is approved by EPA pursuant to Paragraph 19.a., Columbia shall take all actions required by the Deliverable in accordance with the schedules and requirements of the Deliverable as approved. If the Deliverable is conditionally approved or approved only in part, pursuant to Paragraph 19.b.(ii) or 19.b.(iii), Columbia shall, upon written direction from EPA, after consultation with DHEC, take all actions required by the approved plan, report, or other item that EPA, after consultation with DHEC, determines are technically severable from any disapproved portions, subject to Columbia's right to dispute only the specified conditions or the disapproval of portions, under Section XII of this Decree (Dispute Resolution). Following EPA approval of any Deliverable or portion thereof, such Deliverable or portion thereof so approved shall be incorporated into and become enforceable under this Consent Decree.

21. Disapproved Deliverables. If the Deliverable is disapproved in whole or in part pursuant to Paragraph 19.b.(iii) or 19.b.(iv), Columbia shall, within sixty (60) Days or such other time as EPA and Columbia agree to in writing, correct all deficiencies and resubmit to EPA the Deliverable, or disapproved portion thereof, for approval, in accordance with Paragraphs 19 and 20, subject to Columbia's right to dispute the disapproval under Section XII of this Decree (Dispute Resolution). If the resubmission is approved in whole or in part, Columbia shall

proceed in accordance with Paragraph 20.

22. Stipulated Penalties Accruing. Any stipulated penalties applicable to the original Deliverable, as provided in Section X of this Decree, shall accrue during the sixty (60)-Day period or other specified period provided for the correction of deficiencies and resubmittal in Paragraph 21, above, but shall not be payable unless the resubmitted Deliverable is untimely or is disapproved in whole or in part, provided that, if the original submission was so deficient as to constitute a material breach of Columbia's obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

23. Resubmitted/Revised Deliverables.

a. Resubmitted Deliverable. If a resubmitted Deliverable, or portion thereof, is disapproved in whole or in part, EPA, after consultation with DHEC, may again require Columbia to correct any deficiencies, in accordance with Paragraph 21, or may itself correct any deficiencies, subject to Columbia's right to invoke Dispute Resolution and the right of EPA to seek stipulated penalties as provided in preceding Paragraph 22. Upon EPA's correction of any deficiencies, such resubmitted plan, report, or other item, or portion thereof will be incorporated into and become enforceable under this Consent Decree and shall be implemented by Columbia according to the approved schedule subject to Columbia's right to invoke Dispute Resolution.

b. Revisions to Deliverables. The Parties recognize that, during implementation of this Consent Decree, information may be developed which warrants the

revision of previously submitted and/or approved Deliverables. Columbia may revise previously approved Deliverables only with EPA's prior written approval. For any proposed revised Deliverable, Columbia shall comply with the public notification requirements of Paragraph 18 of this Consent Decree originally applicable to such Deliverable.

24. Certification. Columbia shall, by a person who meets the requirements for reports and other information under 40 CFR § 122.22(b), sign and certify all Deliverables, notices, documents or reports submitted to the United States and State pursuant to this Consent Decree as follows:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

VII. CIVIL PENALTY

25. Within thirty (30) Days after the Effective Date of this Consent Decree, Columbia shall pay a total civil penalty in the amount of \$476,400, to be apportioned between the United States and the State as specified in paragraphs 26 and 27, below.

26. Columbia shall pay to the United States \$238,200 of the civil penalty by FedWire

Electronic Funds Transfer (“EFT”) to the U.S. Department of Justice in accordance with written instructions to be provided to Columbia, following lodging of the Consent Decree, by the Financial Litigation Unit of the U.S. Attorney’s Office for the District of South Carolina, 1441 Main Street, Suite 500, Columbia, S.C. 29201 (803) 929-3000. At the time of payment, Columbia shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States et al. v. City of Columbia, and shall reference the civil action number and DOJ case number 90-5-1-1-09954, to the United States in accordance with Section XIV of this Decree (Notices); by email to acctsreceivable.CINWD@epa.gov; and by mail to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

27. Columbia shall pay to the State a civil penalty of \$238,200 by check payable to the “South Carolina Department of Health and Environmental Control” within thirty (30) Days after the Effective Date of this Consent Decree. The check shall reference the case name and civil action number herein and shall be sent to:

Glenn Trofatter
SCDHEC-Bureau of Water
Water Pollution Control Division
2600 Bull St.
Columbia, South Carolina 29201

VIII. SUPPLEMENTAL ENVIRONMENTAL PROJECT

28. Columbia shall implement a Supplemental Environmental Project (SEP), as

described in Appendix I of this Consent Decree in accordance with all provisions of Appendix I of this Consent Decree. The SEP Columbia shall implement, as described in Appendix I, consists of Flooding and Water Quality Improvements in three areas: (i) along the Lower Reach of Rocky Branch, (ii) Smith Branch, and (iii) Gills Creek, with expenditures totaling at least \$1,000,000. The SEP shall be completed within 60 months after entry of this Decree.

29. Columbia is responsible for the satisfactory completion of the SEP in accordance with the requirements of this Decree. Columbia may use contractors or consultants in planning and implementing the SEP.

30. With regard to the SEP, Columbia certifies the truth and accuracy of each of the following:

a. that all cost information provided to EPA in connection with EPA's approval of the SEP is complete and accurate and that Columbia in good faith estimates that the cost to implement the SEP, exclusive of overhead, additional employee time and salary, administrative expenses, legal fees, and contractor oversight, is \$1,000,000;

b. that, as of the date of executing this Decree, Columbia is not required to perform or develop the SEP by any federal, state, or local law or regulation and is not required to perform or develop the SEP by agreement, grant, or as injunctive relief awarded in any other action in any forum;

c. that Columbia is not a party to any open federal financial assistance transaction that is funding or could be used to fund the same activity as the SEP identified

in Appendix I. Columbia further certifies that, to the best of its knowledge and belief after reasonable inquiry, there is no such open federal financial transaction that is funding or could be used to fund the same activity as the SEP, nor has the same activity been described in an unsuccessful federal financial assistance transaction proposal submitted to EPA within two years of the date of this settlement (unless the project was barred from funding as statutorily ineligible). For the purposes of this certification, the term “open federal financial assistance transaction” refers to a grant, cooperative agreement, loan, federally-guaranteed loan guarantee or other mechanism for providing federal financial assistance whose performance period has not yet expired;

d. that the SEP is not a project that Columbia was planning or intending to construct, perform, or implement other than in settlement of the claims resolved in this Decree;

e. that Columbia has not received and will not receive credit for the SEP in any other enforcement action; and

f. that Columbia will not receive any reimbursement for any portion of the SEP from any other person.

31. SEP Completion Report

a. Within 30 days after the deadline for completion of the SEP, Columbia shall submit a SEP Completion Report to the United States, in accordance with Section XVI of this Consent Decree (Notices). The SEP Completion Report shall contain the

following information:

- (i). a detailed description of the SEP as implemented;
- (ii). a description of any problems encountered in completing the SEP and the solutions thereto;
- (iii). an itemized list of all eligible SEP costs expended;
- (iv). certification that the SEP has been fully implemented pursuant to the provisions of this Decree; and
- (v). a description of the environmental and public health benefits resulting from implementation of the SEP (with a quantification of the benefits and pollutant reductions, if appropriate).

32. EPA may, in its sole discretion, require information in addition to that described in the preceding Paragraph, in order to evaluate Columbia's completion reports.

33. After receiving the SEP Completion Report, EPA shall notify Columbia whether or not Columbia has satisfactorily completed the SEP.

34. If Columbia has not completed the SEP in accordance with this Consent Decree, stipulated penalties may be assessed under Section X of this Consent Decree.

35. Disputes concerning the satisfactory performance of the SEP and the amount of eligible SEP costs may be resolved under Section XII of this Decree (Dispute Resolution). No other disputes arising under this Section shall be subject to Dispute Resolution.

36. Each submission required under this Section shall be signed by an official with knowledge of the SEP and shall bear the certification language set forth in Paragraph 24.

37. Any public statement, oral or written, in print, film, or other media, made by Columbia making reference to the SEP under this Decree shall include the following language: “This project was undertaken in connection with the settlement of an enforcement action, United States et al. v. City of Columbia, taken on behalf of the U.S. Environmental Protection Agency and South Carolina Department of Health and Environmental Control, under the Clean Water Act.”

38. For federal income tax purposes, Columbia agrees that it will neither capitalize into inventory or basis nor deduct any costs or expenditures incurred in performing the SEP.

IX. REPORTING REQUIREMENTS

39. Columbia shall submit the following notices and reports:

a. Quarterly Reports. After the Effective Date of this Consent Decree and until termination of this Decree pursuant to Section XX (Termination), Columbia shall submit to EPA and DHEC quarterly reports by email and by either U.S. Mail or an overnight delivery service. The first such quarterly report shall be submitted to EPA and DHEC no later than thirty (30) days after the second full calendar quarter after the Effective Date of this Consent Decree. Succeeding quarterly reports shall be submitted no later than thirty (30) days after the completion of each succeeding calendar quarter. The quarterly report shall include, at a minimum:

(i). 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;

(ii). 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;

(iii). 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;

(iv). Any additional information that demonstrates that Columbia is implementing the remedial measures required in this Consent Decree; and

(v). The results of water quality monitoring conducted during the previous Calendar Quarter as part of the SEP described in Appendix I to this Consent Decree.

b. Reporting of violations. If Columbia violates any requirement of this Consent Decree or has reason to believe that it is likely to violate any requirement of this Consent Decree in the future, Columbia shall notify the United States and DHEC of such violation and its likely duration within ten days of Columbia first becoming aware of the situation, with an explanation of the violation's likely cause and of the remedial steps taken, and/or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be

fully explained at the time the next quarterly report is due, Columbia shall include a statement to that effect in the report. Columbia shall investigate to determine the cause of the violation and then shall submit an amendment to the report, including a full explanation of the cause of the violation, within thirty (30) days after the quarterly report;

c. Annual Reports. Each year, Columbia shall submit to EPA and DHEC an annual report for the previous calendar year, with the first annual report due on the first March 31st which occurs at least six months after entry of this Decree, and subsequent annual reports due each year thereafter by March 31. Each annual report shall include, at minimum:

(i). A summary of the CMOM Programs implemented pursuant to this Consent Decree, including a comparison of actual performance with any performance measures that have been established;

(ii). A summary of each remedial measure and capital project implemented pursuant to this Consent Decree; and

(iii). A trends analysis of the number, volume, duration, and cause of Columbia's SSOs for the previous twenty-four (24) month period.

40. Whenever any violation of this Consent Decree or any other event affecting Columbia's performance under this Decree or its NPDES Permit may pose an immediate threat to the public health or welfare or the environment, Columbia shall notify EPA and DHEC orally or by electronic or facsimile transmission as soon as possible, but no later than 24 hours after Columbia first knew of the violation or event. This procedure is in addition to the requirements

set forth in the preceding Paragraph.

41. All reports shall be submitted to the persons designated in Section XVI of this Consent Decree (Notices).

42. Each report by Columbia under this Section shall be submitted in accordance with the provisions of Paragraph 24 of this Consent Decree. The certification requirement in Paragraph 24 does not apply to emergency or similar notifications where compliance would be impractical.

43. The reporting requirements of this Consent Decree do not relieve Columbia of any reporting obligations required by the CWA or its implementing regulations, SCPCA or its implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

44. Any information provided pursuant to this Consent Decree may be used by the United States or the State in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

X. STIPULATED PENALTIES

45. Columbia shall be liable for stipulated penalties to the United States and the State for violations of this Consent Decree as specified below, unless excused under Section XI (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or

approved under this Decree.

46. Late Payment of Civil Penalty. If Columbia fails to pay the civil penalty required to be paid under Section VII of this Decree (Civil Penalty) when due, Columbia shall pay a stipulated penalty of \$1,000 per Day for each Day that the payment is late.

47. Violations. The following stipulated penalties shall accrue for each violation identified below:

a. Unpermitted Discharges. For each Unpermitted Discharge Event occurring on or after two (2) years from the Date of Entry, a stipulated penalty may be assessed as follows:

(i). For each Unpermitted Discharge Event of 5,000 gallons or less, a stipulated penalty may be assessed as follows:

Within two to five years from the Date of Entry, \$250.

More than five years from the Date of Entry, \$1,000.

(ii). For each Unpermitted Discharge Event of more than 5,000 gallons, a stipulated penalty may be assessed as follows:

Within two to five years from the Date of Entry, \$500

More than five years from the Date of Entry, \$2,000

For purposes of Subparagraph 47.a., an Unpermitted Discharge (as defined in Subparagraph 8.uu.) occurring over multiple days at the same location and due to the same

cause(s) is considered one “Unpermitted Discharge Event.” For example, a collapsed pipe that results in an Unpermitted Discharge on multiple days is a single Unpermitted Discharge Event.

b. Failure to Timely Submit Deliverable. For failing to submit any Deliverable, the following stipulated penalties shall accrue:

<u>Period Beyond Submittal Date</u>	<u>Penalty Per Violation Per Day</u>
1 – 30 days	\$500
more than 30 days	\$1,000

c. Failure to Timely Complete Rehabilitation Projects. For each day that Columbia fails to timely complete rehabilitation projects in accordance with the deadlines established in Paragraph 10, Appendices E and F, or Paragraph 16.b. of this Decree, a stipulated penalty shall accrue for each such missed deadline as follows:

<u>Period Beyond Submittal Date</u>	<u>Penalty Per Violation Per Day</u>
1-14 days	\$500
15 – 30 days	\$1,000
31 – 60 days	\$1,500
61 – 180 days	\$2,000
more than 180 days	\$2,500

d. Failure to Timely Implement SEP Milestones. For each Day that Columbia fails to timely implement a SEP milestone set forth in Section VIII or Appendix I, daily stipulated penalties may be assessed as follows:

<u>Period of Non-compliance</u>	<u>Penalty Per Violation Per Day</u>
1 – 60 days	\$500
more than 60 days	\$1,500

e. Failure to Complete the SEP. For the SEP identified in Section VIII and Appendix I, EPA, after receiving the SEP Completion Report, may notify Columbia that Columbia has failed to satisfactorily complete the SEP in accordance with the terms of this Consent Decree as described in Section VIII and Appendix I (including the required expenditures for the SEP). A stipulated penalty of \$375,000 for the SEP may be assessed, if Columbia does not cure the deficiencies identified in EPA's notice within ninety (90) Days after receiving such notice. Notwithstanding the foregoing, if EPA determines that Columbia has made good faith efforts to satisfactorily complete the SEP and has certified, with supporting documentation, that at least ninety (90) percent of the required amount of money has been spent on the SEP, Columbia shall not be liable for any stipulated penalty.

48. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

49. Columbia shall pay stipulated penalties to the United States and the State within thirty (30) Days of a written demand by EPA. Columbia shall pay fifty percent (50%) of the total stipulated penalty amount due to the United States and fifty percent (50%) to the State.

50. The United States may, in the unreviewable exercise of its discretion, reduce or

waive stipulated penalties otherwise due it under this Consent Decree.

51. Stipulated penalties shall continue to accrue as provided in Paragraph 47, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement or by a decision of EPA that is not appealed to the Court, Columbia shall pay accrued penalties determined to be owing, together with interest, to the United States and the State within thirty (30) Days of the effective date of the agreement or the receipt of EPA's decision or order.

b. If the dispute is appealed to the Court and the United States prevails in whole or in part, Columbia shall pay all accrued penalties determined by the Court to be owed, together with interest, within sixty (60) Days of receiving the Court's decision or order, except as provided in Subparagraph c., below.

c. If the District Court's decision is appealed, Columbia shall pay all accrued penalties determined to be owed, together with interest, within fifteen (15) Days of receiving the final appellate court decision.

52. Columbia shall pay stipulated penalties owing to the United States in the manner set forth and with the confirmation notices required by Paragraph 26, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid. Columbia shall pay stipulated penalties owing to the State in the manner set forth in Paragraph 27.

53. If Columbia fails to pay stipulated penalties according to the terms of this Consent

Decree, Columbia shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States or the State from seeking any remedy otherwise provided by law for Columbia's failure to pay any stipulated penalties.

54. Subject to the provisions of Section XIV of this Consent Decree (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States and the State for Columbia's violation of this Consent Decree or applicable law.

XI. FORCE MAJEURE

55. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Columbia, of any entity controlled by Columbia, or of Columbia's contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Columbia's best efforts to fulfill the obligation. The requirement that Columbia exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. "Force majeure" does not include Columbia's financial inability to perform any obligation under this Consent Decree.

56. If any event occurs or has occurred may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Columbia shall provide notice in orally or by electronic or facsimile transmission to EPA and DHEC, within

seventy-two (72) hours of when Columbia first knew or should have known that the event might cause a delay. Within seven (7) days thereafter, Columbia shall provide a written notice to EPA and DHEC an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken in an effort to prevent or minimize the delay; a schedule for implementation of any measures to be taken in an effort to prevent or mitigate the delay or the effect of the delay; Columbia's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Columbia, such event may cause or contribute to an endangerment to public health, welfare or the environment. Columbia shall include with any notice all available documentation supporting the claim that the delay was attributable to a force majeure event. Failure to comply with the above requirements shall preclude Columbia from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Columbia shall be deemed to know of any circumstance of which Columbia or Columbia's contractors knew or should have known.

57. If EPA, after a reasonable opportunity for review and comment by DHEC, agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA, after a reasonable opportunity for review and comment by DHEC, for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Columbia in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

58. If EPA, after a reasonable opportunity for review and comment by DHEC, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Columbia in writing of its decision.

59. If Columbia elects to invoke the dispute resolution procedures set forth in Section XII (Dispute Resolution), it shall do so no later than fifteen (15) Days after receipt of EPA's notice. In any such proceeding, Columbia shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Columbia complied with the requirements of Paragraphs 55 and 56 above. If Columbia carries this burden, the delay at issue shall be deemed not to be a violation by Columbia of the affected obligation of this Consent Decree identified to EPA and the Court.

XII. DISPUTE RESOLUTION

60. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Columbia's failure to seek resolution of a dispute under this Section shall preclude Columbia from raising any such issue as a defense to an action by the United States or the State to enforce any obligation of Columbia arising under this Decree.

61. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Columbia sends the United States a written Notice of Dispute.

Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed twenty (20) Days from the date the dispute arises, unless that period is modified by written agreement between the United States and Columbia. The United States shall consult with the State during the period of informal negotiations. If the United States and Columbia cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within forty-five (45) Days after the conclusion of the informal negotiation period, Columbia invokes formal dispute resolution procedures as set forth below.

62. Formal Dispute Resolution. Columbia shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States and the State a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Columbia's position and any supporting documentation relied upon by Columbia. The United States shall serve its Statement of Position within ninety (90) Days of receipt of Columbia's Statement of Position. The United States Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States shall consult with the State during preparation of its Statement of Position. The United States Statement of Position shall be binding on Columbia, unless Columbia files a motion for judicial review of the dispute in accordance with the following Paragraph.

63. Judicial Dispute Resolution. Columbia may seek judicial review of the dispute by filing with the Court and serving on the United States and the State, in accordance with Section

XVI of this Consent Decree (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within ten (10) Days of receipt of the United States Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Columbia's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree. The United States shall respond to Columbia's motion within the time period allowed by the Local Rules of this Court. The United States shall consult with the State during preparation of its response. Columbia may file a reply memorandum, to the extent permitted by the Local Rules.

64. Standard of Review.

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraphs 62 and 63 pertaining to the adequacy or appropriateness of plans, procedures to implement plans, schedules or any other items requiring approval by EPA under this Consent Decree; the adequacy of the performance of work undertaken pursuant to this Consent Decree; and all other disputes that are accorded review on the administrative record under applicable principles of administrative law, Columbia shall have the burden of demonstrating, based on the administrative record, that the position of the United States is arbitrary and capricious or otherwise not in accordance with law.

b. Other Disputes. Except as otherwise provided in this Consent Decree, in any other dispute brought under Paragraphs 62 and 63, Columbia shall bear the burden of demonstrating that its position complies with this Consent Decree and furthers the objectives of

the Consent Decree.

65. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Columbia under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 51. If Columbia does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section X (Stipulated Penalties).

XIII. RIGHT OF ENTRY AND INFORMATION COLLECTION AND RETENTION

66. The United States, the State, and their representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility covered by this Consent Decree, at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States or the State in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by Columbia or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Columbia's compliance with this Consent Decree.

67. Upon request, Columbia shall provide EPA and DHEC or their authorized representatives splits of any samples taken by Columbia. Upon request, EPA and DHEC shall provide Columbia splits of any samples taken by EPA or DHEC.

68. Until five years after the termination of this Consent Decree, Columbia shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Columbia's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the State, Columbia shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

69. At the conclusion of the information-retention period provided in the preceding Paragraph, Columbia shall notify the United States and the State at least ninety (90) Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or the State, Columbia shall deliver any such documents, records, or other information to EPA or DHEC. Columbia may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Columbia asserts such a privilege, it shall provide the following:

- a. the title of the document, record, or information;
- b. the date of the document, record, or information;
- c. the name and title of each author of the document, record, or information;
- d. the name and title of each addressee and recipient;
- e. a description of the subject of the document, record, or information; and
- f. the privilege asserted by Columbia.

However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

70. Columbia may also assert that information required to be provided under this Section is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2. As to any information that Columbia seeks to protect as CBI, Columbia shall follow the procedures set forth in 40 C.F.R. Part 2.

71. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the State pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Columbia to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XIV. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

72. This Consent Decree resolves the civil claims of the United States and the State

for the violations alleged in the Complaint filed in this action through the Date of Lodging of this Consent Decree.

73. The United States and the State reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraph 72. This Consent Decree shall not be construed to limit the rights of the United States or the State to obtain penalties or injunctive relief under the CWA, SCPCA, or their implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraph 72. The United States and the State further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, Columbia's Sewer System, whether related to the violations addressed in this Consent Decree or otherwise.

74. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, civil penalties, other appropriate relief relating to the Sewer System or Columbia's violations, Columbia shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 72 of this Section.

75. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Columbia is responsible for achieving and

maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; and Columbia's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and the State do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Columbia's compliance with any aspect of this Consent Decree will result in compliance with provisions of the CWA, SCPCA, or with any other provisions of federal, State, or local laws, regulations, or permits.

76. This Consent Decree does not limit or affect the rights of Columbia or of the United States or the State against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against Columbia, except as otherwise provided by law.

77. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

XV. COSTS

78. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and the State shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by Columbia.

XVI. NOTICES

79. Unless otherwise specified herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and

addressed as follows:

To the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-09954

Amy Gillespie
Environmental Enforcement Section
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-09954

and amy.gillespie@usdoj.gov

and

Chief, Water Programs Enforcement Branch
Water Protection Division
U.S Environmental Protection Agency, Region 4
61 Forsyth Street, S.W.
Atlanta, GA 30303

To EPA

Chief, Water Programs Enforcement Branch
Water Protection Division
U.S Environmental Protection Agency, Region 4
61 Forsyth Street, S.W.
Atlanta, GA 30303

To the State:

Glenn Trofatter
SCDHEC-Bureau of Water
Water Pollution Control Division
2600 Bull St
Columbia, SC 29201

And

Roger Hall
hallrp@dhec.sc.gov

To DHEC:

Glenn Trofatter
SCDHEC-Bureau of Water
Water Pollution Control Division
2600 Bull St
Columbia, SC 29201

And

Roger Hall
hallrp@dhec.sc.gov

To Columbia:

City of Columbia
P.O. Box 147
Columbia, South Carolina 29217
Attn: City Manager

City of Columbia
P.O. Box 667
Columbia, South Carolina 29202
Attn: City Attorney

City of Columbia
P.O. Box 147
Columbia, South Carolina 29217
Attn: Chief Financial Officer

City of Columbia
P.O. Box 147
Columbia, South Carolina 29217
Attn: Director Utilities and Engineering

and:

W. Thomas Lavender, Jr.
Nexsen Pruet, LLC
1230 Main Street, Suite 700
Columbia, South Carolina 29201

80. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

81. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XVII. EFFECTIVE DATE

82. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket.

XVIII. RETENTION OF JURISDICTION

83. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections XII and XIX, or effectuating or enforcing compliance with the terms of this Decree.

XIX. MODIFICATION

84. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval

by the Court.

85. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XII of this Decree (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 64, the party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XX. TERMINATION

86. This Consent Decree may be terminated when the United States determines that Columbia has satisfactorily completed performance of its compliance (Section V) and SEP (Section VIII) obligations required by this Decree, provided that Columbia has fulfilled all other obligations of this Decree, including payment of the civil penalty under Section VII of this Decree and any accrued stipulated penalties as required by Section X of this Decree not waived or reduced by the United States. Columbia may serve upon the United States a Request for Termination, certifying that Columbia has satisfied those requirements, together with all necessary supporting documentation.

87. Following receipt by the United States of Columbia's Request for Termination, the United States and Columbia shall confer informally concerning the Request and any disagreement that they may have as to whether Columbia has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States, after consultation with the State, agrees that the Decree may be terminated, the United States and Columbia shall submit, for the Court's approval, a joint stipulation terminating the Decree.

88. If the United States, after consultation with the State, does not agree that the Decree may be terminated, Columbia may invoke Dispute Resolution under Section XII of this Decree. However, Columbia shall not invoke Dispute Resolution of any dispute regarding termination until one hundred-twenty (120) Days after service of its Request for Termination.

XXI. PUBLIC PARTICIPATION

89. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Columbia and the State each consent to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified the Parties in writing that it no longer supports entry of the Decree.

XXII. SIGNATORIES/SERVICE

90. Each undersigned representative of Columbia, EPA, and the State, and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice, certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

91. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Columbia agrees to accept service of process by mail with respect to all

matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXIII. INTEGRATION

92. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than Deliverables that are subsequently submitted and approved pursuant to this Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree.

XXIV. FINAL JUDGMENT

93. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, the State, and Columbia. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

XXV. APPENDICES

94. The following appendices are attached to and part of this Consent Decree:

“Appendix A” is a Map of the service area for the Sewer System

“Appendix B” is the Lower Richland Sewer Service Agreement

“Appendix C” is the Map of Sewerbasins and Subbasins

“Appendix D” is the Sewer Overflow Response Program, or SORP

“Appendix E” is the Capital Improvement Program for the WWTP

“Appendix F” is the Capital Improvement Program for the WCTS

“Appendix G” is the Fats, Oil and Grease (FOG) Management Program

“Appendix H” is the List of Pump Stations with Capacity Ratings Greater Than
1000 Gallons Per Minute

“Appendix I” is the Description of the Supplemental Environmental Project (SEP)

Dated and entered this ___ day of _____, ____.

[_____]
UNITED STATES DISTRICT JUDGE
District of South Carolina

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA:



ROBERT G. DREHER
Acting Assistant Attorney General
Environment and Natural Resources Division
United States Department of Justice
950 Pennsylvania Avenue, NW
Washington, D.C. 20530



AMY R. GILLESPIE
Trial Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044-7611
(202) 616-8754

FOR PLAINTIFF UNITED STATES OF AMERICA (Continued):



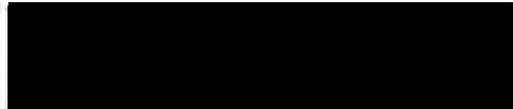
WILLIAM N. NETTLES
United States Attorney
District of South Carolina
First Union Building
1441 Main Street, Suite 500
Columbia, South Carolina 29201
Bill.Nettles@usdoj.gov
(803) 929-3000



BETH DRAKE
First Assistant United States Attorney
District of South Carolina
First Union Building
1441 Main Street, Suite 500
Columbia, South Carolina 29201
Beth.Drake@usdoj.gov
(803) 929-3000

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA (Continued):



SUSAN SHINKMAN
Office Director
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency



MARK POLLINS
Division Director
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency



CAROL DEMARCO
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
Washington, DC 20460
Telephone 202-564-2412
Facsimile 202-564-0024

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA (Continued):



V. ANNE HEARD
Acting Regional Counsel and Director
Office of Environmental Accountability
United States Environmental Protection Agency
Region 4
61 Forsyth Street
Atlanta, GA 30303

Of Counsel:

PAUL SCHWARTZ
Assistant Regional Counsel
United States Environmental Protection Agency
Region 4
61 Forsyth Street
Atlanta, GA 30303
Telephone: (404) 562-9576
Facsimile: (404) 562-9486

WE HEREBY CONSENT to the entry of this Consent Decree.

FOR THE SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL:



JACQUELYN S. DICKMAN
Deputy General Counsel
South Carolina Department of Health
and Environmental Control



ELIZABETH A. DIECK
Director of Environmental Affairs
South Carolina Department of Health
and Environmental Control

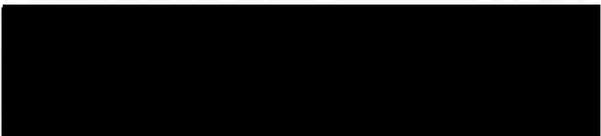


RÖGER P. HALL
Senior Counsel
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, SC 29201
(803) 898-3432

FOR DEFENDANT THE CITY OF COLUMBIA:



TERESA B. WILSON
In her capacity as City Manager
City of Columbia
P.O. Box 147
Columbia, SC 29217



W. THOMAS LAVENDER, JR.
Attorney for the City of Columbia
Nexsen Pruet, LLC
1230 Main Street, Suite 700
Columbia, SC 29201

Federal ID No 2689