



PUBLIC NOTICE

PROPOSAL: ISSUE DOMESTIC WASTEWATER TREATMENT PLANT GENERAL PERMIT (SCG570000)

NOTICE NUMBER: 13-202-G

DATE: NOVEMBER 7, 2013

PERMIT: This General NPDES permit may cover all new, expanding or existing point source discharges from domestic wastewater treatment plants (or other covered activities) with a design flow of less than 500,000 gallons per day into waters of the state of South Carolina. This permit may cover all new, expanding or existing point source discharges from industrial facilities with domestic wastewater only (no process wastewater) and with a design flow of less than 500,000 gallons per day into waters of the state of South Carolina. This permit does not authorize discharges that have a design flow of 500,000 gallons per day or greater, or includes a pretreatment program under R.61-9.403, or receives wastewater from categorical sources per R.61-9.403 or stormwater subject to separate stormwater regulations.

TYPES OF COVERAGE: This General permit authorizes Publicly Owned Treatment Works (POTWs), privately owned treatment works, or industrial facilities with domestic wastewater only (no process wastewater) which require no compliance schedules and have a design flow less than 500,000 gallons per day to discharge into the waters of the state of South Carolina.

PROJECT LOCATION: This General permit covers all areas of South Carolina, where the discharge is into FRESHWATER (Class FW or FW sp) or SALTWATER (Class SA, SA sp, SB, or SB sp) as classified by S.C. Regulation 61-68, Water Classifications and Standards, and Regulation 61-69, Classified Waters. The permit also covers all areas of South Carolina, where the discharge is into SALTWATER (Class SFH) as classified by S.C. Regulation 61-68, Water Classifications and Standards, and Regulation 61-69, Classified Waters for existing dischargers only (as of the date of the issue date for the general permit) and does not include either new or expanding domestic or industrial dischargers into SFH waters.

SUMMARY: The proposed General NPDES permit contains effluent limitations on the amounts of pollutants allowed to be discharged, based upon staff review and application of the Federal Clean Water Act, the Pollution Control Act of South Carolina, and other standards and appropriate regulations.

NOTICE PURPOSE: DHEC is seeking public input on this proposed permit issuance. Initially, the following facilities would be included: See table on reverse side.

HOW TO COMMENT: Provide written comments to DHEC's point of contact: **Andrew Edwards**, Bureau of Water, 2600 Bull Street, Columbia, SC 29201, Andrew.Edwards@dhec.sc.gov, (803) 898-1271. Written comments must be received no later than Monday, December 9, 2013. Please identify the notice number (13-202-G) along with written comments.

MORE INFO: DHEC's project file is available for review at the above address and copies can be obtained for a fee by contacting our Freedom of Information Office (2600 Bull Street, Columbia, SC 29201, 803-898-3882). See the draft permit on the DHEC website, at <http://www.scdhec.gov/environment/water/eqpnbow.htm>, then select "NPDES & POTW Pretreatment Program Permits", and then "General Wastewater Permit - SCG570000".

MISCELLANEOUS: DHEC is not involved in zoning, land use, or property value issues (please contact your local county or municipal officials for questions or concerns on these issues). All people commenting will receive a response to comments when DHEC makes a permit decision.

Permit Number	Name	County
SCG570002	BCSD/CROSS HIGH SCHOOL	Berkeley
SCG570003	BIC REAL ESTATE HOLDINGS LLC	York
SCG570004	GIRL SCOUTS OF EASTERN SOUTH CAROLINA	Berkeley
SCG570006	GSW&SA/TOWN OF NICHOLS	Marion
SCG570007	HIGH HILLS RURAL/HARWOOD MHP	Sumter
SCG570008	JACABB UTILS LLC/THE SHOALS WWTP	Anderson
SCG570010	LOOK UP FOREST HOMES ASSOCIATION	Greenville
SCG570013	SC DISTRIBUTORS INC	Cherokee
SCG570014	SC DPRT/OCONEE STATE PARK	Oconee
SCG570017	SSSD/CLIFTON WWTP	Spartanburg
SCG570018	SUMTER COUNTY/I-95 REST AREA	Sumter
SCG570019	TESI/LOCKHART TREATMENT FACILITY	Union
SCG570020	UNITED UTIL COMPS/FAIRWOODS SD	Union
SCG570022	WOODRUFF ROEBUCK WTR DIST/RIVERDALE MILLS WWTP	Spartanburg
SCG570025	HANSON BRICK/COLUMBIA	Richland
SCG570026	JORDAN ENTERPRISES (FRMLY BUCK-A-ROO RANCH INC)	Greenville

National Pollutant Discharge Elimination System

NPDES General Permit for Domestic Wastewater Treatment Plant Dischargers

(Design flows less than 500,000 gallons per day)

This permit authorizes domestic wastewater treatment plant dischargers (or other covered activities) to waters of the State of South Carolina in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I thru Part X. This permit is issued in accordance with the provisions of the Pollution Control Act of South Carolina (S.C. Code Sections 48-1-10 et seq., 1976), Regulation 61-9 and with the provisions of the Federal Clean Water Act (PL 92-500), as amended, 33 U.S.C. 1251 et seq., the "Act."

Jeffrey P. deBessonnet, P.E., Director
Water Facilities Permitting Division

Issued:

Expires:

Effective:

Permit No.: SCG570000

This general permit will continue to be in effect beyond the expiration date if a complete timely re-application or Notice of Intent (NOI) is received pursuant to Regulation 61-9.122.6 and signed per Regulation 61-9.122.22.



TABLE OF CONTENTS

PART I. DEFINITIONS.....4

PART II. COVERAGE UNDER THIS PERMIT.....10

A. PERMIT AREA.....10

B. ELIGIBILITY.....10

C. AUTHORIZATION.....12

D. CONTINUATION OF EXPIRED GENERAL PERMIT.....14

E. DUTY TO REAPPLY.....14

PART III. NOTICE OF INTENT REQUIREMENTS.....16

A. DEADLINES FOR NOTIFICATION.....16

B. CONTENTS OF NOTICE OF INTENT.....16

C. WHERE TO SUBMIT.....17

D. RENOTIFICATION.....17

E. INDIVIDUAL APPLICATIONS.....17

F. TRANSFER OF OWNERSHIP OR CONTROL.....17

PART IV. MONITORING AND REPORTING REQUIREMENTS.....18

A. MONITORING REPORTS.....18

B. MONITORING AND RECORDS.....19

PART V. STANDARD PERMIT CONDITIONS.....22

A. DUTY TO COMPLY.....22

B. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE.....22

C. DUTY TO MITIGATE.....22

D. PROPER OPERATION AND MAINTENANCE.....22

E. PERMIT ACTIONS.....23

F. PROPERTY RIGHTS.....23

G. DUTY TO PROVIDE INFORMATION.....23

H. INSPECTION AND ENTRY.....23

I. SIGNATORY REQUIREMENTS.....24

J. REPORTING REQUIREMENTS.....26

K. BYPASS.....29

L. UPSET.....30

M. MISREPRESENTATION OF INFORMATION.....31

N. REQUIRING AN INDIVIDUAL PERMIT OR AN ALTERNATIVE GENERAL PERMIT.....31

PART VI. REOPENER CLAUSE.....33

PART VII. TERMINATION OF COVERAGE.....34

A. NOTICE OF TERMINATION.....34

B. WHERE TO SUBMIT.....34

PART VIII. SPECIAL CONDITIONS.....35

A. RELEASES IN EXCESS OF REPORTABLE QUANTITIES.....35

B. [RESERVED].....35

C. [RESERVED].....35

D. SLUDGE DISPOSAL REQUIREMENTS.....35

E. EFFLUENT SAMPLING REQUIREMENTS FOR PART X.....37

F. OTHER REQUIREMENTS.....37

PART IX. OTHER REQUIREMENTS.....	40
A. [RESERVED]	40
B. EFFLUENT TOXICITY LIMITATIONS AND MONITORING REQUIREMENTS	40
C. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.....	46
D. ODOR CONTROL REQUIREMENTS	46
E. [RESERVED]	47
F. [RESERVED]	47
G. ADDITIONAL OPERATIONAL REQUIREMENTS	47
H. SECONDARY TREATMENT (POTW'S ONLY) - PERCENT REMOVAL (BOD ₅ , CBOD ₅ AND TSS)	49
I. SECONDARY TREATMENT (POTW'S ONLY) - PERCENT REMOVAL FOR LAGOONS (BOD ₅ AND CBOD ₅)	49
PART X. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.....	51
A. WASTEWATER TREATMENT FACILITIES (DOMESTIC WASTEWATER SOURCES ONLY) WITH NO COMPLIANCE SCHEDULES AND A DESIGN FLOW LESS THAN OR EQUAL TO 50,000 GALLONS PER DAY	51
B. WASTEWATER TREATMENT FACILITIES (DOMESTIC WASTEWATER SOURCES ONLY) WITH NO COMPLIANCE SCHEDULES AND A DESIGN FLOW GREATER THAN 50,000 GALLONS PER DAY AND LESS THAN 500,000 GALLONS PER DAY	52
C. WHOLE EFFLUENT TOXICITY LIMITATIONS AND MONITORING REQUIREMENTS DISCHARGING TO FRESHWATERS CLASS FW OR FW SP AS CLASSIFIED BY <i>S.C. REGULATION 61-68, WATER CLASSIFICATIONS AND STANDARDS, AND REGULATION 61-69, CLASSIFIED WATERS</i>	53
D. WHOLE EFFLUENT TOXICITY LIMITATIONS AND MONITORING REQUIREMENTS DISCHARGING TO SALTWATERS CLASS SA OR SA SP OR SB OR SB SP OR SFH (EXISTING) AS CLASSIFIED BY <i>S.C. REGULATION 61-68, WATER CLASSIFICATIONS AND STANDARDS, AND REGULATION 61-69, CLASSIFIED WATERS</i>	54
E. CHRONIC WHOLE EFFLUENT TOXICITY LIMITATIONS AND MONITORING REQUIREMENTS DISCHARGING TO FRESHWATERS CLASS FW OR FW SP AS CLASSIFIED BY <i>S.C. REGULATION 61-68, WATER CLASSIFICATIONS AND STANDARDS, AND REGULATION 61-69, CLASSIFIED WATERS</i>	55
F. CHRONIC WHOLE EFFLUENT TOXICITY LIMITATIONS AND MONITORING REQUIREMENTS DISCHARGING TO SALTWATERS CLASS SA OR SA SP OR SB OR SB SP OR SFH (EXISTING) AS CLASSIFIED BY <i>S.C. REGULATION 61-68, WATER CLASSIFICATIONS AND STANDARDS, AND REGULATION 61-69, CLASSIFIED WATERS</i>	56
G. BACTERIA LIMITATIONS AND MONITORING REQUIREMENTS DISCHARGING TO FRESHWATERS (FW AND FW SP).....	57
H. BACTERIA LIMITATIONS AND MONITORING REQUIREMENTS DISCHARGING TO SALTWATERS (SA AND SA SP).....	58
I. BACTERIA LIMITATIONS AND MONITORING REQUIREMENTS DISCHARGING TO SALTWATERS (SB AND SB SP).....	59
J. BACTERIA LIMITATIONS AND MONITORING REQUIREMENTS DISCHARGING TO SALTWATERS SFH (EXISTING) OR ANY WATERS REGARDLESS OF CLASS THAT CAN AFFECT SHELLFISH	60
K. BACTERIA SUPPLEMENTAL DATA SHEET	62
L. PHOSPHORUS LIMITATIONS AND MONITORING REQUIREMENTS: WASTEWATER TREATMENT FACILITIES (DOMESTIC WASTEWATER SOURCES ONLY) WITH NO COMPLIANCE SCHEDULES AND A DESIGN FLOW LESS THAN OR EQUAL TO 50,000 GALLONS PER DAY	64
M. PHOSPHORUS LIMITATIONS AND MONITORING REQUIREMENTS: WASTEWATER TREATMENT FACILITIES (DOMESTIC WASTEWATER SOURCES ONLY) WITH NO COMPLIANCE SCHEDULES AND A DESIGN FLOW GREATER THAN 50,000 GALLONS PER DAY AND LESS THAN 500,000 GALLONS PER DAY	65
N. MERCURY LIMITATIONS AND MONITORING REQUIREMENTS: WASTEWATER TREATMENT FACILITIES (DOMESTIC WASTEWATER SOURCES ONLY) WITH NO COMPLIANCE SCHEDULES AND A DESIGN FLOW LESS THAN OR EQUAL TO 50,000 GALLONS PER DAY	66
O. MERCURY LIMITATIONS AND MONITORING REQUIREMENTS: WASTEWATER TREATMENT FACILITIES (DOMESTIC WASTEWATER SOURCES ONLY) WITH NO COMPLIANCE SCHEDULES AND A DESIGN FLOW GREATER THAN 50,000 GALLONS PER DAY AND LESS THAN 500,000 GALLONS PER DAY	67

Part I. DEFINITIONS

Any term not defined in this Part has the definition stated in the South Carolina Pollution Control Act (PCA) or in “Water Pollution Control Permits”, R.61-9 or its normal meaning.

- A. The “Act”, or CWA shall refer to the Clean Water Act (Formerly referred to as the Federal Water Pollution Control Act) Public Law 92-500, as amended means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, and Pub. L. 97-117, 33 U.S.C. 1251 et seq. Specific references to sections within the CWA will be according to Pub. L. 92-500 notation.
- B. “Arithmetic Mean” for any set of values means the summation of the individual values divided by the number of individual values.
- C. “Best Management Practices” (“BMPs”) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
- D. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility.
- E. “Composite sample” shall be defined as one of the following four types:
 - 1. An influent or effluent portion collected continuously over a specified period of time at a rate proportional to the flow.
 - 2. A combination of not less than 8 influent or effluent grab samples collected at regular (equal) intervals over a specified period of time and composited by increasing the volume of each aliquot in proportion to flow. If continuous flow measurement is not used to composite in proportion to flow, the following method will be used: An instantaneous flow measurement should be taken each time a grab sample is collected. At the end of the sampling period, the instantaneous flow measurements should be summed to obtain a total flow. The instantaneous flow measurement can then be divided by the total flow to determine the percentage of each grab sample to be combined. These combined samples form the composite sample.
 - 3. A combination of not less than 8 influent or effluent grab samples of equal volume but at variable time intervals that are inversely proportional to the volume of the flow. In other words, the time interval between aliquots is reduced as the volume of flow increases.
 - 4. If the effluent varies by less than 15 percent, a combination of not less than 8 influent or effluent grab sample of constant (equal) volume collected at regular (equal) time intervals over a specified period of time.

5. All samples shall be properly preserved in accordance with Part IV.B.4. Continuous flow or the sum of instantaneous flows measured and averaged for the specified compositing time period shall be used with composite results to calculate mass.
- F. “CWA” means Clean Water Act. See A. above.
- G. “Daily discharge” means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.
- H. “Daily maximum” other than for bacterial indicators (i.e. fecal coliform, E. coli and enterococci) is the highest average value recorded of samples collected on any single day during the calendar month. Daily average for bacterial indicators means the highest arithmetic average of bacterial samples collected for each bacterial indicator species (i.e. fecal coliform, E. coli and/or enterococci) in any 24 hour period during a calendar month.
- I. “Daily minimum” is the lowest average value recorded of samples collected on any single day during the calendar month.
- J. “Department” or “DHEC” means the South Carolina Department of Health and Environmental Control or an authorized representative.
- K. “Director” means the EPA Regional Administrator or an authorized representative.
- L. “DMR” means a Discharge Monitoring Report.
- M. “EPA” means the Environmental Protection Agency.
- N. “Freshwater” means any freshwater as defined by Regulation 61-68 and classified by Regulation 61-69.
- O. “Geometric mean” of any set of values is the Nth root of the product of the individual values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered to be one (1).
- P. “Grab sample” is an individual, discrete or single influent or effluent portion of at least 100 milliliters collected at a time representative of the discharge and over a period not exceeding 15 minutes and retained separately for analysis. Instantaneous flow measured at the time of grab sample collection shall be used to calculate quantity, unless a totalizer is used.
- Q. “Instantaneous maximum or minimum” means the highest or lowest value recorded of all samples collected during the calendar month.

- R. "MGD" means million gallons per day.
- S. "Monthly Average", other than for fecal coliform, E. coli and enterococci, is the arithmetic mean of all samples collected in a calendar month period. Monthly average (for bacterial indicators only) means the calendar month (i.e., 28 days, 29 days, 30 days, or 31 days) geometric mean of all bacterial samples collected [for each of the bacterial indicator species (i.e., E. coli, enterococci, and/or fecal coliform)] during that calendar month. The monthly average loading is the arithmetic average of all daily discharges made during the month.
- T. "NOI" means notice of intent to be covered by this permit.
- U. "NOT" means notice of termination.
- V. "Outfall" or "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, or vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agricultural or agricultural storm water runoff.
- W. "Permittee" means any individual, facility or company to whom this permit has been issued.
- X. "POTW" means a treatment works as defined by section 212 of the CWA, which is owned by a state or municipality (as defined by section 502[4] of the CWA). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature or a regional entity composed of two (2) or more municipalities or parts thereof. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality, as defined in section 502[4] of the CWA, which has jurisdiction over the Indirect Dischargers to and the discharge from such a treatment works.
- Y. "Practical Quantitation Limit" is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. It is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specific sample weights, volumes, and processing steps have been followed. It is also referred to as the reporting limit.
- Z. "Privately owned treatment works" means any device or system which both is used to treat wastes from any facility whose operator is not the operator of the treatment works and is not a POTW.
- AA "Quarter" is defined as the first three calendar months beginning with the month that this permit becomes effective and each group of three calendar months thereafter.
- BB. "Quarterly average" is the arithmetic mean of all samples collected in a quarter.

- CC. “Regional Administrator” means the Regional Administrator of Region IV of the Environmental Protection Agency or the authorized representative of the Regional Administrator.
- DD. “Saltwater” means any tidal saltwater defined as Class SA, SB or Shellfish Harvesting (SFH) by Regulation 61-68 and classified by Regulation 61-69.
- EE. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- FF. “Significant spills” includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (see 40 CFR 110.10 and CFR 117.21) or Section 102 of CERCLA (see 40 CFR 302.4).
- GG. “sp” an “sp” by the water class means the Department has established site-specific standards for certain parameters for that waterbody. The site-specific standards are listed in parentheses after the waterbody description in Regulation 61-69.
- HH. “Storm Water” means storm water runoff, snowmelt runoff, and surface runoff and drainage.
- II. “TRC” means Total Residual Chlorine.
- JJ. “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- KK. “Waters of South Carolina” means all waters of the United States within the political boundaries of the State of South Carolina.
- LL. “Waters of the United States” means:
1. All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
 2. All interstate waters, including interstate “wetlands”;
 3. All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, wet meadows, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - a. Which are or could be used by interstate or foreign travelers for recreational or other purposes;
 - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce;or

- c. Which are used or could be used for industrial purposes by industries in interstate commerce;
- 4. All impoundments of waters otherwise defined as waters of South Carolina under this definition.
- 5. Tributaries of waters identified in paragraphs 1 through 4 of this definition;
- 6. The territorial sea; and
- 7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs 1 through 6 of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA are not waters of South Carolina. This exclusion applies only to manmade bodies of water, which neither were originally created in waters of South Carolina (such as disposal areas in wetlands) nor resulted from the impoundment of waters of South Carolina.

- MM. “Weekly average” is the arithmetic mean of all the samples collected during a one-week period. For self-monitoring purposes, weekly periods in a calendar month are defined as three (3) consecutive seven-day intervals starting with the first day of the calendar month and a fourth interval containing seven (7) days plus those days beyond the 28th day in a calendar month. The value to be reported is the single highest of the four (4) weekly averages computed during a calendar month. The weekly average loading is the arithmetic average of all daily discharges made during the week.
- NN. “Ultimate Oxygen Demand” (UOD) is the oxygen consumed by aquatic microbes in metabolizing the remaining organic and nitrogenous matter in the effluent from the permittee's wastewater treatment plant. This demand is expressed in pounds per day and is calculated by multiplying the effluent biochemical oxygen demand (BOD₅) or the effluent carbonaceous biochemical oxygen demand (CBOD₅) concentration by the F-ratio and adding that to 4.57 times the effluent ammonia (NH₃-N) concentration and multiplying the sum by the flow and the constant 8.34. The UOD loading is the arithmetic average of all individual loading determinations made during the sampling period.

$$\text{U.O.D. (lbs/day)} = [\{ \text{BOD}_5(\text{mg/l}) * \text{F-ratio} \} + \{ \text{NH}_3\text{-N}(\text{mg/l}) * 4.57 \}] * \text{Flow (MGD)} * 8.34$$

F-ratio = 1.50

OR

$$\text{U.O.D. (lbs/day)} = [\{ \text{CBOD}_5(\text{mg/l}) * \text{F-ratio} \} + \{ \text{NH}_3\text{-N}(\text{mg/l}) * 4.57 \}] * \text{Flow (MGD)} * 8.34$$

F-ratio = 1.50

Legend (See Effluent Limitations and Monitoring Requirements)

Abbreviation	Meaning/Definition
BOD ₅	5-Day Biochemical Oxygen Demand
TSS	Total Suspended Solids
DO	Dissolved Oxygen
TRC	Total Residual Chlorine
NH ₃ -N	Ammonia Nitrogen
24 Hr C	24 Hour Composite
Cont.	Continuous
Cal	Calculated
Eff.	Effluent
Inst	Instantaneous

Part II. COVERAGE UNDER THIS PERMIT

A. Permit Area

The permit covers all areas of South Carolina, where the discharge is into FRESHWATER (Class FW or FW sp) or SALTWATER (Class SA, SA sp, SB, or SB sp) as classified by S.C. Regulation 61-68, Water Classifications and Standards, and Regulation 61-69, Classified Waters. The permit also covers all areas of South Carolina, where the discharge is into SALTWATER (Class SFH) as classified by S.C. Regulation 61-68, Water Classifications and Standards, and Regulation 61-69, Classified Waters for existing dischargers only (as of the date of the issue date for the general permit) and does not include either new or expanding dischargers into SFH waters.

B. Eligibility

1. This permit may cover all new, expanding or existing point source discharges from domestic wastewater treatment plants (or other covered activities) with a design flow of less than 500,000 gallons per day into waters of the state of South Carolina but does not include either new or expanding dischargers into SFH waters. This permit may cover all new, expanding or existing point source discharges from industrial facilities with domestic wastewater only (no process wastewater) and with a design flow of less than 500,000 gallons per day into waters of the state of South Carolina.
2. The effluent limits will be based on the 7Q10 of the receiving stream and calculated using the formulas from the general permit rationale and related tables or information from the general permit.
3. This permit does not authorize discharges that have a design flow greater than or equal to 500,000 gallons per day, or includes a pretreatment program under R.61-9.403, or receives wastewater from categorical sources per R.61-9.403 or stormwater subject to separate stormwater regulations. This permit also does not include new (as of the date of the issue date for the general permit) or expanding dischargers into Class SFH waters.
4. Types of Coverage: This permit authorizes discharge of the following types of wastewater as further specified in this permit:
 - a. Wastewater treatment facilities **with no** compliance schedules and with a design flow less than or equal to 50,000 gallons per day and:
 - (1) A POTW with a discharge to Class Freshwaters (FW or FW sp).
 - (2) A POTW with a discharge to Class Saltwaters (SA or SA sp).
 - (3) A POTW with a discharge to Class Saltwaters (SB or SB sp).
 - (4) A POTW with a discharge to Class Saltwaters (SFH, existing facilities only).
 - (5) A privately owned treatment works with a discharge to Class Freshwaters (FW or FW sp).
 - (6) A privately owned treatment works with a discharge to Class Saltwaters (SA or SA sp).
 - (7) A privately owned treatment works with a discharge to Class Saltwaters (SB or SB sp).

- (8) A privately owned treatment works with a discharge to Class Saltwaters (SFH, existing facilities only).
 - (9) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Freshwaters (FW or FW sp).
 - (10) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SA or SA sp).
 - (11) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SB or SB sp).
 - (12) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SFH, existing facilities only).
- b. Wastewater treatment facilities **with no** compliance schedules and with a design flow greater than 50,000 gallons per day and less than 500,000 gallons per day and:
- (1) A POTW with a discharge to Class Freshwaters (FW or FW sp).
 - (2) A POTW with a discharge to Class Saltwaters (SA or SA sp).
 - (3) A POTW with a discharge to Class Saltwaters (SB or SB sp).
 - (4) A POTW with a discharge to Class Saltwaters (SFH, existing facilities only).
 - (5) A privately owned treatment works with a discharge to Class Freshwaters (FW or FW sp).
 - (6) A privately owned treatment works with a discharge to Class Saltwaters (SA or SA sp).
 - (7) A privately owned treatment works with a discharge to Class Saltwaters (SB or SB sp).
 - (8) A privately owned treatment works with a discharge to Class Saltwaters (SFH, existing facilities only).
 - (9) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Freshwaters (FW or FW sp).
 - (10) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SA or SA sp).
 - (11) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SB or SB sp).
 - (12) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SFH, existing facilities only).
- c. All facilities needing Toxicity Limitations in addition to the items above.
- d. All facilities utilizing the bacterial requirements for documenting compliance with the provisions of R.61-68.E.14(c)(12).
5. Limitations on Coverage

The following wastewater treatment plant discharges are not authorized by this permit:

- a. discharges that are:
- (1) mixed with other wastewater from categorical sources per R.61-9.403 and/or process wastewater unless those discharges are in compliance with a different NPDES permit; or

- (2) discharges of hazardous substances or oils, identified by and in compliance with Part VIII.A;
- b. discharges which are subject to an existing effluent limitation guideline addressing them;
- c. discharges that are subject to an existing NPDES individual or general permit; are located at a facility where an NPDES permit has been terminated or denied; or which are issued a permit in accordance with Part V.N (Requiring an Individual Permit or an Alternative General Permit) of this permit. Such discharges may be authorized under this permit after an existing permit expires or is canceled.
- d. discharges for waters other than those described;
- e. discharges whose receiving waters are not FRESHWATER (Class FW or FW sp) or Saltwater (Class SA, SA sp, SB, or SB sp), or (Class SFH, as qualified in Part II.A. above) as classified by S.C. Reg. 61-68, Water Classifications and Standards and 61-69, Classified Waters. This permit does not authorize discharges to Trout Waters (Class TPGT or TN), Outstanding Resource Waters (Class ORW), or Outstanding National Resource Waters (ONRW) as classified by S.C. Regulation 61-69.
- f. discharges that the Department has determined to be or which may reasonably be expected to be contributing to a violation of a water quality standard; and
- g. discharges that would adversely affect a listed endangered or threatened species or its critical habitat.

C. Authorization

- 1. Wastewater treatment plant dischargers desiring coverage under this general permit at the time of original permit issue must:
 - a. have submitted timely, appropriate reapplication forms for an existing individual permit or
 - b. either;
 - (1) submit for discharges as described in II.B, above, using for:
 - (a) POTW's: NPDES Form 2A, NPDES Form 2S (if applicable), and any required supplemental information (e.g. sludge supplement, Mixing Zone Request Form, Location Supplement and Antidegradation/Alternatives Analysis (for New or Expanding dischargers including new/increased loadings);
 - (b) Private domestic wastewater systems: Short Form D, NPDES Form 2S (if required) and any required supplemental information (e.g. sludge supplement, Mixing Zone Request Form, Location Supplement and Antidegradation/Alternatives Analysis (for New or Expanding dischargers including new/increased loadings);
 - (c) Industrial facility with domestic wastewater only (no process wastewater): Forms 1 and 2C, 1 and 2D, or Form 1 and 2E and any required supplemental

information (e.g. sludge supplement (if required), Mixing Zone Request Form (if required), Location Supplement and Antidegradation/Alternatives Analysis (for New or Expanding dischargers including new/increased loadings).

In accordance with the requirements of Part III of this permit, to be authorized to discharge under this general permit, or,

- (2) submit a NOI form (and all associated required attachments) provided by the Department.
2. Discharges for which individual permit applications have been submitted are authorized to discharge under the terms and conditions of this permit beginning on the date of written notice from the Department of such coverage.
3. Dischargers (either new, expansions (any increase in loading) of existing facilities) requesting coverage after the effective date of this General Permit and not included in the original public notice for the :

a. General Permit can be granted coverage under the following conditions:

The following documents, certifications and or applications must be complete as determined by the Department:

- (1) NPDES application forms, or NOI as required by the General Permit section II.C.1.b(1).
- (2) Sludge or solids disposal forms as required by the General Permit section II.C.1.b(1).
- (3) 208 Water Quality Management Plan consistency of permit including permit reissues, expansions of facilities or new facilities
- (4) Any proposed mixing zone request along with the associated mixing zone application forms
- (5) For private facilities (including industrial facilities with domestic wastewater only), all necessary easements or agreements for the wastewater treatment plant, and all sewer lines, force mains and pump stations to the proposed outfall
- (6) Any other documents, certifications and or applications (identified by the Department) as being necessary for the permit reissue or required per Regulation R.61-9.

b. In addition for wastewater plant expansions (any increase in loading), or new facilities:

- (1) A substantially complete Preliminary Engineering Report for the proposed expansion or new facility has been submitted to the Department
- (2) A complete anti-degradation analysis (per R.61-68) for the proposed project
- (3) A complete wasteload allocation for the proposed expansion or new facility, or alternatively an acceptable water quality model (as determined by the Department) for the proposed discharge per R.61-67.
- (4) For dischargers within the eight Coastal Zone counties covered by DHEC OCRM, an OCRM certification of the project (if determined necessary)
- (5) For dischargers to Navigable Waters as defined by R.61-68, or R.61-67, a completed Navigable Waters review along with any required Construction Permit conditions for the proposed discharge point (if applicable)

- (6) Any other documents, certifications and or applications (identified by the Department) as being necessary for the proposed project or required per Regulations R.61-68, R.61-67 or R.61-9.
 - c. For public notices associated with completed application packages (as identified by item 3(a) or 3(b)) will be placed in the following locations:
 - (1) A newspaper of general circulation in the vicinity of the proposed facility discharge if required in R.61-9.
 - (2) Any other locations, and or individuals as required per R.61-9.
 - d. At the end of the public notice period, and after any comments are addressed per R.61-9, the proposed permit (if determined by the Department to be issued), will become effective as described below:
 - (1) For public notices during the first day of the 2nd following month (e.g. notices between March 1st and March 30th, the permit would be effective May 1st) of the calendar year, the permit would be effective.
 - (2) If due to the expiration date of the issued General Permit, this effective date would be after the expiration date of the general permit, the effective date could be changed to an earlier date however the permit issue must meet the requirements stated in R.61-9.
 - e. Any complete permit application packages (for permits not presently covered under the General Permit) for permit reissues, expansions, or new facilities within nine (9) months of the General Permit expiration date, will be considered meeting the requirements for a complete application package for the subsequent permit renewal. The permittee would only be required to resubmit the signature page(s) for either the NOI or the application forms prior to the permit expiration date to be considered complete. All other permittee's (presently covered under the General Permit) must submit a complete application package as required by R.61-9 and the General permit conditions, in the timeframe required.
4. The Department may deny coverage under this permit and require submittal of an application for an individual NPDES permit based on a review of the NOI or other information.

D. Continuation of Expired General Permit

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with R.61-9.122.6 and remain in force and effect. If you were authorized to discharge under this permit prior to the expiration date, any discharges authorized under this permit will automatically remain covered by this permit provided a complete application was provided as required in Part II.E. Coverage under this permit continues in force and effect only if the conditions in Part II.E below are satisfied.

E. Duty to Reapply

1. Except as noted in Part II.C.3.e above, permittees must submit an NOI (or other application forms) in accordance with the requirements of Part III of this permit at least 180 days prior to the

permit expiration date (unless an extension has been granted but in no case beyond the expiration date) to remain covered under the continued permit after expiration. The completed NOI (or other application forms) should be submitted to the Department at the address in Part III.C.

2. Permittees who submit NOIs (or other application forms) in accordance with the requirements of Part III of this permit and obtain coverage prior to the permit expiration date are automatically considered covered under the continued permit after expiration.
3. An NOI (or other application forms) submitted in accordance with E.1 or E.2 above will be used to determine coverage under the new General Permit when this permit is reissued. The Department may, require additional information to be submitted as necessary to determine if permit coverage can be granted.

Part III. NOTICE OF INTENT REQUIREMENTS

A. Deadlines for Notification

1. Except as provided in Part III.A.2 (Late NOIs), III.F (Transfer of Ownership or Control), or Part II.C applicants or permittees who intend to obtain coverage for a new or existing wastewater treatment plant discharge (or other covered activities) under this permit shall submit a NOI in accordance with the requirements of this part at least one hundred eighty (180) days before coverage is desired;
2. An applicant or permittee of a wastewater treatment facility (or other covered activities) is not precluded from submitting a NOI (or other required application forms) in accordance with the requirements of this part after the effective date of this permit. In such instances, the Department may bring an enforcement action for failure to submit a NOI (or other required application forms) in a timely manner or for any unauthorized discharges of wastewaters that have occurred.

B. Contents of Notice of Intent

The Notice of Intent shall be signed in accordance with Part V.I of this permit and shall include the following information:

1. Name, mailing address, location of the facility for which the notification is submitted and location of the outfall(s) stated as latitude and longitude to the nearest 15 seconds.
2. Up to four 4-digit Standard Industrial Classification (SIC) codes that best represent the principal products or activities provided by the facility; or for hazardous waste treatment, storage or disposal facilities, land disposal facilities that receive or have received any industrial waste, steam electric power generating facilities, or treatment works treating domestic sewage, a narrative identification of those activities;
3. The applicant or permittee's name, address, telephone number, and status as Federal, State, private, public or other entity;
4. The permit number of additional NPDES permits for any discharges (including storm water discharges, etc.) from the site that are currently, or have been previously, authorized by an NPDES permit;
5. The name of the receiving water(s);
6. Information related to the quality and quantity of wastewater to be discharged;
7. A statement that easements for the discharge have been obtained by the permittee for any conveyances of the discharge not on property of the permittee and which do not constitute waters of the State;
8. A map indicating facility and discharge locations.

C. Where to Submit

Facilities required to submit an NOI per Part III.B of this permit must use the appropriate NOI form provided by the Department (or photocopy thereof). Forms are also available by calling (803) 898-4300. NOIs must be signed in accordance with Part V.I of this permit. NOIs are to be submitted to the Department at the following address:

S.C. Dept. of Health and Environmental Control
Bureau of Water
2600 Bull Street
Columbia, SC 29201

D. Renotification

Upon issuance of a new general permit, the permittee is required to notify the DHEC/Bureau of Water/Water Facilities Permitting Division of its intent to be covered by the new general permit.

E. Individual Applications

Any applicant eligible for coverage under the general permit who has previously filed an individual application and has not received an NPDES permit can receive coverage under this general permit. To do so, a letter must be sent to the DHEC/Bureau of Water/Water Facilities Permitting Division requesting coverage in lieu of an individual permit.

F. Transfer of Ownership or Control

1. Coverage under a general permit may be transferred to another party under the following conditions:
 - a. The permittee notifies the DHEC/Bureau of Water/Water Facilities Permitting Division of the proposed transfer at least thirty (30) days in advance of the proposed transfer date;
 - b. A written agreement is submitted to the DHEC/Bureau of Water/Water Facilities Permitting Division between the existing and new permittee containing a specific date of permit responsibility, coverage, and liability for violations up to that date and thereafter.
 - c. A NOI (or other application forms) is filed by the new owner.
 - d. The proposed owner complies with Viability Requirements in accordance with SC Regulation R.61-9.600 (if required).

Transfers are not effective until approved by the Department. A permit is non-transferable without prior Department approval.

Part IV. MONITORING AND REPORTING REQUIREMENTS

A. Monitoring Reports

Monitoring results shall be reported at the intervals specified in the permit.

- a. Monitoring results (with the exception of any Annual Reporting requirements under section 503.18, section 503.28, section 503.48 or section 504.18) must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Department for reporting results of monitoring of sludge use or disposal practices.

(1) Effluent Monitoring:

Effluent monitoring results obtained at the required frequency shall be reported on a Discharge Monitoring Report Form (EPA Form 3320-1). The DMR is due postmarked no later than the 28th day of the month following the end of the monitoring period. One original and one copy of the Discharge Monitoring Reports (DMRs) shall be submitted to:

S.C. Department of Health and Environmental Control
Bureau of Water/Water Pollution Control Division
Data and Records Management Section
2600 Bull Street
Columbia, South Carolina 29201

(2) Groundwater Monitoring:

Groundwater monitoring results obtained at the required frequency shall be reported on a Groundwater Monitoring Report Form (DHEC 2110) postmarked no later than the 28th day of the month following the end of the monitoring period. One original and one copy of the Groundwater Monitoring Report Form (DHEC 2110) shall be submitted to:

S.C. Department of Health and Environmental Control
Bureau of Water/Water Pollution Control Division
Data and Records Management Section
2600 Bull Street
Columbia, South Carolina 29201

(3) Sludge, Biosolids and/or Soil Monitoring:

Sludge, biosolids and/or soil monitoring results obtained at the required frequency shall be reported in a laboratory format postmarked no later than the 28th day of the month following the end of the monitoring period. Two copies of these results shall be submitted to:

S.C. Department of Health and Environmental Control
Bureau of Water/Water Pollution Control Division

Water Pollution Enforcement Section
2600 Bull Street
Columbia, South Carolina 29201

- (4) All other reports required by this permit shall be submitted at the frequency specified elsewhere in the permit to:

S.C. Department of Health and Environmental Control
Bureau of Water/Water Pollution Control Division
Water Pollution Enforcement Section
2600 Bull Street
Columbia, South Carolina 29201

- b. If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in R.61-9.503, R.61-9.504, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Department.
- c. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.

B. Monitoring and Records

1. a. Samples and measurements

- (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (2) Samples shall be reasonably distributed in time, while maintaining representative sampling.
- (3) No analysis, which is otherwise valid, shall be terminated for the purpose of preventing the analysis from showing a permit or water quality violation.

b. Flow Measurements

Where primary flow meters are required, appropriate flow measurement devices and methods consistent with accepted scientific practices shall be present and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of not greater than 10 percent from the true discharge rates throughout the range of expected discharge volumes. The primary flow device, where required, must be accessible to the use of a continuous flow recorder.

- c. The permittee shall maintain all records of inspections at the permitted facility as required by the permit, and the records shall be made available for on-site review during normal working hours.
2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by R.61-9.503 or R.61-9.504), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.
3. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
4.
 - a. Analyses for required monitoring must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal specified in R.61-9.503, unless other test procedures have been specified in the permit
 - b. Unless addressed elsewhere in this permit, the permittee shall use a sufficiently sensitive analytical method for each sample that achieves a value below the derived permit limit stated in Part X. If more than one method of analysis is approved for use, the Department recommends for reasonable potential determinations that the permittee use the method having the lowest practical quantitation limit (PQL) unless otherwise specified in Part VIII of the permit. For the purposes of reporting analytical data on the Discharge Monitoring Report (DMR):
 - (1) Analytical results below the PQL from methods available in 40 CFR 136 or otherwise specified in the permit shall be reported as zero (0), provided the PQL is below the value specified in Part VIII.E and the result is also below the PQL. Zero (0) shall also be used to average results which are below the PQL. When zero (0) is reported or used to average results, the permittee shall report, in the "Comment Section" or in an attachment to the DMR, the analytical method used, the PQL achieved, and the number of times results below the PQL were reported as zero (0).

- (2) Analytical results above the PQL from methods available in 40 CFR 136 or otherwise specified in the permit shall be reported as the value achieved, even if the PQL is below the value specified in Part VIII.E. When averaging results using a value containing a < the average shall be calculated using the value and reported as < the average of all results collected.
3.
 - (a) Mass value for a pollutant collected using a grab sample shall be calculated using the 24-hour totalized flow for the day the sample was collected (if available) or the instantaneous flow at the time of the sample and either the concentration value actually achieved or the value as determined from the procedures in (1) or (2) above, as appropriate. Grab samples should be collected at a time representative of the discharge.
 - (b) Mass value for a pollutant collected using a composite sample shall be calculated using the 24-hour totalized flow measured for the day the sample was collected and either the concentration value actually achieved or the value as determined from the procedures in (1) or (2) above, as appropriate.
5. The PCA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$25,000 or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment provided by the Clean Water Act is also by imprisonment of not more than 4 years.

Part V. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The permittee must comply with all conditions of the permit. Any permit noncompliance constitutes a violation of the Clean Water Act and the Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. The Department's approval of wastewater facility Plans and Specifications does not relieve the permittee of responsibility to meet permit limits.

1. a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
 - b. It is the responsibility of the permittee to have a treatment facility that will meet the final effluent limitations of this permit. The approval of plans and specifications by the Department does not relieve the permittee of responsibility for compliance.
2. Failure to comply with permit conditions or the provisions of this permit may subject the permittee to civil penalties under S.C. Code Section 48-1-330 or criminal sanctions under S.C. Code Section 48-1-320. Sanctions for violations of the Federal Clean Water Act may be imposed in accordance with the provisions of 40 CFR Part 122.41(a)(2) and (3).
3. A person who violates any provision of this permit, a term, condition or schedule of compliance contained within a valid NPDES permit, or the State law is subject to the actions defined in the State law.

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

C. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

D. Proper Operation and Maintenance

1. The permittee shall at all times properly operate and maintain in good working order and operate as efficiently as possible all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the terms

and conditions of this permit. Proper operation and maintenance includes effective performance based on design facility removals, adequate funding, adequate operator staffing and training and also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Power Failures.

In order to maintain compliance with effluent limitations and prohibitions of this permit, the permittee shall either:

- a. provide an alternative power source sufficient to operate the wastewater control facilities;
- b. or have a plan of operation which will halt, reduce, or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

E. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

F. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege nor does it authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

G. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

H. Inspection and Entry

The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and Pollution Control Act, any substances or parameters at any location.

I. Signatory Requirements

1. All applications, reports, or information submitted to the Department shall be signed and certified.
 - a. Applications. All permit applications shall be signed as follows:
 - (1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or
 - (b) The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - (3) For a municipality, State, Federal, or other public agency or public facility: By either a principal executive officer, mayor, or other duly authorized employee or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (a) The chief executive officer of the agency, or

- (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator, Region IV, EPA).
- b. All reports required by permits, and other information requested by the Department, shall be signed by a person described in Part V.I of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - (1) The authorization is made in writing by a person described in Part V.I of this section;
 - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,
 - (3) The written authorization is submitted to the Department.
- c. Changes to authorization.

If an authorization under Part V.I of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.I of this section must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.
- d. Certification.
 - 1. Any person signing a document under Part V.I of this section shall make the following certification: "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 the 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."
 - 2. The PCA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$25,000 per violation, or by imprisonment for not more than two years per violation, or by both.

J. Reporting Requirements

1. Planned changes

The permittee shall give written notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in R 61-9.122.29(b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements of this section.
- c. The alteration or addition results in a significant change in the permittee's sewage sludge or industrial sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan (included in the NPDES permit directly or by reference);

2. Anticipated noncompliance

The permittee shall give advance notice to DHEC/Bureau of Water/Water Pollution Control Division of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

This permit is not transferable to any person except after notice to DHEC/Bureau of Water/NPDES Administration Section. The Department may require modification or revocation and reissuance of the permit to change the name of permittee and incorporate such other requirements as may be necessary under the Pollution Control Act and the Clean Water Act. (See section 122.61; in some cases, modification or revocation and reissuance is mandatory.)

- a. Transfers by modification. Except as provided in paragraph b of this section, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under R.61-9.122.62(e)(2)), or a minor modification made (under R.61-9.122.63(d)), to identify the new permittee and incorporate such other requirements as may be necessary under CWA.
- b. Other transfers. As an alternative to transfers under paragraph a of this section, any NPDES permit may be transferred to a new permittee if:
 - (1) The current permittee notifies the Department at least 30 days in advance of the proposed transfer date of this section;

- (2) The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
- (3) Permits are non-transferable except with prior consent of the Department. A modification under this subparagraph may also be a minor modification under section 122.63.

4. Twenty-four hour reporting

- a. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally to local DHEC office within 24 hours from the time the permittee becomes aware of the circumstances. During normal working hours call:

County	DHEC Region	Phone No.
Anderson, Oconee	Upstate BEHS Anderson	864-260-5569
Abbeville, Edgefield, Greenwood, Laurens, McCormick, Saluda	Upstate BEHS Greenwood	864-223-0333
Greenville, Pickens	Upstate BEHS Greenville	864-241-1090
Cherokee, Spartanburg, Union	Upstate BEHS Spartanburg	864-596-3800
Fairfield, Lexington, Newberry, Richland	Midlands BEHS Columbia	803-896-0620
Chester, Lancaster, York	Midlands BEHS Lancaster	803-285-7461
Aiken, Allendale, Bamberg, Barnwell, Calhoun, Orangeburg	Midlands BEHS Aiken	803-642-1637
Chesterfield, Darlington, Dillon, Florence, Marion, Marlboro	Pee Dee BEHS Florence	843-661-4825
Clarendon, Kershaw, Lee, Sumter	Pee Dee BEHS Sumter	803-778-6548
Georgetown, Horry, Williamsburg	Pee Dee BEHS Myrtle Beach	843-238-4378
Berkeley, Charleston, Dorchester	Low Country BEHS Charleston	843-953-0150
Beaufort, Colleton, Hampton, Jasper	Low Country BEHS Beaufort	843-846-1030

After-hour reporting should be made to the 24-Hour Emergency Response telephone number 803-253-6488 or 1-888-481-0125 outside of the Columbia area.

A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; and, if the noncompliance has not been corrected, the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - (1) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See R.61-9.122.41(L)(6)(ii)(A).
 - (2) Any upset which exceeds any effluent limitation in the permit.
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours (See R 61-9.122.44(g)). If the permit contains maximum limitations for any of the pollutants listed below, a violation of the maximum limitations shall be reported orally to the DHEC/Bureau of Water/Water Pollution Control Division within 24 hours or the next business day.
 - (i) Total Residual Chlorine (TRC)
- c. The Department may waive the written report on a case-by-case basis for reports if the oral report has been received within 24 hours.

5. Other noncompliance

The permittee shall report all instances of noncompliance not reported at the time monitoring reports are submitted. The reports shall contain the information listed in Part V.J of this section.

6. Other information.

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

7. Existing manufacturing or commercial dischargers

In addition to the reporting requirements under Part V.J.1-6 of this section, all existing manufacturing or commercial dischargers (that meet the conditions for coverage under this permit) must notify the DHEC/Bureau of Water/Compliance & Enforcement Section of the Department as soon as they know or have reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (1) One hundred micrograms per liter (100 µg/l);
 - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application or NOI; or
 - (4) The level established by the Department in accordance with section R.61-9.122.44(f).
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed in the highest of the following “notification levels”:
 - (1) Five hundred micrograms per liter (500 µg/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with R.61-9.122.21(g)(7).
 - (4) The level established by the Department in accordance with section R.61-9.122.44(f).

K. Bypass

1. Bypass not exceeding limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part V.K.2 and 3 of this section.

2. Notice

- a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least ten days before the date of the bypass to the DHEC/Bureau of Water/ Water Facilities Permitting Division.
- b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part V.J.4 of this section.

3. Prohibition of bypass

- a. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
 - (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The permittee submitted notices as required under Part V.K.2 of this section.
- b. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in Part V.K.3.a of this section.

L. Upset

1. Effect of an upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Part V.L.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2. Conditions necessary for a demonstration of upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An upset occurred and that the permittee can identify the cause(s) of the upset;
- b. The permitted facility was at the time being properly operated; and
- c. The permittee submitted notice of the upset as required in Part V.J.
- d. The permittee complied with any remedial measures required under Part V.C.

3. Burden of proof

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

M. Misrepresentation of Information

1. Any person making application for a NPDES discharge permit or filing any record, report, or other document pursuant to a regulation of the Department, shall certify that all information contained in such document is true. All application facts certified to by the applicant shall be considered valid conditions of the permit issued pursuant to the application.
2. Any person who knowingly makes any false statement, representation, or certification in any application, record, report, or other documents filed with the Department pursuant to the State law, and the rules and regulations pursuant to that law, shall be deemed to have violated a permit condition and shall be subject to the penalties provided for pursuant to 48-1-320 or 48-1-330.

N. Requiring an Individual Permit or an Alternative General Permit

1. The Department may require any person authorized by this permit to apply for and/or obtain either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition the Department to take action under this paragraph. The Department may require any owner or operator authorized to discharge under this permit to apply for an individual NPDES permit only if the owner or operator has been notified in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the owner or operator to file the application, and a statement that on the effective date of the individual NPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Individual permit applications shall be submitted to the address shown in Part III.C of this permit. The Department may grant additional time to submit the application upon request of the applicant. If an owner or operator fails to submit in a timely manner an individual NPDES permit application as required by the Department, then the applicability of this permit to the individual NPDES permittee is automatically terminated at the end of the day specified for application submittal.
2. Any owner or operator authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application (Form 1 and Form 2C, 2D, or 2E, as appropriate) with reasons supporting the request to the Department. Individual permit applications shall be submitted to the address in Part III.C of this permit. The request may be granted by the issuance of an individual permit or an alternative general permit if the reasons cited by the owner or operator are adequate to support the request.
3. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit, or the owner or operator is authorized for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual NPDES

permit is denied to an owner or operator otherwise subject to this permit, or the owner or operator is denied coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the Department.

Part VI. REOPENER CLAUSE

1. If there is evidence indicating potential or realized impacts on water quality due to any water treatment plant discharge covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or an alternative general permit in accordance with Part V.N (Requiring an Individual Permit or Alternative General Permit) of this permit or the permit may be modified to include different limitations and/or requirements.
2. Permit modification or revocation of coverage will be conducted according to S.C. Pollution Control Act and S.C. Regulation 61-9.

Part VII. TERMINATION OF COVERAGE

A. Notice of Termination

Where all wastewater treatment plant discharges that are authorized by this permit are eliminated or where a facility's operation changes as to reclassify it under another type of eligible operation, the operator of the facility shall submit a Notice of Termination. The Notice of Termination shall include the following information:

1. Name, mailing address, and location of the facility for which the notification is submitted. Where a mailing address for the site is not available, the location can be described in terms of the latitude and longitude of the facility to the nearest 15 seconds that the facility is located in;
2. Up to four 4-digit SIC codes that best represent the principal products or activities provided by the facility;
3. The operator's name, address, telephone number, ownership status and status as Federal, State, private, public or other entity;
4. The NPDES permit number for the water plant discharge identified by the Notice of Termination;
5. The reason(s) for termination; and
6. The Notice of Termination must be signed in accordance with Part V.I of this permit.

B. Where to Submit

All Notices of Termination are to be sent to the following address:

SC Dept. of Health and Environmental Control
Bureau of Water
NPDES/ND Permit Administration
2600 Bull Street
Columbia, SC 29201

Part VIII.SPECIAL CONDITIONS

A. Releases in Excess of Reportable Quantities

1. This permit does not relieve the permittee of the reporting requirements of 40 CFR Part 117 and 40 CFR Part 302. Where a release containing a hazardous substance in an amount equal to or in excess of reporting quantity established under either 40 CFR 117 or 40 CFR 302, occurs during a 24 hour period:
 - a. The discharger is required to notify both the Department's Emergency Response Section at (803) 253-6488 and the National Response Center (NRC) (800-424-8802) in accordance with the requirements of 40 CFR 117 and 40 CFR 302 as soon as he or she has knowledge of the discharge;
 - b. The permittee shall submit within 14 calendar days of knowledge of the release a written description of the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and steps to be taken to both:

Emergency Response Section
SC Dept. of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201; and

EPA Region IV
61 Forsyth Street SW
Atlanta, GA 30303-3104

2. Spills

This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

B. [Reserved]

C. [Reserved]

D. Sludge Disposal Requirements

1. Sludge Use and Disposal

- a. The permittee shall comply with effluent standards and/or prohibitions established under Section 307(a) of the Clean Water Act (CWA) for toxic pollutants, standards for sludge use and disposal established in 40 CFR Parts 122, 123, 258, 501 and 503, under Section 405(d) of the CWA, and R.61-9.503 State Domestic Sludge Regulations, within the time provided in

- the regulations that establish these prohibitions or standards for sludge use or disposal, even if the NPDES permit has not yet been modified to incorporate the requirement.
- b. The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
 - c. This permit may be modified to address any standard for sludge use or disposal promulgated under Section 405(d) and Section 503 of the Clean Water Act and R.61-9.503 State Domestic Sludge Regulations or additional controls of a pollutant or practice not currently limited in this permit.
 - d. The compliance with the Federal sludge regulations is directly enforceable as identified in 40 CFR Part 503.3. No person shall use or dispose of sewage sludge through any practice for which requirements are established except in accordance with 40 CFR Part 503. Any sludge disposal permits issued by the Department will remain in effect and all conditions and requirements will apply; however, this does not relieve the permittee from complying with the conditions of 40 CFR Part 503 or State Regulation 61-9.503
 - e. The direct enforceability (§503.3(b)) of the sludge standards requires that the permittee shall not use or dispose of sewage sludge through any practice for which requirements are established in 40 CFR Part 503, except in accordance with those requirements. If the Department includes State sludge permit requirements under R.61-9.503, the conditions of that permit shall apply in addition to any requirements under 40 CFR Part 503.
 - f.
 - 1. The permittee must obtain prior Departmental approval of planned changes in the facility when the alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use of disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
 - 2. The sludge disposal permit may be modified or revoked and reissued if there are material and substantial alterations or additions to the permitted facility or activity (including a change or changes in the permittee's sludge use or disposal practice) which occurred after the permit issuance which justify the application of permit conditions which are different from or absent in the existing permit.
 - g. The sludge disposal permit may be terminated if there is a change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit.
 - h. Periodic inspections will be conducted by Department authorized representatives to ensure compliance with State regulations and permit stipulations. Any necessary modification to this permit may be based upon these evaluations.

- i. Records of monitoring required by the permits related to sludge use and disposal activities must be kept at least five (5) years (or longer as required by 40 CFR Part 503 or R.61-9.503).
- j. Sludge monitoring procedures shall be those specified in 1) R.61-9.503; 2) 40 CFR Part 503; 3) 40 CFR Part 136; or 4) other procedures specified in the sludge permit (in that order of "preference" depending on the availability and applicability of a particular method at the time the sludge permit is issued).
- k. The permittee must provide sludge monitoring results on a form(s) approved by the Department.
- l. The permittee shall submit the results of all sludge monitoring if done more frequently than required by the sludge permit. The permittee may be required to maintain specific records at the facility and on request may also be required to furnish them to the Department.
- m. The permittee should note that under 40 CFR 122.44(l), the "anti-backsliding" provision applies only to surface water dischargers. The "anti-backsliding" provision does not apply to sludge use and disposal activities.

E. Effluent Sampling Requirements for Part X

For purposes of reporting, the Permittee shall use the reporting threshold equivalent to the PQL listed below and conduct analyses in accordance with the method specified below:

Parameter	Analytical Method	PQL (µg/l)
Total Residual Chlorine	SM4500Cl B, C, D, E, F, or G	50
Total Mercury	1669(sampling)/1631E (analysis)	0.0005

The Permittee can however use another analytical method (40 CFR Part 136 approved) from a SCDHEC certified laboratory with a PQL equal to or lower than the PQL listed above. If the permittee is using a PQL below the PQL listed above, then for purposes of reporting, the lower PQL shall be used.

The grab samples taken must be representative of the effluent characteristics. The permittee may be required to provide composite samples using the method listed in Part I.E.2, 3 or 4 in place of grab samples. If required, the permittee must change from grab to composite sample beginning sixty (60) days from written notice by the Department.

F. Other Requirements

- 1. The permittee shall develop and maintain at the facility a complete Operations and Maintenance Manual for the waste treatment facilities and/or land application system. The manual shall be made available for on-site review during normal working hours. The manual shall contain operation and maintenance instructions for all equipment and appurtenances associated with the waste treatment

facilities and land application system. The manual shall contain a general description of: the treatment process(es), the operational procedures to meet the permit requirements, and the corrective action to be taken should operating difficulties be encountered.

2. The permittee shall provide for the performance of daily treatment facility inspections by a certified operator of the appropriate grade as specified in Part IX.G. The inspections shall include, but should not necessarily be limited to, areas which require visual observation to determine efficient operation and for which immediate corrective measures can be taken using the O & M manual as a guide. All inspections shall be recorded and shall include the date, time, and name of the person making the inspection, corrective measures taken, and routine equipment maintenance, repair, or replacement performed. The permittee shall maintain all records of inspections at the permitted facility as required by the permit, and the records shall be made available for on-site review during normal working hours.
3. A roster of operators associated with the facility's operation and their certification grades shall be submitted to the DHEC/Bureau of Water/Water Pollution Control Division. For existing facilities, this roster shall be submitted within thirty (30) days of the effective date of this permit. For new facilities, this roster must be submitted prior to placing the facility into operation. Additionally, any changes in operator or operators (including their certification grades) shall be submitted to the Department as they occur.
4. Wastewater Sewer Systems
 - a. Purpose. This section establishes rules for governing the operation and maintenance of wastewater sewer systems, including gravity or pressure interceptor sewers. It is the purpose of this section to establish standards for the management of sewer systems to prevent and/or minimize system failures that would lead to public health or environmental impacts.
 - b. Applicability. This section applies to all sewer systems that have been or would be subject to a DHEC construction permit under Regulation 61-67 and whose owner owns or operates the wastewater treatment system to which the sewer discharges.
 - c. General requirements. The permittee must:
 - (1) Properly manage, operate, and maintain at all times all parts of its sewer system(s), to include maintaining contractual operation agreements to provide services, if appropriate;
 - (2) Provide adequate capacity to convey base flows and peak flows for all parts of the sewer system or, if capital improvements are necessary to meet this standard, develop a schedule of short and long term improvements;
 - (3) Take all reasonable steps to stop and mitigate the impact of releases of wastewater to the environment; and
 - (4) Notify the Department within 30 days of a proposed change in ownership of a sewer system.

5. Domestic treatment works

All POTWs must provide adequate notice to the Department of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to sections 301 or 306 of CWA if it were directly discharging those pollutants; and
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- c. For purposes of this paragraph, adequate notice shall include information on:
 - (1) The quality and quantity of effluent introduced into the POTW, and
 - (2) Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

6. Prohibited Discharges (POTW's)

In accordance with 24 S.C. Reg. Ann. § 61-9.403, the Permittee shall prohibit in its sewer use ordinance the discharge of pollutant(s) into its treatment works by any non-domestic source(s), if such pollutant(s) may inhibit or interfere with the operation or performance of the works. Further, the Permittee shall prohibit in its sewer use ordinance and pretreatment program regulations (if a pretreatment program is approved by the Department) the introduction of the following pollutants into its treatment works:

- a. Pollutant(s) which create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21.
- b. Pollutant(s) which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such discharges.
- c. Solid or viscous pollutant(s) in amounts which will cause obstruction to the flow in the POTW resulting in interference.
- d. Any pollutant, including oxygen demanding pollutants, (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW.
- e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40°C (104°F) unless the Department, upon request of the POTW, approves alternate temperature limits.
- f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through.
- g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems.
- h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

Part IX. Other Requirements

A. [Reserved]

B. Effluent Toxicity Limitations and Monitoring Requirements

1. Acute Toxicity

a. Freshwater (FW) and Brackish Water (FW-SW) Requirements

- (1) A 48-hour static acute toxicity test shall be conducted at the frequency stated in Part X.C Effluent Toxicity Limitations and Monitoring Requirements using a control and the acute test concentration (ATC) of (see RATIONALE and EXCEL spreadsheet). The test shall be conducted using *Ceriodaphnia dubia* as the test organism using EPA Method 2002.0 in accordance with “Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms,” EPA 821/R-02/012 (October 2002). The test shall be conducted at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$.
- (2) If the test group *Ceriodaphnia dubia* survival is less than the control group survival at the 0.05α level of a left-tailed Fisher’s exact test, the test shall be deemed a failure.
- (3) The permittee must report on the discharge monitoring report (DMR) form whether the test passes or fails at the specified ATC. If the test fails, the number “1” shall be placed on the form. If the test passes, the number “0” shall be placed on the form. If more than one test is performed during a monitoring period (including tests from split samples), the worst case result shall be reported on the DMR.
- (4) A test shall be invalidated if any part of Method 2002.0 is not followed or if the laboratory is not certified at the time the test is conducted.
- (5) Results from all invalid tests must be appended to DMRs, including lab control data. The permittee has sole responsibility for scheduling toxicity tests so as to ensure there is sufficient opportunity to complete and report the required number of valid test results for each monitoring period.
- (6) The permittee is responsible for reporting a valid test during each monitoring period. However, the Department acknowledges that invalid tests may occur. All of the following conditions must be satisfied for the permittee to be in compliance with Whole Effluent Toxicity (WET) testing requirements for a particular monitoring period when a valid test was not obtained.
 - (a) A minimum of five (5) tests have been conducted which were invalid in accordance with Part IX.B.1.a.(4) above;

- (b) The data and results of all invalid tests are attached to the DMR;
- (c) At least one additional State-certified laboratory is used after two (2) consecutive invalid tests were determined by the first laboratory. The name(s) and lab certification number(s) of the additional lab(s) shall be reported in the comment section of the DMR; and
- (d) A valid test was reported during each of the previous three reporting periods.

If these conditions are satisfied, the permittee may enter “H” in the appropriate boxes on the toxicity DMR and add the statement to the Comment Section of the DMR that “H indicates invalid tests.”

- (7) This permit may be modified based on new information that supports a modification in accordance with Regulation 61-9.122.62 and Regulation 61-68.D.

b. Saltwater (SW) Requirements

- (1) A 48-hour static acute toxicity test shall be conducted at the frequency stated in Part X.D, Effluent Toxicity Limitations and Monitoring Requirements, using a control and the acute test concentration (ATC) of (see RATIONALE and EXCEL spreadsheet). The test shall be conducted using *Mysidopsis bahia* as the test organism using Method 2007.0 in accordance with “Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms,” EPA 821/R-02/012 (October 2002). The test shall be conducted at 25°C ±1°C. The effluent’s salinity may be adjusted to 20 to 30 parts per thousand (ppt) by the addition of salts before the test is performed. The effluent shall not be diluted to achieve a lower salinity.
- (2) If the test group *Mysidopsis bahia* survival is less than the control group survival at the 0.05 α level of a left-tailed Fisher’s exact test, the test shall be deemed a failure.
- (3) The permittee must report on the discharge monitoring report (DMR) form whether the test passes or fails at the specified ATC. If the test fails, the number “1” shall be placed on the form. If the test passes, the number “0” shall be placed on the form. If more than one test is performed during a monitoring period (including tests from split samples), the worst case result shall be reported on the DMR.
- (4) A test shall be invalidated if any part of Method 2007.0 is not followed or if the laboratory is not certified at the time the test is conducted.
- (5) Results from all invalid tests must be appended to DMRs, including lab control data. The permittee has sole responsibility for scheduling toxicity tests so as to ensure there is sufficient opportunity to complete and report the required number of valid test results for each monitoring period.

- (6) The permittee is responsible for reporting a valid test during each monitoring period. However, the Department acknowledges that invalid tests may occur. All of the following conditions must be satisfied for the permittee to be in compliance with Whole Effluent Toxicity (WET) testing requirements for a particular monitoring period when a valid test was not obtained.
- (a) A minimum of five (5) tests have been conducted which were invalid in accordance with Part IX.B.1.b.(4) above;
 - (b) The data and results of all invalid tests are attached to the DMR;
 - (c) At least one additional State-certified laboratory is used after two (2) consecutive invalid tests were determined by the first laboratory. The name(s) and lab certification number(s) of the additional lab(s) shall be reported in the comment section of the DMR; and
 - (d) A valid test was reported during each of the previous three reporting periods.

If these conditions are satisfied, the permittee may enter “H” in the appropriate boxes on the toxicity DMR and add the statement to the Comment Section of the DMR that “H indicates invalid tests.”

- (7) This permit may be modified based on new information that supports a modification in accordance with Regulation 61-9.122.62 and Regulation 61-68.D.

2. Chronic Toxicity

a. Freshwater (FW) and Brackish Water (FW-SW) Requirements

- (1) A *Ceriodaphnia dubia* three brood chronic toxicity test shall be conducted at the frequency stated in Part X.E, Effluent Toxicity Limitations and Monitoring Requirements, using the chronic test concentration (CTC) of (see RATIONALE and EXCEL spreadsheet) and the following test concentrations: 0% (control), 6.25%, 12.5%, 25%, 50% and 100% effluent. The permittee may add additional test concentrations without prior authorization from the Department provided that the test begins with at least 10 replicates in each concentration and all data is used to determine permit compliance.
- (2) The test shall be conducted using EPA Method 1002.0 in accordance with “Short-Term Methods for Estimating Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,” EPA/821/R-02/013 (October 2002).
- (3) The permittee shall use the linear interpolation method described in “Short-Term Methods for Estimating Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,” EPA/821/R-02/013 (October 2002), Appendix M to estimate the percent effect at the CTC according to the equations in d below.

- (4) The linear interpolation estimate of percent effect is $\left(1 - \frac{M_{CTC}}{M_1}\right) * 100$ if the CTC is a tested concentration. Otherwise, it is

$$\left(1 - \frac{M_J - \frac{M_{J+1} - M_J}{C_{J+1} - C_J} * C_J + \frac{M_{J+1} - M_J}{C_{J+1} - C_J} * CTC}{M_1}\right) * 100.$$

- (5) A test shall be invalidated if any part of Method 1002.0 is not followed or if the laboratory is not certified at the time the test is conducted.
- (6) Results from all invalid tests must be appended to DMRs, including lab control data. The permittee has sole responsibility for scheduling toxicity tests so as to ensure there is sufficient opportunity to complete and report the required number of valid test results for each monitoring period.
- (7) The permittee is responsible for reporting a valid test during each monitoring period. However, the Department acknowledges that invalid tests may occur. All of the following conditions must be satisfied for the permittee to be in compliance with Whole Effluent Toxicity (WET) testing requirements for a particular monitoring period when a valid test was not obtained.
- (a) A minimum of three (3) tests have been conducted which were invalid in accordance with Part IX.B.2.a.(5) above;
 - (b) The data and results of all invalid tests are attached to the DMR;
 - (c) At least one additional State-certified laboratory was used after two (2) consecutive invalid tests were determined by the first laboratory. The name(s) and lab certification number(s) of the additional lab(s) shall be reported in the comment section of the DMR; and
 - (d) A valid test was reported during each of the previous three reporting periods.

If these conditions are satisfied, the permittee may enter “H” in the appropriate boxes on the toxicity DMR and add the statement to the Comment Section of the DMR that “H indicates invalid tests.”

- (8) This permit may be modified based on new information that supports a modification in accordance with Regulation 61-9.122.62 and Regulation 61-68.D.

b. Saltwater (SW) Requirements

- (1) A *Mysidopsis bahia* survival, growth and fecundity chronic toxicity test shall be conducted at the frequency stated in Part X.F, Effluent Toxicity Limitations and Monitoring Requirements, using the chronic test concentration (CTC) of (see RATIONALE and EXCEL spreadsheet) and the following test concentrations: 0% (control), 6.25%, 12.5, 25%, 50%, and 100% effluent. The permittee may add additional test concentrations without prior authorization from the Department provided that the test begins with at least 8 vessels each containing 5 organisms per concentration and all data is used to determine permit compliance. The effluent's salinity may be adjusted to 20 to 30 parts per thousand (ppt) by the addition of salts before the test is performed. The effluent shall not be diluted to achieve a lower salinity.
- (2) The test shall be conducted using EPA Method 1007.0 in accordance with "Short-Term Methods for Estimating Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms," EPA/821/R-02/014 (October 2002).

- (3) The permittee shall use the linear interpolation method described in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms," EPA/821/R-02/014 (October 2002), Appendix L to estimate the percent effect on survival, growth and fecundity at the CTC according to the equations in (4) below.

- (4) The linear interpolation estimate of percent effect is $\left(1 - \frac{M_{CTC}}{M_1}\right) * 100$ if the CTC is a tested concentration. Otherwise, it is

$$\left(1 - \frac{M_J - \frac{M_{J+1} - M_J}{C_{J+1} - C_J} * C_J + \frac{M_{J+1} - M_J}{C_{J+1} - C_J} * CTC}{M_1}\right) * 100.$$

- (5) A test shall be invalidated if any part of Method 1007.0 is not followed or if the laboratory is not certified at the time the test is conducted.
- (6) Results from all invalid tests must be appended to DMRs, including lab control data. The permittee has sole responsibility for scheduling toxicity tests so as to ensure there is sufficient opportunity to complete and report the required number of valid test results for each monitoring period.
- (7) The permittee is responsible for reporting a valid test during each monitoring period. However, the Department acknowledges that invalid tests may occur. All of the following conditions must be satisfied for the permittee to be in compliance with Whole Effluent

Toxicity (WET) testing requirements for a particular monitoring period when a valid test was not obtained.

- (a) A minimum of three (3) tests have been conducted which were invalid in accordance with Part IX.B.2.b.(5) above;
- (b) The data and results of all invalid tests are attached to the DMR;
- (c) At least one additional State-certified laboratory was used after two (2) consecutive invalid tests were determined by the first laboratory. The name(s) and lab certification number(s) of the additional lab(s) shall be reported in the comment section of the DMR; and
- (d) A valid test was reported during each of the previous three reporting periods.

If these conditions are satisfied, the permittee may enter “H” in the appropriate boxes on the toxicity DMR and add the statement to the Comment Section of the DMR that “H indicates invalid tests.”

- (8) This permit may be modified based on new information that supports a modification in accordance with Regulation 61-9.122.62 and Regulation 61-68.D.

C. Effluent Limitations and Monitoring Requirements

1. There shall be no discharge of floating solids or visible foam in other than trace amounts, nor shall the effluent cause a visible sheen on the receiving waters.
2. a. Effluent samples taken in compliance with the monitoring requirements specified in Part X, shall be taken at the following location(s): nearest accessible point after final treatment but prior to actual discharge or mixing with the receiving waters.

b. Influent samples taken in compliance with the monitoring requirements specified in Part X, shall be taken at the following location(s): nearest accessible point prior to any primary treatment unit (e.g. after the bar screen and before primary treatment).
3. Samples shall be collected in accordance with the permit conditions specified.
4. MR = Monitor and Report only.

D. Odor Control Requirements

The permittee shall use best management practices normally associated with the proper operation and maintenance of a sludge wastewater treatment site, any sludge storage or lagoon areas, transportation of sludges, and all individual activities permitted under R.61-9.503 to ensure that an undesirable level of odor does not exist.

1. The permittee is required to prepare an odor abatement plan for the sewage sludge treatment sites, any sludge storage or lagoon areas, and land application or surface disposal sites. It must be noted this state regulation that went into effect on June 27, 2003, and continues in effect, required permittees that land-apply sludge to prepare the plan by December 24, 2003. Otherwise, the permittee had until June 27, 2004 to prepare the plan and this requirement remains in effect. The plan must have included the following topics:
 - a. Operation and maintenance practices which are used to eliminate or minimize undesirable odor levels in the form of best management practices for odor control.
 - b. Use of treatment processes for the reduction of undesirable odors;
 - c. Use of setbacks.
 - d. Contingency plans and methods to address odor problems for the different type of disposal/application methods used.
2. Unless otherwise requested, prior to issuance of a new or expanded land application disposal permit, the Department may review the odor abatement plan for compliance with this Part (503.50). The Department may require changes to the plan as appropriate.

3. No permittee may cause, allow, or permit emission into the ambient air of any substance or combinations of substances in quantities that an undesirable level of odor is determined to result unless preventative measures of the type set out below are taken to abate or control the emission to the satisfaction of the Department. When an odor problem comes to the attention of the Department through field surveillance or specific complaints, the Department may determine, in accordance with section 48-1-120 of the Pollution Control Act, if the odor is at an undesirable level by considering the character and degree of injury or interference to:
 - a. The health or welfare of the people;
 - b. Plant, animal, freshwater aquatic, or marine life;
 - c. Property; or
 - d. Enjoyment of life or use of affected property.
4. After determining that an undesirable level of odor exists, the Department may require:
 - a. the permittee to submit a corrective action plan to address the odor problem,
 - b. remediation of the undesirable level of odor within a reasonable timeframe, and
 - c. in an order, specific methods to address the problem.
5. In accordance with R.61-9.503.50(e), if the permittee fails to control or abate the odor problems addressed in this section within the specified timeframe, the Department may revoke disposal/application activities associated with the site or the specific aspect of the sludge management program.

E. [Reserved]

F. [Reserved]

G. Additional Operational Requirements

1. The wastewater treatment plant is assigned a classification of (see EXCEL spreadsheet). This classification corresponds to an operator with a grade of (see EXCEL spreadsheet).
2. The wastewater treatment plant is assigned a Reliability Classification of (see EXCEL spreadsheet), in accordance with Section 67.400 "Reliability Classifications" of the Standards for Wastewater Facility Construction: R.61-67.
3. For parameters with a sample frequency of once per month or greater, the Permittee shall monitor (at least one sample) consistent with conditions established by this Permit on the (see EXCEL spreadsheet) of every calendar month, unless otherwise approved by the Department. (For

example; with a once per week (01/07) sampling frequency, the permittee shall monitor one weekly sample on the day of the week noted during the monthly DMR reporting period.)

For parameters with a sampling frequency of less than once per month (if any), the permittee shall monitor these parameters on specific date noted above on any of the months during the appropriate reporting period unless otherwise approved by the Department. (For example, with a once per quarter (1/90) sampling frequency, the permittee may monitor on the day of the week noted in either the first, second or third month in the quarterly reporting period.)

For parameters requiring multiple samples for a single test the Permittee may collect the samples on any date during the reporting period, unless otherwise approved by the Department. The permittee must notify the Department of the planned sampling dates upon request.

In accordance with R.61-9.122.41(j)(1)(iii), the Department may waive compliance with the permit requirement for a specific sampling event for extenuating circumstances. Additional monitoring, as necessary to meet the frequency requirements of this Permit (Part IV, if applicable) shall be performed by the Permittee.

4. Wastewater Design Flow

- a. For the purposes of identification of the treatment capacity (under R.61-67.300.A.8) the design flow is (see EXCEL spreadsheet).
- b. For NPDES billing (under R.61-30.B(2)(b)), the “actual flow” limit for this wastewater treatment facility shall be identified as the design flow of (see EXCEL spreadsheet).

5. Water Treatment Plant Notification

The permittee shall notify any downstream water treatment plants within fifteen (15) miles downstream of any emergency condition, plant upset, bypass or other system failure, which has the potential to affect the quality of water withdrawn for drinking purposes:

This notification should be made as soon as possible and in anticipation of such event, if feasible, without taking away any response time necessary to attempt to alleviate this situation.

6. Sludge transportation and disposal requirements, if applicable, shall hereby be incorporated by reference into this permit from the attached “Sludge Removal and Transportation Approval” letter.

H. Secondary Treatment (POTW's only) - Percent Removal (BOD₅, CBOD₅ and TSS)

1. In accordance with R.61-9.133.102,103 and 105, the 30 day average percent removal for BOD₅, CBOD₅ (if applicable) and TSS have been identified in Part X, "Effluent Limitations and Monitoring Requirements". For purposes of reporting the 30-day average percent removal for BOD₅, CBOD₅ (if applicable) and TSS across the treatment plant, the permittee shall conduct influent and effluent sampling for BOD₅, CBOD₅ (if applicable) and TSS during a 30-day reporting as follows:

I. Secondary Treatment (POTW's only) - Percent Removal for Lagoons (BOD₅ and CBOD₅)

1. In accordance with R.61-9.133.102,103 and 105, the 30 day average percent removal for BOD₅ and/or CBOD₅ (if applicable) have been identified in Part X, "Effluent Limitations and Monitoring Requirements". For purposes of reporting the 30-day average percent removal for BOD₅ and/or CBOD₅ (if applicable) across the treatment plant, the permittee shall conduct influent and effluent sampling for BOD₅ and/or CBOD₅ (if applicable) during a 30-day reporting as follows: **(FOR LAGOONS)**

Influent Sampling:

- At a minimum during any 30-day reporting period, collect grab or composite influent sample(s) at a frequency identified in Part X. The procedure to collect a composite sample shall be in accordance with Part I.E and a grab sample shall be in accordance with Part I.P.
- If only one influent sample is collected during any 30-day reporting period (provided this meets the minimum frequency specified in Part X), then that sample shall be considered as the 30-day average influent concentration for a given parameter.
- If more than one influent samples are collected during the 30-day reporting period, then all individual values for a given parameter shall be averaged to determine the 30-day average influent concentration.

Effluent Sampling:

- Effluent data collected for permit compliance can be used, provided sufficient samples are collected to meet the frequency specified in Part X.
- If more than one effluent samples are collected during the 30-day reporting period, then all individual values for a given parameter shall be averaged to determine the 30-day average effluent concentration.

Percent Removal Determination:

- Determine the 30-day average percent removal for a given parameter using the formula below:

$$30\text{-day average percent removal} = \frac{C_{\text{influent}} - C_{\text{effluent}}}{C_{\text{influent}}} \times 100$$

where:

C_{influent} = Average of all influent samples collected during the 30-day reporting period in (mg/l).

C_{effluent} = Average of all effluent samples collected during the 30-day reporting period in (mg/l).

2. The Department may substitute either a lower percent removal requirement or a mass loading limit for the percent removal requirements set forth in section 133.102(a)(3), section 133.102(a)(4)(iii), section 133.102(b)(3), section 133.105(a)(3), section 133.105(b)(3) and section 133.105(e)(1)(iii) provided that the permittee satisfactorily demonstrates that:
 - (a) The treatment works is consistently meeting, or will consistently meet, its permit effluent concentration limits but its percent removal requirements cannot be met due to less concentrated influent wastewater,
 - (b) To meet the percent removal requirements, the treatment works would have to achieve significantly more stringent limitations than would otherwise be required by the concentration-based standard. In accordance with R.61-9.133.101(j), "Significantly more stringent limitation" means BOD₅ and TSS limitations necessary to meet the percent removal requirements of at least 5 mg/l more stringent than the otherwise applicable concentration-based limitations (e.g., less than 25 mg/l in the case of the secondary treatment limits for BOD₅ and TSS), or the percent removal limitations in section 133.102 and section 133.105, if such limits would, by themselves, force significant construction or other significant capital expenditure.
 - (c) The less concentrated influent wastewater is not the result of excessive I/I. The determination of whether the less concentrated wastewater is the result of excessive I/I will use the definition of excessive I/I in 40 CFR 35.2005(b)(16) plus the additional criterion that inflow is non-excessive if the total flow to the POTW (i.e., wastewater plus inflow plus infiltration) is less than 275 gallons per capita per day.

Part X. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Wastewater treatment facilities (domestic wastewater sources only) with no compliance schedules and a design flow less than or equal to 50,000 gallons per day

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited at each outfall and monitored by the permittee as specified below:

Following limits are based on the average design flow of: ① MGD													
EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (Public Facilities - POTW)						DISCHARGE LIMITATIONS (Private Facilities)				MONITORING REQUIREMENTS		
	Pounds per Day			Other Units			Pounds per Day		Other Units		Measurement Frequency	Sample Type	Sample Point
	Monthly Average	Weekly Average	Daily Max.	Monthly Average	Weekly Average	Daily Max.	Monthly Average	Daily Max.	Monthly Average	Daily Max.			
Flow	---	---	---	MR MGD	MR MGD	---	---	---	MR MGD	MR MGD	1/Month	Inst. +	Eff.
BOD ₅	②	②	---	③ mg/l	③ mg/l	---	②	②	③ mg/l	③ mg/l	1/Month	24 Hr C	Eff.
TSS	②	②	---	④ mg/l	④ mg/l	---	②	②	④ mg/l	④ mg/l	1/Month	24 Hr C	Eff.
NH ₃ -N (Mar-Oct)	②	②	---	⑤ mg/l	⑤ mg/l	---	②	②	⑤ mg/l	⑤ mg/l	1/Month	24 Hr C	Eff.
NH ₃ -N (Nov-Feb)	②	②	---	⑥ mg/l	⑥ mg/l	---	②	②	⑥ mg/l	⑥ mg/l	1/Month	24 Hr C	Eff.
TRC	②	---	②	⑦ mg/l	---	⑦ mg/l	②	②	⑦ mg/l	⑦ mg/l	1/Month	Grab	Eff.
DO	---	---	---	⑧ mg/l Minimum at all times			---	---	⑧ mg/l Minimum at all times		Week-Days	Grab	Eff.
pH	---	---	---	⑨ - ⑩ Standard Units			---	---	⑨ - ⑩ Standard Units		Week-Days	Grab	Eff.
BOD ₅ (% Removal) §	---	---	---	* % (Min.)	---	---	---	---	---	---	1/Month	Calc.	---
TSS (% Removal) §	---	---	---	**% (Min.)	---	---	---	---	---	---	1/Month	Calc.	---

① Design Flow from Excel sheet
 ② Mass in pounds per day from Excel sheet
 ③ BOD₅ concentration in mg/l from Excel sheet
 ④ TSS concentration in mg/l from Excel sheet
 ⑤ NH₃-N concentration (Mar-Oct) in mg/l from Excel sheet
 * BOD₅ percent removal (POTW's only) from Excel sheet
 § See Part IX.H.

⑥ NH₃-N concentration (Nov-Feb) in mg/l from Excel sheet
 ⑦ TRC concentration in mg/l from Excel sheet
 ⑧ Minimum DO in mg/l from Excel sheet
 ⑨ pH Lower range limit (standard units) from Excel sheet
 ⑩ pH Upper range limit (standard units) from Excel sheet
 ** TSS percent removal (POTW's only) from Excel sheet
 + The flow to be reported shall either be the average of eight instantaneous flow readings or the continuous flow measurement used in obtaining the composite samples as required in Part I.E.

B. Wastewater treatment facilities (domestic wastewater sources only) with no compliance schedules and a design flow greater than 50,000 gallons per day and less than 500,000 gallons per day

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited at each outfall and monitored by the permittee as specified below:

Following limits are based on the average design flow of: ① MGD													
EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (Public Facilities - POTW)						DISCHARGE LIMITATIONS (Private Facilities)				MONITORING REQUIREMENTS		
	Pounds per Day			Other Units			Pounds per Day		Other Units		Measurement Frequency	Sample Type	Sample Point
	Monthly Average	Weekly Average	Daily Max.	Monthly Average	Weekly Average	Daily Max.	Monthly Average	Daily Max.	Monthly Average	Daily Max.			
Flow	---	---	---	MR MGD	MR MGD	---	---	---	MR MGD	MR MGD	2/Month	Cont.	Eff.
BOD ₅	②	②	---	③ mg/l	③ mg/l	---	②	②	③ mg/l	③ mg/l	2/Month	24 Hr C	Eff.
TSS	②	②	---	④ mg/l	④ mg/l	---	②	②	④ mg/l	④ mg/l	2/Month	24 Hr C	Eff.
NH ₃ -N (Mar-Oct)	②	②	---	⑤ mg/l	⑤ mg/l	---	②	②	⑤ mg/l	⑤ mg/l	2/Month	24 Hr C	Eff.
NH ₃ -N (Nov-Feb)	②	②	---	⑥ mg/l	⑥ mg/l	---	②	②	⑥ mg/l	⑥ mg/l	2/Month	24 Hr C	Eff.
TRC	②	---	②	⑦ mg/l	---	⑦ mg/l	②	②	⑦ mg/l	⑦ mg/l	2/Month	Grab	Eff.
DO	---	---	---	⑧ mg/l Minimum at all times			---	---	⑧ mg/l Minimum at all times		Week-Days	Grab	Eff.
pH	---	---	---	⑨ - ⑩ Standard Units			---	---	⑨ - ⑩ Standard Units		Week-Days	Grab	Eff.
BOD ₅ (% Removal) §	---	---	---	* % (Min.)	---	---	---	---	---	---	2/Month	Calc.	---
TSS (% Removal) §	---	---	---	**% (Min.)	---	---	---	---	---	---	2/Month	Calc.	---

- ① Design Flow from Excel sheet
- ② Mass in pounds per day from Excel sheet
- ③ BOD₅ concentration in mg/l from Excel sheet
- ④ TSS concentration in mg/l from Excel sheet
- ⑤ NH₃-N concentration (Mar-Oct) in mg/l from Excel sheet
- * BOD₅ percent removal (POTW's only) from Excel sheet
- § See Part IX.H.

- ⑥ NH₃-N concentration (Nov-Feb) in mg/l from Excel sheet
- ⑦ TRC concentration in mg/l from Excel sheet
- ⑧ Minimum DO in mg/l from Excel sheet
- ⑨ pH Lower range limit (standard units) from Excel sheet
- ⑩ pH Upper range limit (standard units) from Excel sheet
- ** TSS percent removal (POTW's only) from Excel sheet

C. Whole Effluent Toxicity Limitations and Monitoring Requirements discharging to Freshwaters Class FW or FW sp as classified by S.C. Regulation 61-68, Water Classifications and Standards, and Regulation 61-69, Classified Waters

Final Limitations: During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited at each outfall and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Other Units		Measurement Frequency	Sample Type
	Monthly Average	Daily Maximum		
Whole Effluent Toxicity Acute Testing @ ATC = \$%	---	0	1/year	24 Hour Composite

1. Samples used to demonstrate compliance with the discharge limitations and monitoring requirements specified above shall be taken at or near the final point-of-discharge but, prior to mixing with the receiving waters or other waste streams.
2. A 48-hour static acute toxicity test shall be conducted at the frequency stated above using a control and the acute test concentration (ATC) of \$%. The test shall be conducted using *Ceriodaphnia dubia* as the test organism using EPA Method 2002.0 in accordance with "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms," EPA 821/R-02/012 (October 2002). The test shall be conducted at 25°C ±1°C.
3. If the test group *Ceriodaphnia dubia* survival is less than the control group survival at the 0.05α level of a left-tailed Fisher's exact test, the test shall be deemed a failure.
4. The permittee must report on the discharge monitoring report (DMR) form whether the test passes or fails at the specified ATC. If the test fails, the number "1" shall be placed on the form. If the test passes, the number "0" shall be placed on the form. If more than one test is performed during a monitoring period (including tests from split samples), the worst case result shall be reported on the DMR. The DMR Attachment for Toxicity Test Results, DHEC Form 3420, shall also be completed and submitted with the DMR.
5. \$% = (see RATIONALE and EXCEL spreadsheet). Default IWC is 100% if no mixing zone analysis provided and if IWC calculation is less than 80%. IWC will be actual dilution between 80% and 100%.

D. Whole Effluent Toxicity Limitations and Monitoring Requirements discharging to Saltwaters Class SA or SA sp or SB or SB sp or SFH (existing) as classified by S.C. Regulation 61-68, Water Classifications and Standards, and Regulation 61-69, Classified Waters

Final Limitations: During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited at each outfall and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Other Units		Measurement Frequency	Sample Type
	Monthly Average	Daily Maximum		
Whole Effluent Toxicity Acute Testing @ ATC = \$%	---	0	1/year	24 Hour Composite

1. Samples used to demonstrate compliance with the discharge limitations and monitoring requirements specified above shall be taken at or near the final point-of-discharge but, prior to mixing with the receiving waters or other waste streams.
2. A 48-hour static acute toxicity test shall be conducted at the frequency stated above using a control and the acute test concentration (ATC) of \$%. The test shall be conducted using *Mysidopsis bahia* as the test organism using Method 2007.0 in accordance with “Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms,” EPA 821-R-02-012, 5th ed., 2002. The test shall be conducted at 25°C ±1°C. The effluent’s salinity may be adjusted to 20 to 30 parts per thousand (ppt) by the addition of salts before the test is performed. The effluent shall not be diluted to achieve a lower salinity.
3. If the test group *Mysidopsis bahia* survival is less than the control group survival at the 0.05α level of a left-tailed Fisher’s exact test, the test shall be deemed a failure.
4. The permittee must report on the discharge monitoring report (DMR) form whether the test passes or fails at the specified ATC. If the test fails, the number “1” shall be placed on the form. If the test passes, the number “0” shall be placed on the form. If more than one test is performed during a monitoring period (including tests from split samples), the worst case result shall be reported on the DMR. The DMR Attachment for Toxicity Test Results, DHEC Form 3420, shall also be completed and submitted with the DMR.
5. \$% = (see RATIONALE and EXCEL spreadsheet). Default IWC is 100% if no mixing zone analysis provided and if IWC calculation is less than 80%. IWC will be actual dilution between 80% and 100%.

E. Chronic Whole Effluent Toxicity Limitations and Monitoring Requirements discharging to Freshwaters Class FW or FW sp as classified by S.C. Regulation 61-68, Water Classifications and Standards, and Regulation 61-69, Classified Waters

Final Limitations: During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
<i>Ceriodaphnia dubia</i> Chronic Whole Effluent Toxicity @ CTC= \$%	MR%	MR%	1/year	24 hour composite

MR = Monitor and Report.

See Part IX.B.2 for additional toxicity reporting requirements.

The following notes apply only to valid tests. For invalid tests see Part IX.B.2.

- 1: The overall % effect is defined as the larger of the % survival effect or the % reproduction effect.
- 2: If only one test is conducted during a month, the monthly average and daily maximum are each equal to the overall % effect.
- 3: If more than one test is conducted during a month, the monthly average is the arithmetic mean of the overall % effect values of all tests conducted during the month.
- 4: The monthly average to be reported on the DMR is the highest monthly average for any month during the monitoring period. There is no averaging of data from tests from one month to another.
- 5: The daily maximum to be reported on the DMR is the highest of the % survival effect or % reproduction effect of all tests conducted during the monitoring period.
- 6: When a sample is collected in one month and the test is completed in the next month, the overall % effect applies to the month in which the sample was collected.
- 7: Tests must be separated by at least 7 days (from the time the first sample is collected to start one test until the time the first sample is collected to start a different test). There is no restriction on when a new test may begin following a failed or invalid test.
- 8: For any split sample:
 - a. Determine the % survival effect and % reproduction effect values separately for each test.
 - b. Determine the arithmetic mean of the % survival effects and of the % reproduction effects for all tests.
 - c. The monthly average and daily maximum shall be the higher of the % effect values from (b) above.
 - d. For the purposes of reporting, split samples are reported as an individual sample regardless of the number of times it is split. All laboratories used shall be identified on the DMR attachment and each test shall be reported individually.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): after treatment but prior to mixing with the receiving stream or other waste streams for each monitored outfall.

\$% = (see RATIONALE and EXCEL spreadsheet). Default IWC is 100% if no mixing zone analysis provided and if IWC calculation is less than 80%. IWC will be actual dilution between 80% and 100%.

F. Chronic Whole Effluent Toxicity Limitations and Monitoring Requirements discharging to Saltwaters Class SA or SA sp or SB or SB sp or SFH (existing) as classified by S.C. Regulation 61-68, Water Classifications and Standards, and Regulation 61-69, Classified Waters

Final Limitations: During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
<i>Mysidopsis bahia</i> Chronic Whole Effluent Toxicity @ CTC= \$%	MR %	MR %	1/year	24 hour composite

MR = Monitor and Report.

See Part IX.B.2 for additional toxicity reporting requirements.

The following notes apply only to valid tests. For invalid tests see Part IX.B.2. The % fecundity effect is not used below when inadequate control fecundity occurs (egg production by less than 50% of females). Inadequate control fecundity alone does not invalidate the toxicity test.

- 1: The overall % effect is defined as the larger of the % survival effect, the % growth effect or the % fecundity effect.
- 2: If only one test is conducted during a month, the monthly average and daily maximum are each equal to the overall % effect.
- 3: If more than one test is conducted during a month, the monthly average is the arithmetic mean of the overall % effect values of all tests conducted during the month.
- 4: The monthly average to be reported on the DMR is the highest monthly average for any month during the monitoring period. There is no averaging of data from tests from one month to another.
- 5: The daily maximum to be reported on the DMR is the highest of the % survival effect, % growth effect or % fecundity effect of all tests conducted during the monitoring period.
- 6: When a sample is collected in one month and the test is completed in the next month, the overall % effect applies to the month in which the sample was collected.
- 7: Tests must be separated by at least 7 days (from the time the first sample is collected to start one test until the time the first sample is collected to start a different test). There is no restriction on when a new test may begin following a failed or invalid test.
- 8: For any split sample:
 - a. Determine the % survival effect, % growth effect and % fecundity effect values separately for each test.
 - b. Determine the arithmetic mean of the % survival effects, of the % growth effects and of the % fecundity effects for all tests.
 - c. The monthly average and daily maximum shall be the higher of the % effect values from (b) above.
 - d. For the purposes of reporting, split samples are reported as an individual sample regardless of the number of times it is split. All laboratories used shall be identified on the DMR attachment and each test shall be reported individually.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): after treatment but prior to mixing with the receiving stream or other waste streams for each monitored outfall.

\$% = (see RATIONALE and EXCEL spreadsheet). Default IWC is 100% if no mixing zone analysis provided and if IWC calculation is less than 80%. IWC will be actual dilution between 80% and 100%.

G. Bacteria Limitations and Monitoring Requirements discharging to Freshwaters (FW and FW sp)

1. **FINAL LIMITS:** During the period beginning on the effective date of this permit, and lasting until the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

If each E. coli daily maximum (as defined by R.61-68.B.29) during a calendar month reporting period is **less than or equal to** 349 MPN/100 ml **or** the provisions of R.61-68.E.14(c)(12), included as “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit, were **not** met, then the following limits apply:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
E. coli (MPN/100ml)	126	349	①	Grab	Effluent

① See Rationale

Otherwise, report “Conditional Monitoring-Not Required” on the Discharge Monitoring Report (DMR) form for this portion (Part X.G.1) of the permit, and report all E. coli data for this monitoring period in paragraph 2 below.

2. **FINAL LIMITS:** During the period beginning on the effective date of this permit, and lasting until the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

If any E. coli daily maximum (as defined by R.61-68.B.29) during a calendar month reporting period is **greater than** 349 MPN/100 ml **and** in each instance the provisions of R.61-68.E.14(c)(12), included as “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit, **were** met, then the following limits apply:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Individual Sample Maximum	Measurement Frequency	Sample Type	Sample Point
E. coli (MPN/100ml)	126	800*	①	Grab	Effluent

* For this reporting period only.

① See Rationale

Otherwise report “Conditional Monitoring-Not Required” on the Discharge Monitoring Report (DMR) form for this portion (Part X.G.2) of the permit, and report all E. coli data for this monitoring period in paragraph 1 above. In addition, if data is reported in paragraph 2, the “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit **must** be attached to the Discharge Monitoring Report (DMR) and signed by the authorized DMR representative, documenting compliance with the provisions of R.61-68.E.14(c)(12). If this attachment is not included with the DMR submittal, the permittee may **not** use this portion (Part X.G.2) for reporting E. coli data.

Note for 1 and 2 above: Sample results reported should include all data collected for this monitoring period including any additional E. coli samples that might be collected under the provisions of R.61-68.E.14(c)(12).

H. Bacteria Limitations and Monitoring Requirements discharging to Saltwaters (SA and SA sp)

1. **FINAL LIMITS:** During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

If each Enterococci daily maximum (as defined by R.61-68.B.29) during a calendar month reporting period is less than or equal to 104 MPN/100 ml or the provisions of R.61-68.E.14(c)(12), included as “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit, were not met, then the following limits apply:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Enterococci (MPN/100ml)	35	104	①	Grab	Effluent

① See Rationale

Otherwise, report “Conditional Monitoring-Not Required” on the Discharge Monitoring Report (DMR) form for this portion (Part X.H.1) of the permit, and report all Enterococci data for this monitoring period in paragraph 2 below.

2. **FINAL LIMITS:** During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

If any Enterococci daily maximum (as defined by R.61-68.B.29) during a calendar month reporting period is **greater than** 104 MPN/100 ml **and** in each instance the provisions of R.61-68.E.14(c)(12), included as “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit, **were** met, then the following limits apply:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Individual Sample Maximum	Measurement Frequency	Sample Type	Sample Point
Enterococci (MPN/100ml)	35	800*	①	Grab	Effluent

* For this reporting period only.

① See Rationale

Otherwise, report “Conditional Monitoring-Not Required” on the Discharge Monitoring Report (DMR) form for this portion (Part X.H.2) of the permit, and report all Enterococci data for this monitoring period in paragraph 1 above. In addition, if data is reported in paragraph 2, the “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit **must** be attached to the Discharge Monitoring Report (DMR) and signed by the authorized DMR representative, documenting compliance with the provisions of R.61-68.E.14(c)(12). If this attachment is not included with the DMR submittal, the permittee may **not** use this portion (Part X.H.2) for reporting Enterococci data.

Note for 1 and 2 above: Sample results reported should include all data collected for this monitoring period including any additional Enterococci samples that might be collected under the provisions of R.61-68.E.14(c)(12).

I. Bacteria Limitations and Monitoring Requirements discharging to Saltwaters (SB and SB sp)

1. **FINAL LIMITS:** During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

If each Enterococci daily maximum (as defined by R.61-68.B.29) during a calendar month reporting period is **less than or equal to** 501 MPN/100 ml **or** the provisions of R.61-68.E.14(c)(12), included as “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit, were **not** met, then the following limits apply:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Enterococci (MPN/100ml)	35	501	①	Grab	Effluent

① See Rationale

Otherwise report “Conditional Monitoring-Not Required” on the Discharge Monitoring Report (DMR) form for this portion (Part X.I.1) of the permit, and report all Enterococci data for this monitoring period in paragraph 2 below.

2. **FINAL LIMITS:** During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

If any Enterococci daily maximum (as defined by R.61-68.B.29) during a calendar month reporting period is **greater than** 501 MPN/100 ml **and** in each instance the provisions of R.61-68.E.14(c)(12), included as “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit, **were** met, then the following limits apply:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Individual Sample Maximum	Measurement Frequency	Sample Type	Sample Point
Enterococci (MPN/100ml)	35	800*	①	Grab	Effluent

* For this reporting period only.

① See Rationale

Otherwise, report “Conditional Monitoring-Not Required” on the Discharge Monitoring Report (DMR) form for this portion (Part X.I.2) of the permit, and report all Enterococci data for this monitoring period in paragraph 1 above. In addition, if data is reported in paragraph 2, the “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit **must** be attached to the Discharge Monitoring Report (DMR) and signed by the authorized DMR representative, documenting compliance with the provisions of R.61-68.E.14(c)(12). If this attachment is not included with the DMR submittal, the permittee may **not** use this portion (Part X.I.2) for reporting Enterococci data.

Note for 1 and 2 above: Sample results reported should include all data collected for this monitoring period including any additional Enterococci samples that might be collected under the provisions of R.61-68.E.14(c)(12).

J. Bacteria Limitations and Monitoring Requirements discharging to Saltwaters SFH (existing) or any waters regardless of class that can affect shellfish

1. **FINAL LIMITS:** During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

If each Fecal Coliform daily maximum (as defined by R.61-68.B.29) during a calendar month reporting period is **less than or equal to** 43 MPN/100 ml **or** the provisions of R.61-68.E.14(c)(12), included as “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit, were **not** met, then the following limits apply:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Fecal Coliform (MPN/100ml)	14	43	①	Grab	Effluent

① See Rationale

Otherwise, report “Conditional Monitoring-Not Required” on the Discharge Monitoring Report (DMR) form for this portion (Part X.J.1) of the permit, and report all Fecal Coliform data for this monitoring period in paragraph 2 below.

2. **FINAL LIMITS:** During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

If any Fecal Coliform daily maximum (as defined by R.61-68.B.29) during a calendar month reporting period is **greater than** 43 MPN/100 ml **and** in each instance the provisions of R.61-68.E.14(c)(12), included as “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit, **were** met, then the following limits apply:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Individual Sample Maximum	Measurement Frequency	Sample Type	Sample Point
Fecal Coliform (MPN/100ml)	14	200*	①	Grab	Effluent

* For this reporting period only.

① See Rationale

Otherwise, report “Conditional Monitoring-Not Required” on the Discharge Monitoring Report (DMR) form for this portion (Part X.J.2) of the permit, and report all Fecal Coliform data for this monitoring period in paragraph 1 above. In addition, if data is reported in paragraph 2, the “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit **must** be attached to the Discharge Monitoring Report (DMR) and signed by the authorized DMR representative, documenting compliance with the provisions of R.61-68.E.14(c)(12). If this attachment is not included, the permittee may **not** use this portion (Part X.J.2) for reporting Fecal Coliform data.

Note for 1 and 2 above: Sample results reported should include all data collected for this monitoring period including any additional Fecal Coliform samples that might be collected under the provisions of R.61-68.E.14(c)(12).

3. **FINAL LIMITS:** During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

If each Enterococci daily maximum (as defined by R.61-68.B.29) during a calendar month reporting period is **less than or equal to** 104 MPN/100 ml **or** the provisions of R.61-68.E.14(c)(12), included as “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit, were **not** met, then the following limits apply:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Enterococci (MPN/100ml)	35	104	①	Grab	Effluent

① See Rationale

Otherwise, report “Conditional Monitoring-Not Required” on the Discharge Monitoring Report (DMR) for this portion (Part X.J.3) of the permit, and report all Enterococci data for this monitoring period in paragraph 4 below.

4. **FINAL LIMITS:** During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited and monitored by the permittee as specified below:

If any Enterococci daily maximum (as defined by R.61-68.B.29) during a calendar month reporting period is **greater than** 104 MPN/100 ml **and** in each instance the provisions of R.61-68.E.14(c)(12), included as “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit, **were** met, then the following limits apply:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Individual Sample Maximum	Measurement Frequency	Sample Type	Sample Point
Enterococci (MPN/100ml)	35	800*	①	Grab	Effluent

* For this reporting period only.

① See Rationale

Otherwise, report “Conditional Monitoring-Not Required” on the Discharge Monitoring Report (DMR) for this portion (Part X.J.4) of the permit, and report all Enterococci data for this monitoring period in paragraph 3 above. In addition, if data is reported in paragraph 4, the “Bacteria Supplemental Data Sheet” contained in Part X.K of this permit **must** be attached to the Discharge Monitoring Report (DMR) and signed by the authorized DMR representative, documenting compliance with the provisions of R.61-68.E.14(c)(12). If this attachment is not included, the permittee may **not** use this portion (Part X.J.4) for reporting Enterococci data.

Note for 3 and 4 above: Sample results reported should include all data collected for this monitoring period including any additional Enterococci samples that might be collected under the provisions of R.61-68.E.14(c)(12).

K. Bacteria Supplemental Data Sheet

MONITORING PERIOD

YEAR MO DAY		YEAR MO DAY	
FROM		TO	

Select the current daily maximum limit	<input type="checkbox"/> 349 MPN/100 ml (E.coli) <input type="checkbox"/> 104 MPN/100 ml (Enterococci) <input type="checkbox"/> 501 MPN/100 ml (Enterococci) <input type="checkbox"/> 43 MPN/100 ml (Fecal coliform)
--	---

1. Report data and sample time for daily maximum bacteria value greater than the permitted limitation.

Sample Result (MPN/100 ml) §	Sample Date (mm/dd/yyyy)	Sample Time (24 Hr. Format)	Parameter
	/ /	: hrs	<input type="checkbox"/> E.coli <input type="checkbox"/> Enterococci <input type="checkbox"/> Fecal coliform

§ Sample result above must be less than or equal to 800 MPN/100 ml for E. coli and Enterococci or less than or equal to 200 MPN/100 ml for Fecal Coliform to use this form.

2. Two additional bacterial samples collected within 48 hours of the original sample result (of item #1) that exceeded the daily maximum limitation.

Sample Number	Sample Result (MPN/100 ml)	Sample Date (mm/dd/yyyy)	Sample Time (24 Hr. Format)	Parameter
1.		/ /	: hrs	<input type="checkbox"/> E.coli <input type="checkbox"/> Enterococci <input type="checkbox"/> Fecal coliform
2.		/ /	: hrs	<input type="checkbox"/> E.coli <input type="checkbox"/> Enterococci <input type="checkbox"/> Fecal coliform

The two additional sample results in item #2, do not exceed the daily maximum bacteria limits in the permit and were collected within 48-hours of the original sample result of item #1.

Yes No*

3. Report the total number of bacterial samples collected in the previous twelve months: _____
(If requested, this data must be provided to the Department to verify this information)

4. Choose one of the following:

- a. The number from item #3 above is less than 120; and no more than one (1) bacterial sample exceeded the daily maximum limit in the previous twelve (12) months, and that value is identified in item #1 above.

- b. The number in item #3 above is 120 samples or more, and no more than four (4) individual bacterial samples exceeded the daily maximum limit in the previous twelve (12) months, and those values were:

Sample Number	Sample Result (MPN/100 ml)	Sample Date (mm/dd/yyyy)	Parameter
1.	Same as Item #1 above	Same as Item #1 above	Same as Item #1 above
2.		/ /	<input type="checkbox"/> E.coli <input type="checkbox"/> Enterococci <input type="checkbox"/> Fecal coliform
3.		/ /	<input type="checkbox"/> E.coli <input type="checkbox"/> Enterococci <input type="checkbox"/> Fecal coliform
4.		/ /	<input type="checkbox"/> E.coli <input type="checkbox"/> Enterococci <input type="checkbox"/> Fecal coliform

c. Neither (a) **nor** (b) above is true*.

5. The following statements are true:

- a. The disinfection equipment and wastewater solids handling system were fully functional and operating during this monitoring period.
- b. There is neither an existing Consent Order nor Administrative Order associated with the facility's operation of this disinfection system.
- c. The laboratory data included with this report is sufficiently sensitive to accurately represent the effluent bacteria concentrations. No values for the monitoring period were reported as ">" greater than.

* If you check any of the starred boxes or if statements 5(a), (b) or (c) are not true, you cannot use this form.

"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 the 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."

Name: _____

Signature: _____ Date: _____

Note: The bacteria supplemental data sheets are required only in the event the permittee reports bacteria data under Part X.G-J.

L. Phosphorus Limitations and Monitoring Requirements: Wastewater treatment facilities (domestic wastewater sources only) with no compliance schedules and a design flow less than or equal to 50,000 gallons per day

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited at each outfall and monitored by the permittee as specified below:

Following limits are based on the average design flow of: ① MGD							
EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS		
	Pounds per Day		Other Units		Measurement Frequency	Sample Type	Sample Point
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum			
Total Phosphorus	MR	MR	MR	MR	Semi-annual*	Grab	Eff.

① Design Flow from Excel sheet

* Semi-annual samples should be taken during the following periods. One sample between November to April and one sample between May to October. No two consecutive month samples (e.g. October and November or April and May) should be provided.

M. Phosphorus Limitations and Monitoring Requirements: Wastewater treatment facilities (domestic wastewater sources only) with no compliance schedules and a design flow greater than 50,000 gallons per day and less than 500,000 gallons per day

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited at each outfall and monitored by the permittee as specified below:

Following limits are based on the average design flow of: ① MGD							
EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS		
	Pounds per Day		Other Units		Measurement Frequency	Sample Type	Sample Point
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum			
Total Phosphorus	MR	MR	MR	MR	Quarterly	Grab	Eff.

① Design Flow from Excel sheet

N. Mercury Limitations and Monitoring Requirements: Wastewater treatment facilities (domestic wastewater sources only) with no compliance schedules and a design flow less than or equal to 50,000 gallons per day

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited at each outfall and monitored by the permittee as specified below:

Following limits are based on the average design flow of: ① MGD							
EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS		
	Pounds per Day		Other Units		Measurement Frequency	Sample Type	Sample Point
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum			
Total Mercury	MR	MR	MR	MR	1/5 Years	Grab	Eff.

① Design Flow from Excel sheet

- O. Mercury Limitations and Monitoring Requirements: Wastewater treatment facilities (domestic wastewater sources only) with no compliance schedules and a design flow greater than 50,000 gallons per day and less than 500,000 gallons per day**
1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from **outfall 001**. Such discharge shall be limited at each outfall and monitored by the permittee as specified below:

Following limits are based on the average design flow of: ① MGD							
EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS		
	Pounds per Day		Other Units		Measurement Frequency	Sample Type	Sample Point
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum			
Total Mercury	MR	MR	MR	MR	1/Year	Grab	Eff.

① Design Flow from Excel sheet

**FRESHWATER/SALTWATER COMBINED PERMIT
RATIONALE**



**Domestic Wastewater Treatment Plant General Permit
NPDES Permit No. SCG570000
Design flows less than 500,000 GPD**

Permitting Engineer: Andrew Edwards

Date: October 2013

Facility Rating: Major: (EPA review required, General Permit)
Minor: (EPA review may be required; see below)

Facility Description (include SIC code): see EXCEL spreadsheet for details

Facility Location: State of South Carolina

County: All Counties

Watershed: All Watersheds

Permit based on NPDES Permit Application: Notice of Intent

Application Received Date: Various dates for permit reissues

Issuance (New) Reissuance Modification Expansion of existing facility

If this application is for a new or expansion of an existing facility, is the anti-degradation assessment completed, per the requirements of R.61-68.D: N/A

Number of Outfalls: 16 proposed conversions from an existing issued individual NPDES permits (see EXCEL spreadsheet for details) plus any new proposed outfalls during the general permit life.

Effluent Comprised of: Domestic wastewater treatment plants effluent as described herein.

This permit may cover all new, expanding or existing point source discharges from domestic wastewater treatment plants (or other covered activities) with a design flow of less than 500,000 gallons per day into waters of the state of South Carolina but does not include either new or expanding dischargers into SFH waters. This permit may cover all new, expanding or existing point source discharges from industrial facilities with domestic wastewater only (no process wastewater) and with a design flow of less than 500,000 gallons per day into waters of the state of South Carolina.

The effluent limits will be based on the 7Q10 of the receiving stream and calculated using the formulas from the general permit rationale and related tables or information from the general permit.

This permit does not authorize discharges that have a design flow of more than 500,000 gallons per day, or includes a pretreatment program under R.61-9.403, or receives wastewater from categorical sources per R.61-9.403 or stormwater subject to separate stormwater regulations. This permit also does not include new (as of the date of the issue date for the general permit) or expanding dischargers into Class SFH waters.

Limitations on Coverage:

The following wastewater treatment plant discharges are not authorized by this permit:

a. discharges that are:

- (1) mixed with other wastewater from categorical sources per R.61-9.403 and/or process wastewater unless those discharges are in compliance with a different NPDES permit; or

- (2) discharges of hazardous substances or oils, identified by and in compliance with Part VIII.A;
- b. discharges which are subject to an existing effluent limitation guideline addressing them;
- c. discharges that are subject to an existing NPDES individual or general permit; are located at a facility where an NPDES permit has been terminated or denied; or which are issued a permit in accordance with Part V.N (Requiring an Individual Permit or an Alternative General Permit) of this permit. Such discharges may be authorized under this permit after an existing permit expires or is canceled.
- d. discharges for waters other than those described;
- e. discharges whose receiving waters are not FRESHWATER (Class FW or FW sp) or Saltwater (Class SA, SA sp, SB, or SB sp), or (Class SFH, as qualified in Part II.A. above) as classified by S.C. Reg. 61-68, Water Classifications and Standards and 61-69, Classified Waters. This permit does not authorize discharges to Trout Waters (Class TPGT or TN), Outstanding Resource Waters (Class ORW), or Outstanding National Resource Waters (ONRW) as classified by S.C. Regulation 61-69.
- f. discharges that the Department has determined to be or which may reasonably be expected to be contributing to a violation of a water quality standard; and
- g. discharges that would adversely affect a listed endangered or threatened species or its critical habitat.

Types of Coverage:

This permit authorizes discharge of the following types of wastewater:

- a. Wastewater treatment facilities **with no** compliance schedules and a design flow less than or equal to 50,000 gallons per day and:
 - (1) A POTW with a discharge to Class Freshwaters (FW or FW sp).
 - (2) A POTW with a discharge to Class Saltwaters (SA or SA sp).
 - (3) A POTW with a discharge to Class Saltwaters (SB or SB sp).
 - (4) A POTW with a discharge to Class Saltwaters (SFH, existing facilities only).
 - (5) A privately owned treatment works with a discharge to Class Freshwaters (FW or FW sp).
 - (6) A privately owned treatment works with a discharge to Class Saltwaters (SA or SA sp).
 - (7) A privately owned treatment works with a discharge to Class Saltwaters (SB or SB sp).
 - (8) A privately owned treatment works with a discharge to Class Saltwaters (SFH, existing facilities only).
 - (9) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Freshwaters (FW or FW sp).
 - (10) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SA or SA sp).
 - (11) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SB or SB sp).
 - (12) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SFH, existing facilities only).
- b. Wastewater treatment facilities **with no** compliance schedules and a design flow greater than 50,000 gallons per day and less than 500,000 gallons per day and:
 - (1) A POTW with a discharge to Class Freshwaters (FW or FW sp).
 - (2) A POTW with a discharge to Class Saltwaters (SA or SA sp).
 - (3) A POTW with a discharge to Class Saltwaters (SB or SB sp).
 - (4) A POTW with a discharge to Class Saltwaters (SFH, existing facilities only).

- (5) A privately owned treatment works with a discharge to Class Freshwaters (FW or FW sp).
- (6) A privately owned treatment works with a discharge to Class Saltwaters (SA or SA sp).
- (7) A privately owned treatment works with a discharge to Class Saltwaters (SB or SB sp).
- (8) A privately owned treatment works with a discharge to Class Saltwaters (SFH, existing facilities only).
- (9) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Freshwaters (FW or FW sp).
- (10) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SA or SA sp).
- (11) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SB or SB sp).
- (12) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SFH, existing facilities only).

c. All facilities needing Toxicity Limitations in addition to the items above.

d. All facilities utilizing the bacterial requirements for documenting compliance with the provisions of R.61-68.E.14(c)(12).

Receiving Water: The permit covers all areas of South Carolina, where the discharge is into FRESHWATER (Class FW or FW sp) or SALTWATER (Class SA, SA sp, SB, or SB sp) as classified by S.C. Regulation 61-68, Water Classifications and Standards, and Regulation 61-69, Classified Waters. The permit also covers all areas of South Carolina, where the discharge is into SALTWATER (Class SFH) as classified by S.C. Regulation 61-68, Water Classifications and Standards, and Regulation 61-69, Classified Waters for existing dischargers only (as of the date of the issue date for the general permit) and does not include either new or expanding dischargers into SFH waters.

Receiving Water Classification (see R.61-68 for receiving water uses): See EXCEL spreadsheet for details

Does this discharge(s) have the potential to adversely affect waters in another state based on the county/waterbody in which it discharges? Yes (if yes, EPA review required)

Discharge to Impaired Waters: Yes

If Yes, the parameter(s) impaired from 303(d) list: see EXCEL spreadsheet for details, 2012 303(d) list

Enter the appropriate Design Flow: (Q_d) (MGD): varies up to 0.5 MGD depending on the facility (see EXCEL spreadsheet for details)

Does this permit include site-specific limits for any parameter(s)? Yes (see EXCEL spreadsheet for details) (if yes, EPA review required)

If Yes, the parameter(s) are: Dissolved Oxygen and pH (see EXCEL spreadsheet for details)

Stream Data from Wasteload Allocation various dates

Receiving Stream Flow Data:

7Q10 at discharge point (Q_{7Q10})	see EXCEL spreadsheet for details
Average Annual Flow at discharge point (AAF_d)	see EXCEL spreadsheet for details

Is the discharge above a drinking water intake? N/A

Map showing the SWP area and the discharge point included: N/A

7Q10 at source water protection area boundary (Q_{7Q10i})	N/A	
Average Annual Flow at source water protection area boundary (AAF_i)	N/A	

Data from Discharge Monitoring Reports (DMRs) and Notice of Intents (NOI's) (including all subsequent data presented) has been used to evaluate permit limitations.

I. GENERAL INFORMATION

- A. The effluent from this facility may be subject to the requirements of any of the following regulations: R.61-9.125, 129, 133, and 403; 40 CFR Part 136; Subchapter N (40 CFR Parts 400 through 402 and 404 through 471); R.61-9.503, R.61-9.504 and R.61-9.505.
- B. Authority: This permit is written in accordance with applicable laws and regulations including, but not limited to, Regulation 61-9, Regulation 61-68, Pollution Control Act and Clean Water Act.
- C. Under R.61-9.124.8 (Fact Sheet), a fact sheet shall be prepared for every draft permit for a major NPDES facility or activity, for every Class I sludge management facility, for every NPDES draft permit that incorporates a variance or requires an explanation under section 124.56(b), and for every draft permit which the Department finds is the subject of wide-spread public interest or raises major issues. The Rationale will be included as an attachment to the Fact Sheet prepared under this regulation.
- D. The conclusions noted in the Rationale establish proposed effluent limitations and permit requirements addressed in R.61-9.122.43 (Establishing Permit Conditions), R.61-9.122.44 (Establishing Limitations, Standards and other permit conditions) and other appropriate sections of R.61-9.

II. BACKGROUND AND PROCEDURES FOR PERMIT LIMIT DEVELOPMENT

- A. The receiving water 7Q10, annual average flow, tidal flow, tidal dilution or other critical flow condition at the discharge point, and 7Q10, annual average flow, tidal flow, tidal dilution or other critical flow condition at the boundary of the source water protection (SWP) area above a proposed or existing drinking water intake (if applicable) are determined by the SCDHEC's Wasteload Allocation Section. The 7Q10, annual average flow or other critical flow conditions are based on information published or verified by the USGS, an estimate extrapolation from published or verified USGS data or from data provided by the permittee. These flows may be adjusted by the Wasteload Allocation Section to account for existing water withdrawals that impact the flow. The 7Q10 (or 30Q5 if provided by the applicant), annual average flow at the discharge point, or other critical flow condition or 7Q10 (or 30Q5 if provided by the applicant), annual average flow or other critical flow condition at the boundary of the SWP area for a proposed or existing drinking water intake will be used to determine dilution factors, as appropriate, in accordance with R.61-68.C.4.a & 4.b for aquatic life, human health, and organoleptic effects respectively.
- B. Water and organism consumption and drinking water MCL data will be evaluated as human health values when calculating dilution factors. "The Department may, after Notice of Intent included in a notice of a proposed NPDES permit in accordance with Regulation 61-9.124.10, determine that drinking water MCLs or W/O shall not apply to discharges to those waterbodies where there is: no potential to affect an existing or proposed drinking water source and no state-approved source water protection area." For permitting purposes, a proposed drinking water source is one for which a complete permit application, including plans and specifications for the intake, is on file with the Department at the time of consideration of an NPDES permit application for a discharge that will affect or has the potential to affect the drinking water source." See R.61-68.E.14.c(5). The Department defines the source water protection (SWP) area to be the primary SWP area delineated by the Source-Water Assessment and

Protection (SWAP) Program initiated by the EPA and required by the states to identify SWP areas to protect drinking water sources. Using the procedure described in the document entitled, "Determination of the Primary and Secondary Source-Water Protection Areas for Selected Surface-Water Public-Supply Systems in South Carolina, 1999," USGS Water Resource Investigations Report 00-4097, the primary SWP area for a drinking water intake is the area which encompasses all 14-digit Hydrologic Unit Code (HUC) basins that adjoin streams, tributaries, and reservoirs between an intake and the upstream 10-percent exceedance, 24-hour travel distance (TOT₁₀). The entire basin above a drinking water intake has been designated as the SWP area where the drainage area is equal to or less than one HUC basin or is estimated to have less than 24-hours of instream travel time between the intake and the HUC basin in the headwaters of the drainage basin.

- C. Application of numeric criteria to protect human health: If separate numeric criteria are given for organism consumption, water and organism consumption (W/O), and drinking water Maximum Contaminant Levels (MCLs), they shall be applied as appropriate. The most stringent of the criteria shall be applied to protect the existing and classified uses of the waters of the State. See R.61-68.E.14.b(1).
- D. Numeric criteria have been established in R.61-68 based on organoleptic data (prevention of undesirable taste and odor). For those substances which have aquatic life and/or human health numeric criteria and organoleptic numeric criteria, the most stringent of the three shall be used for derivation of permit effluent limitations. See R.61-68.E.13.
- E. Sampling Frequency: Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit (R.61-9.122.41). Typically requirements to report monitoring results shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge but in no case less than once a year (R.61-9.122.44)
- F. Compliance Schedules:
1. A person issued an NPDES permit by the Department who is not in compliance with applicable effluent standards and limitations or other requirements contained therein at the time the permit is issued, shall be required to achieve compliance within a period of time as set forth by the Department, with effluent standards and limitations, with water quality standards, or with specific requirements or conditions set by the Department. The Department shall require compliance with terms and conditions of the permit in the shortest reasonable period of time as determined thereby or within a time schedule for compliance which shall be specified in the issued permit.
 2. If a time schedule for compliance specified in an NPDES permit which is established by the Department exceeds nine (9) months, the time schedule shall provide for interim dates of achievement for compliance with certain applicable terms and conditions of the permit. (R.61-9.122.47)
- G. Procedure for establishing effluent limitations:
1. Effluent limits (mass and concentration) for Five day Biochemical Oxygen Demand (BOD₅), Ultimate Oxygen Demand (UOD), Dissolved Oxygen (DO), Total Ammonia Nitrogen (as N), and Nutrients are established by the Wasteload Allocation (WLA) Section, with consideration given to technology-based limitations.
 - a. Five day Biochemical Oxygen Demand BOD₅, Ultimate Oxygen Demand (UOD), Dissolved Oxygen (DO):

Effluent limits for conventional oxygen demanding constituents (BOD₅, UOD and DO) are established to protect in-stream water quality and uses, while utilizing a portion of the assimilative capacity of the receiving water. The ability of a water body to assimilate oxygen-demanding substances is a function of its physical and chemical characteristics above and below the discharge point. Various mathematical techniques, called models, have been developed to estimate this capacity. The Department follows the

procedures as outlined in the “State/EPA Region IV Agreement on the Development of Wasteload Allocations/Total Maximum Daily Loads and NPDES Permit Limitations” dated October 30, 1991 (as updated) for determining the assimilative capacity of a given water body. Mathematical models such as QUAL2E and QUAL2E-UNCAS are used in accordance with “Enhanced Stream Water Quality Models QUAL2E and QUAL2E-UNCAS: Documentation and Users Manual” (EPA/600/3-87/007; dated May 1987) as updated. BOD₅ and UOD values determined from modeling results will be used in permitting as monthly average derived limits (C_{wla}). Daily maximum derived limits will be determined by multiplying the monthly average value by two.

For facilities subject to effluent guidelines limitations or other technology-based limitations, BOD₅ will also be evaluated in accordance with the applicable industrial categorical guidelines. These parameters will be identified in Part III of this rationale when they are applicable to the permit.

- b. Total Ammonia Nitrogen (as N): Note: Since protection of both freshwater and saltwater organisms is needed, the more stringent of all aquatic life criteria will be used to determine permit limits. See Part III for description of the controlling limit.

1. Freshwater

Ammonia limitations based on oxygen demand will be determined from modeling information as described above. These values will be used as monthly average derived limits and a weekly average will be determined by multiplying the monthly average derived limit by 1.50 for POTW's. For all other facilities a daily maximum will be determined by multiplying the monthly average by 2.0. These values will be compared with the ammonia water quality criteria for protection of aquatic life from Regulation 61-68, as shown below. The more stringent of the limitations will be imposed. Calculations for aquatic life criteria and other wasteload recommendations will be shown later in Part III of this rationale when ammonia is a pollutant of concern.

Ammonia limits based on the 1999 Update of Ambient Water Quality Criteria for Ammonia (1999 Ammonia Update). The 1999 Ammonia Update contains EPA's most recent freshwater aquatic life criteria for Total Ammonia Nitrogen (as N), superseding all previous EPA recommended freshwater criteria for ammonia. The 1999 Ammonia Update pertains to Fresh Waters. EPA has issued a Federal Register notice of availability for the 1999 Update, which summarizes changes in the 1999 Update and describes EPA's recommendations for implementing the criteria. The full text of the Federal Register Notice is available at <http://www.epa.gov/ost/standards/ammonia/> on the Internet. The thirty-day (monthly) average, and weekly average limits for Total Ammonia Nitrogen (as N) are calculated using the following equations (R.61.68; Attachment 3 “Calculation of Freshwater Ammonia Criteria”):

- (i) Determining the Criterion Concentration:

Step 1: (1) Establishing the CCC (Criterion Continuous Concentration) when fish early life stages (ELS) are **present**:

$$CCC \text{ (in mg N/L)} = \left\{ \frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right\} \times \left\{ \min(2.85, 1.45 \times 10^{0.028 \times (25 - T)}) \right\}$$

(2) Establishing the CCC (Criterion Continuous Concentration) when fish early life stages (ELS) are **absent**:

$$CCC \text{ (in mg N/L)} = \left\{ \frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right\} \times (1.45 \times 10^{0.028 \times (25 - \max(T, 7))})$$

Step 2: (1) Establishing the CMC (Criterion Maximum Concentration) when salmonids are **present**:

$$CMC \text{ (in mg N/L)} = \left\{ \frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}} \right\}$$

(2) Establishing the CMC (Criterion Maximum Concentration) when salmonids are **absent**:

$$CMC \text{ (in mg N/L)} = \left\{ \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}} \right\}$$

Where:

CCC: Criterion Continuous Concentration in mg N/L

CMC: Criterion Maximum Concentration in mg N/L

pH: pH of receiving stream provided by WLA Section in standard units (typically assumed to be 7.5 standard units)

T: Critical Summer and Winter temperature of the receiving stream in °C, provided by WLA Section.

max (T, 7): Critical Summer and Winter temperature of the receiving stream in °C, provided by WLA Section, or 7°C whichever is higher.

Step 3: Calculating the Dilution Factor based on 7Q10 of the receiving stream (R.61-68.C.4.a)

$$DF_1 = \left(\frac{Q_{7Q10} + Q_d}{Q_d} \right)$$

Where:

Q_{7Q10} 7Q10 for the receiving stream in mgd

Q_d Wastewater Treatment Plant Discharge in mgd

Step 4: Calculating Limits for Total Ammonia Nitrogen (as N):

For protection of aquatic life:

(1) Monthly Average Limit (C_{avg}):

$$C_{avg} = (CCC \times DF_1) - \left\{ C_b \times \left(\frac{Q_{7Q10}}{Q_d} \right) \right\}$$

(2) Weekly Average Limit (C_{wky}):

$$C_{wky} \text{ (mg/l)} = 1.5 \times C_{avg}$$

The multiplier used will be consistent with secondary treatment multipliers for weekly average values under R.61-9.133.

(3) Daily Maximum Limit (C_{max}):

$$C_{\max} = (CMC \times DF_1) - \left\{ C_b \times \left(\frac{Q_{7Q10}}{Q_d} \right) \right\}$$

Where:

- C_b Background Total Ammonia Nitrogen (as N) Concentration in mg/l, provided by WLA Section
 Q_{7Q10} 7Q10 for the receiving stream in mgd
 Q_d Wastewater Treatment Plant Discharge in mgd

The most restrictive of either limits calculated to protect aquatic life or oxygen demand will be used . See Part III for description of the controlling limit.

Note: For receiving stream flow data, see table provided earlier.

Note: Regulation R.61-68 Attachment 3 “Calculation of Freshwater Ammonia Criteria” provides equations for establishing the CMC (Criterion Maximum Concentration) for determining the daily maximum permit limit for Total Ammonia Nitrogen (as N). Water Quality Criteria; Notice of Availability; 1999 Update of Ambient Water Quality Criteria for Ammonia (dated December 22, 1999) requires the use of stream 1Q10 or 1B3 as the design flow for calculating the daily maximum limits using the CMC. Since 1Q10 or 1B3 are not available, the Department will establish only the monthly average and weekly average effluent limits for Total Ammonia Nitrogen (as N) using the procedures stated above.

2. Saltwater

Ammonia limitations based on oxygen demand will be determined from modeling information as described above. These values will be used as monthly average derived limits and a weekly average will be determined by multiplying the monthly average derived limit by 1.50 for POTW’s. For all other facilities a daily maximum will be determined by multiplying the monthly average by 2.0. These values will be compared with the ammonia water quality criteria for protection of aquatic life from Regulation 61-68, as shown below. The more stringent of the limitations will be imposed. Calculations for aquatic life criteria and other wasteload recommendations will be shown later in Part III of this rationale when ammonia is a pollutant of concern.

The following ammonia water quality limits are calculated using the references listed below:

Hampson, B.L., 1977. Relationship between total ammonia and free ammonia in terrestrial and ocean waters. J. Cons. int. Explor. Mer. 37(2): 117-122.

Hydroscience, 1971. Simplified Mathematical Modeling of Water Quality. Report prepared for EPA. 127 pp.

U.S. EPA, 1999. Update of Ambient Water Quality Criteria for Ammonia. EPA-822-R-99-014. Washington, DC. 147 pp.

U.S. EPA, 1989. Ambient Water Quality Criteria for Ammonia (Saltwater). EPA 440/5-88-004. Washington, DC. 59 pp.

Whitfield, M., 1974. The hydrolysis of ammonium ions in sea water—a theoretical study. J. Mar. Biol. Ass. U.K. 54: 565-580.

The thirty-day (monthly) average, and weekly average, or daily maximum limits for Total Ammonia

Nitrogen (as N) are calculated using the following equations:

Determining the Criterion Concentration:

Step 1: Calculate the molal ionic strength of the receiving water using Equation 3 from Hampson (1977):

$$I = 19.9273 * S / (1000 - 1.005109 * S)$$

Where S = salinity (g/kg or ppt)

Step 2: Calculate the negative log of the hydrolysis constant using the regression equation for Model B from the Appendix in Hampson (1977):

$$pK_a^S = 9.245 + 0.116 * I.$$

Step 3: Calculate the percent un-ionized ammonia using the equation for FREAM3 in the seawater subroutine of Hampson's program:

$$\% \text{ UIA} = \text{FREAM3} = 100 / [1 + 10^{(pK_a^S + 0.0324 * (298 - T) + 0.0415 * P/T - \text{pH})}]$$

where T = temperature (K),

P = pressure (atm) = 1 atm (U.S. EPA, 1989)

pH = receiving water pH.

Step 4: Calculate the total ammonia CMC and CCC using the un-ionized ammonia CMC = 0.233 mg/L and CCC = 0.035 mg/L (U.S. EPA, 1989, p. 27) and the calculated % UIA:

$$\text{total ammonia CMC (mg/L)} = 0.233 * 100 / \% \text{ UIA}$$

and

$$\text{total ammonia CCC (mg/L)} = 0.035 * 100 / \% \text{ UIA}.$$

Step 5: Convert the total ammonia values to total ammonia nitrogen by multiplying by 14/17 (U.S. EPA, 1999, p. 107):

$$\text{total ammonia nitrogen (mg N/L)} = \text{total ammonia (mg/L)} * 14/17$$

Step 6: Calculate the discharge concentrations protecting against acute and chronic toxicity in the receiving water using the following equation. Simplified Mathematical Modeling (SMM) is used to estimate dilution (Hydroscience, 1971). The SMM equations are provided in the State/EPA Wasteload Allocation Agreement. The tidal river case (Case 1) is used here. The equation for the initial concentration of a non-conservative constituent is:

$$C_0 = \frac{25.5758 Q_d C_d}{AU \sqrt{1 + 4KE / U^2}}$$

where C_0 = initial concentration (mg N/L)

Q_d = discharge flow (MGD)

C_d = discharge concentration (mg/L)

A = channel cross section area (ft²)
U = freshwater velocity (mi/day)
K = decay rate coefficient (1/day)
E = dispersion coefficient (mi²/day)
25.5758 = units conversion factor.

The equation is solved for the allowable discharge concentration, C_d , assuming values for the other parameters.

The most restrictive of either limits calculated to protect aquatic life or oxygen demand will be used. See Part III for description of the controlling limit.

Note: For receiving stream flow data, see table provided earlier.

c. Discharges of Nutrients:

In order to protect and maintain lakes and other waters of the State, consideration is given to the control of nutrients reaching the waters of the State. Therefore, in accordance with regulation R.61-68.E.11, the Department controls the nutrients as prescribed below. Nutrient limitations will be determined from the best available information and/or modeling performed by the Wasteload Allocation Section to meet these water quality standards.

- i. Discharges of nutrients from all sources, including point and nonpoint, to waters of the State shall be prohibited or limited if the discharge would result in or if the waters experience growths of microscopic or macroscopic vegetation such that the water quality standards would be violated or the existing or classified uses of the waters would be impaired. Loading of nutrients shall be addressed on an individual basis as necessary to ensure compliance with the narrative and numeric criteria.
- ii. Numeric nutrient criteria for lakes are based on an ecoregional approach which takes into account the geographic location of the lakes within the State and are listed below. These numeric criteria are applicable to lakes of 40 acres or more. Lakes of less than 40 acres will continue to be protected by the narrative criteria.
 1. for the Blue Ridge Mountains ecoregion of the State, total phosphorus shall not exceed 0.02 mg/l, chlorophyll *a* shall not exceed 10 ug/l, and total nitrogen shall not exceed 0.35 mg/l
 2. for the Piedmont and Southeastern Plains ecoregions of the State, total phosphorus shall not exceed 0.06 mg/l, chlorophyll *a* shall not exceed 40 ug/l, and total nitrogen shall not exceed 1.50 mg/l
 3. for the Middle Atlantic Coastal Plains ecoregion of the State, total phosphorus shall not exceed 0.09 mg/l, chlorophyll *a* shall not exceed 40 ug/l, and total nitrogen shall not exceed 1.50 mg/l.
- iii. In evaluating the effects of nutrients upon the quality of lakes and other waters of the State, the Department may consider, but not be limited to, such factors as the hydrology and morphometry of the waterbody, the existing and projected trophic state, characteristics of the loadings, and other control mechanisms in order to protect the existing and classified uses of the waters.
- iv. The Department shall take appropriate action, to include, but not limited to: establishing numeric effluent limitations in permits, establishing Total Maximum Daily Loads, establishing waste load allocations, and establishing load allocations for nutrients to ensure that the lakes attain and maintain the above narrative and numeric criteria and other applicable water quality standards.

- v. The criteria specific to lakes shall be applicable to all portions of the lake. For this purpose, the Department shall define the applicable area to be that area covered when measured at full pool elevation.

- 2. Effluent concentration limits (C_{efflim}) for parameters other than the parameters listed in G.1.a-c above are established using the following procedures:

Q_{7Q10}	7Q10 or other critical flow condition of the receiving water at the discharge point in mgd. (may require adjustment for withdrawals)
AAF_d	Average Annual Flow (AAF) or other critical flow condition of the receiving water at the discharge point in mgd. (may require adjustment for withdrawals)
Q_{7Q10i}	7Q10 or other critical flow condition of the receiving water at the SWP Area boundary in mgd.
AAF_i	Average Annual Flow (AAF) or other critical flow condition of the receiving water at the SWP Area boundary in mgd.
Q_d	Design flow in mgd.

- a. Determine dilution factors, where not provided by modeling:
The following information is to be used (where applicable) for establishing effluent concentration limits:

DF_1 : Dilution factor based on 7Q10 or other critical flow condition of the receiving water at the discharge point (Q_{7Q10}). This dilution factor is used to determine the derived limits for protection of the following aquatic life and human health concerns for the reasons indicated:

- i. Aquatic Life (see R.61-68.C.4.a(1)). Protection of aquatic life on a short-term basis is needed at the point where aquatic organisms become exposed to the discharge.
- ii. Human Health – Organism Consumption for parameters identified as non-carcinogens per R.61-68.C.4.b(1). Protection for human health on a short-term basis for consumption of aquatic organisms is needed at the point the aquatic organisms become exposed to the discharge.

$$DF_1 = \left(\frac{Q_{7Q10} + Q_d}{Q_d} \right)$$

DF_2 : Dilution factor, at the discharge point, based on the Average Annual Flow or tidal flow of the receiving water at the discharge point (AAF_d). This dilution factor is used to determine the derived limits for protection of the following human health and organoleptic concerns for the reasons indicated:

- i. Human Health – Organism Consumption for parameters identified as carcinogens per R.61-68.C.4.b(1). Protection for human health on a long-term basis to prevent cancer due to consumption of aquatic organisms is needed at the point the aquatic organisms become exposed to the discharge where it enters the receiving water.
- ii. Organoleptic effects per R.61-68.C.4.b(1). Protection for taste and odor issues related to the discharge is needed at the point where the discharge enters the receiving water.

$$DF_2 = \left(\frac{AAF_d + Q_d}{Q_d} \right)$$

DF_3 : Dilution factor based on the 7Q10 or other critical flow condition at the source water protection area boundary for protection of a proposed or existing water intake downstream of the discharge (Q_{7Q10}). This dilution factor is used to determine the derived limits for protection of the following human health concerns for the reasons indicated:

- i. Human Health – Water and Organism Consumption for parameters identified as non-carcinogens per R.61-68.C.4.b(1) and E.14.c(5) to protect for short-term health effects when the discharge is above any drinking water intake. Protection of human health relative to drinking the water from the waterbody and consuming aquatic organisms from the same water body is provided by this criterion, but drinking the water withdrawn from the waterbody may require a potentially higher level of protection in terms of applicable dilution than consumption of organisms. In addition, to satisfy the requirements of R.61-68.C.10(a), the Department has determined that dilution at the boundary of the Source Water Protection area will protect the source water protection area and drinking water intake to meet this requirement.

For discharges except those to lakes affecting the primary source water protection (SWP) area, dilution will be determined using the largest flow (7Q10 or annual average flow, as appropriate) associated with any TOT10 point along the SWP area boundary upstream of the drinking water intake of concern. For discharges to lakes affecting the primary SWP area, dilution will be determined using the sum of the flows (7Q10 or average annual flow, as appropriate) associated with all TOT10 point(s) along the SWP area boundary upstream of the drinking water intake of concern. If multiple drinking water intakes are present below the discharge, the SWP area of the intake closest to the discharge will be protected. If the entire basin is designated as the SWP area, the boundary will be the TOT10 at the beginning of the basin, even if it is outside the State boundaries (e.g. North Carolina).

- ii. Human Health - Drinking Water Maximum Contaminant Level (MCL) for parameters identified as non-carcinogens per R.61-68.C.4.b(1) and E.14.c(5) to protect for short-term health effects when the discharge is above any drinking water intake. Protection of human health relative to drinking the water from the receiving water after conventional treatment per R.61-68.G is provided by this criterion. In addition, to satisfy the requirements of R.61-68.C.10(a), the Department has determined that dilution at the boundary of the Source Water Protection area will protect the source water protection area and drinking water intake to meet this requirement.

For discharges except those to lakes affecting the primary source water protection (SWP) area, dilution will be determined using the largest flow (7Q10 or annual average flow, as appropriate) associated with any TOT10 point along the SWP area boundary upstream of the drinking water intake of concern. For discharges to lakes affecting the primary SWP area, dilution will be determined using the sum of the flows (7Q10 or average annual flow, as appropriate) associated with all TOT10 point(s) along the SWP area boundary upstream of the drinking water intake of concern. If multiple drinking water intakes are present below the discharge, the SWP area of the intake closest to the discharge will be protected. If the entire basin is designated as the SWP area, the boundary will be the TOT10 at the beginning of the basin, even if it is outside the State boundaries (e.g. North Carolina).

$$DF_3 = \left(\frac{Q_{7Q10i} + Q_d}{Q_d} \right)$$

*DF*₄: Dilution factor based on the Average Annual Flow or tidal flow at the source water protection area boundary for protection of a proposed or existing water intake downstream of the discharge (*AAF*_{*i*}). This dilution factor is used to determine the derived limits for protection of the following human health concerns for the reasons indicated:

- i. Human Health–Water and Organism Consumption for parameters identified as carcinogens per R.61-68.C.4.b(1) and E.14.c(5) to protect for long-term health effects due to cancer when the discharge is above any drinking water intake. Protection of human health relative to drinking the water from the receiving water and consuming aquatic organisms from the same receiving water is provided by this criterion, but drinking the water withdrawn from the receiving water may require a potentially higher level of protection in terms of applicable dilution than consumption of organisms. In addition, to satisfy the requirements of R.61-68.C.10(a), the Department has determined that dilution at the boundary of the Source Water Protection area will protect the source water protection area and drinking water intake to meet this requirement.

For discharges except those to lakes affecting the primary source water protection (SWP) area, dilution will be determined using the largest flow (7Q10 or annual average flow, as appropriate) associated with any TOT10 point along the SWP area boundary upstream of the drinking water intake of concern. For discharges to lakes affecting the primary SWP area, dilution will be determined using the sum of the flows (7Q10 or average annual flow, as appropriate) associated with all TOT10 point(s) along the SWP area boundary upstream of the drinking water intake of concern. If multiple drinking water intakes are present below the discharge, the SWP area of the intake closest to the discharge will be protected. If the entire basin is designated as the SWP area, the boundary will be the TOT10 at the beginning of the basin, even if it is outside the State boundaries (e.g. North Carolina).

- ii. Human Health - Drinking Water Maximum Contaminant Level (MCL) for parameters identified as carcinogens per R.61-68.C.4.b(1) and E.14.c(5) to protect for long-term health effects due to cancer when the discharge is above any drinking water intake. Protection of human health relative to drinking the water from the receiving water and consuming aquatic organisms from the same receiving water is provided by this criterion, but drinking the water withdrawn from the receiving water may require a potentially higher level of protection in terms of applicable dilution than consumption of organisms. In addition, to satisfy the requirements of R.61-68.C.10(a), the Department has determined that dilution at the boundary of the Source Water Protection area will protect the source water protection area and drinking water intake to meet this requirement.

For discharges except those to lakes affecting the primary source water protection (SWP) area, dilution will be determined using the largest flow (7Q10 or annual average flow, as appropriate) associated with any TOT10 point along the SWP area boundary upstream of the drinking water intake of concern. For discharges to lakes affecting the primary SWP area, dilution will be determined using the sum of the flows (7Q10 or average annual flow, as appropriate) associated with all TOT10 point(s) along the SWP area boundary upstream of the drinking water intake of concern. If multiple drinking water intakes are present below the discharge, the SWP area of the intake closest to the discharge will be protected. If the entire basin is designated as the SWP area, the boundary will be the TOT10 at the beginning of the basin, even if it is outside the State boundaries (e.g. North Carolina).

$$DF_4 = \left(\frac{AAF_i + Q_d}{Q_d} \right)$$

b. Determine derived limits using the following procedures:

- WQS_{al} Receiving water Standard (based on an established criteria or other published data per R.61-68) for protection of Aquatic Life; may be a CCC or CMC as defined below
- WQS_{org} Receiving water Standard (based on an established criteria or other published data per R.61-68) for protection of Human Health – Organism Consumption
- WQS_{wo} Receiving water Standard (based on an established criteria or other published data per R.61-68), for protection of Human Health – Water & Organism Consumption. Applicable only if any portion of the mixing zone for this discharge is in a state-approved source water protection area for a proposed or existing water intake downstream of the discharge point.
- WQS_{mcl} Receiving water Standard (based on an established criteria or other published data per R.61-68), for Drinking Water MCL (Maximum Contaminant Level). Applicable only if any portion of the mixing zone for this discharge is in a state-approved source water protection area for a proposed or existing water intake downstream of the discharge point.
- WQS_{ol} : Receiving water Standard (based on an established criteria or other published data per R.61-68), based on Organoleptic Data.
- C_{aqlife} Concentration limit derived from aquatic life data
- C_{HH} Concentration limit derived from human health data as determined from organism (C_{org}), water/organism (C_{wo}) and MCL (C_{mcl}) data
- C_{ol} Concentration limit derived from organoleptic data
- C_b Background concentration of the concerned parameter in mg/l is typically determined from ambient monitoring data or data provided by applicant. If the waterbody to which the discharge flows is not on the 303(d) list, the 90th percentile of ambient monitoring data for aquatic life protection for the parameters identified in the Appendix (Water Quality Numeric Criteria) to Regulation 61-68 from the last 3 years, or whatever is available if less than 3 years, will typically be used. If the waterbody to which the discharge flows is not on the 303(d) list, the median value of ambient monitoring data for human health protection for the parameters identified in the Appendix (Water Quality Numeric Criteria) to Regulation 61-68 from the last 3 years, or whatever is available if less than 3 years, will typically be used. The background concentration is assumed to be zero (0) in the absence of actual data based on Departmental guidance and EPA recommendation.

i. Determine the derived limits for protection of Aquatic Life (C_{aqlife})

1. The following guidelines apply to determining aquatic life limits using this basic equation:

$$C_{aqlife} = (DF_1 \times WQS_{al}) - \left\{ C_b \times \left(\frac{Q_{7Q10}}{Q_d} \right) \right\}$$

- a. Typically, the Criterion Maximum Concentration (CMC) is applied as a daily maximum derived limit and the Criterion Continuous Concentration (CCC) is applied as a monthly average derived limit, after consideration of dilution and background concentrations. The CMC and CCC for specific metals will be adjusted using the procedures in 60 FR 22229, “Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants; States’ Compliance-Revision of Metals Criteria,” May 4, 1995 and the “Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria,” Oct. 1, 1993 and

applied as a daily maximum and monthly average, respectively, after consideration of dilution and background concentrations. For specific metals, this calculation is explained in detail later in this rationale.

$$\begin{aligned}\text{monthly average} &= C_{\text{aqilife}} \text{ using CCC as } WQS_{al} \\ \text{daily maximum} &= C_{\text{aqilife}} \text{ using CMC as } WQS_{al}\end{aligned}$$

- b. If only a CMC exists for a particular parameter, the daily maximum derived permit limit will be set using that value, after consideration of dilution and background concentrations. If no other values (e.g., human health) exist for that parameter on which to base a monthly average limit and the discharge is continuous, the monthly average will be set equal to the daily maximum to satisfy Regulation 61-9.122.45(d). In no case shall the monthly average limit be set higher than the daily maximum limit. If only a CCC is given, it will be used as a monthly average derived limit and the daily maximum derived limit will be two (2) times the value obtained for the monthly average based on a simplified statistical procedure for determining permit limits recommended in Section 5.4.2 of the US EPA's "Technical Support Document for Water Quality-based Toxics Control", EPA/505/2-90-001, March 1991 (hereafter known as the TSD).

If a CCC exists and no CMC exists and no other acute or chronic data exists, the aquatic life limits are

$$\begin{aligned}\text{monthly average} &= C_{\text{aqilife}} \text{ using CCC as } WQS_{al} \\ \text{daily maximum} &= 2 \times C_{\text{aqilife}}\end{aligned}$$

If a CMC and no CCC exists, and no other acute or chronic data exists, the aquatic life limits are

$$\begin{aligned}\text{monthly average} &= C_{\text{aqilife}} \text{ using CMC as } WQS_{al} \\ \text{daily maximum} &= C_{\text{aqilife}} \text{ using CMC as } WQS_{al}\end{aligned}$$

- c. If only an acute toxicity effect concentration for a number of species for a particular pollutant is given as a LC_{50} , the lowest concentration should be divided by an acute-to-chronic ratio (ACR) of 10 and a sensitivity factor of 3.3, for an acceptable instream concentration in order to protect against chronic toxicity effects (R.61-68.E.16.a(1)). Other acute toxicity data will be handled similarly. The value obtained from this calculation will be used as a monthly average derived limit after consideration of dilution and background concentrations. The daily maximum will be two (2) times the value obtained for the monthly average based on a simplified statistical procedure for determining permit limits recommended in Section 5.4.2 of the TSD.

$$\begin{aligned}\text{monthly average} &= C_{\text{aqilife}} \text{ using other data as } WQS_{al} \\ \text{daily maximum} &= 2 \times C_{\text{aqilife}}\end{aligned}$$

- d. If a chronic toxicity effect concentration for a number of species for a particular pollutant is given as a no observed effect concentration (NOEC), the lowest concentration should be divided by a sensitivity factor of 3.3 in order to protect against chronic toxicity to the most sensitive species (R.61-68.E.16.a(2)). Other chronic toxicity data will be handled similarly. The value obtained from this calculation will be used as a monthly average derived limit after consideration of dilution and background concentrations. The daily maximum will be two (2) times the value obtained for the monthly average based on a simplified statistical procedure for determining permit limits recommended in Section 5.4.2 of the TSD.

$$\begin{aligned} \text{monthly average} &= C_{\text{aqlife}} \text{ using other data as } WQS_{\text{al}} \\ \text{daily maximum} &= 2 \times C_{\text{aqlife}} \end{aligned}$$

- e. If both acute and chronic data are available for a particular pollutant, monthly average derived limit will be calculated as in c and d above for each acute and chronic, respectively. The more stringent of the monthly average derived limits will be the monthly average derived limit used after consideration of dilution and background concentrations. The daily maximum will be two (2) times the value obtained for the monthly average based on a simplified statistical procedure for determining permit limits recommended in Section 5.4.2 of the TSD.

$$\begin{aligned} \text{monthly average} &= C_{\text{aqlife}} \text{ using other data as } WQS_{\text{al}} \\ \text{daily maximum} &= 2 \times C_{\text{aqlife}} \end{aligned}$$

- f. Consider the background concentration (C_b) of the parameter of concern. If the background concentration is equal to or greater than the applicable standard (WQS , as defined above) for the parameter of concern, then the derived concentration limit (C_{aqlife}) for that parameter is established equal to the standard (WQS) so that no additional amount of that pollutant is added to the waterbody. An exception exists where the naturally occurring instream concentration for a substance is higher than the derived permit effluent limitation. In those situations, the Department may establish permit effluent limitations (C_{efflim}) at a level higher than the derived limit, but no higher than the natural background concentration (i.e. a “rise above background” limit). In such cases, the Department may require biological instream monitoring and/or whole effluent toxicity (WET) testing (R.61-68.E.14.c(2)).

If C_b is not based on naturally occurring concentrations and

$$C_b \geq WQS$$

Then, generally,

$$C_{\text{aqlife}} = WQS.$$

If C_b is based on naturally occurring concentrations and

$$C_b \geq WQS$$

Then, generally,

$$C_{\text{aqlife}} < C_{\text{efflim}} \leq C_b.$$

2. Metals: Regulation 61-9.122.45(c) requires that permit limits be expressed in terms of total recoverable metal (with limited exceptions). In order to translate from the water quality criterion to a total recoverable metal, Regulation R.61-68.E.14.c(4) provides for the use of the EPA Office of Water Policy and "Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria", October 1, 1993. A subsequent revision published in the Federal Register (60 FR 22229) on May 4, 1995 updated the data in the original report. See R.61-68 Appendix for CMC and CCC values and equations, Attachment 1 for “Conversion Factors for Dissolved Metals” and Attachment 2 “Parameters for Calculating Freshwater Dissolved Metals Criteria that are Hardness-Dependent”.

Per R.61-68.E.14.a(3), the CMC and CCC are based on a hardness of 25 mg/l if the ambient or mixed stream hardness is equal to or less than 25 mg/l. Concentrations of hardness less than 400 mg/l may be based on the mixed stream hardness if it is greater than 25 mg/l and less than 400 mg/l and 400 mg/l if the ambient stream hardness is greater than 400 mg/l. The ambient stream hardness is assumed to be 25 mg/l in the absence of actual stream data. Mixed stream hardness

may be determined using flow-weighted effluent hardness and stream hardness.

The following equations and constants will be used to calculate aquatic life metals limits based on these documents. The values of the terms referenced in this section and determined from the equations below are included in the Metals spreadsheet attached to this rationale.

a. Freshwater: The following metals are subject to this section:

arsenic	lead
cadmium	mercury
chromium (III & VI)	nickel
copper	zinc

The equation for C_d below changes the total metal to dissolved metal. From Technical Guidance Manual for Performing Waste Load Allocations Book II, Rivers and Streams, EPA/440/484/022.

$$S = CCC \text{ or } CMC \text{ (adjusted for hardness)}$$

$$C_d = S \times CF$$

where C_d = Dissolved metal concentration ($\mu\text{g/l}$)

S = a constant to represent the CCC or CMC ($\mu\text{g/l}$)

CF = Conversion factor considered most relevant in fresh water for aquatic life as defined by EPA for each metal

Once the dissolved metal concentration is known, determine C_p using the equation for C_d above and the following equations.

$$C_p = C_d \times \left\{ 1 + \left(K_{pb} \times TSS_b \times 10^{-6} \right) \right\}$$

$$K_{pb} = K_{po} \times (TSS_b)^a$$

where C_p = Particulate sorbed metal concentration ($\mu\text{g/l}$). This value represents the revised water quality criterion for the metal to be used for ambient data comparison.

K_{pb} = Linear partition coefficient using the stream TSS (liters/mg)

K_{po} = Metal-specific equilibrium constant (liters/mg)

a = Metal-specific constant

TSS_b = Background or in-stream Total Suspended Solids (TSS) concentration (mg/l). The background TSS is assumed to be 1 mg/l in the absence of actual instream data based on the 5th percentile of ambient TSS data on South Carolina waterbodies from 1993-2000.

To determine the effluent limit (C_{aqlife}), use the following equations to translate the limits into a total recoverable metal concentration.

$$TSS_{avg} = \frac{(Q_d \times TSS_e) + (Q_{7Q10} \times TSS_b)}{Q_d + Q_{7Q10}}$$

where TSS_e = Effluent Total Suspended Solids (TSS) proposed permit concentration limit

(mg/l).

TSS_{avg} = Average in-stream (mixed) TSS concentration (mg/l)

$$C_t = C_d \times \left\{ 1 + \left(K_p \times TSS_{avg} \times 10^{-6} \right) \right\}$$

$$K_p = K_{po} \times (TSS_{avg})^a$$

where C_t = Total metal concentration (µg/l)

K_p = Linear partition coefficient (liters/mg). This is the distribution of metal at equilibrium between the particulate and dissolved forms.

Once C_t has been calculated, it is multiplied by DF_1 and background concentrations are accounted for to obtain the derived limit (max or avg) (C_{aqlife}):

$$C_{aqlife} = (C_t \times DF_1) - \left\{ C_b \times \left(\frac{Q_{7Q10}}{Q_d} \right) \right\}$$

monthly average = C_{aqlife} based on CCC

daily maximum = C_{aqlife} based on CMC

- b. Saltwater: So that metals may be expressed in terms of total recoverable metal as required by R.61-9.122.45(c), the saltwater CCC and CMC will be used in the calculation of limits for all other parameters not included in paragraph 2 above. Monthly average derived limits (C_{aqlife}) for aquatic life protection are calculated as follows:

$$C_{aqlife} = (DF_1 \times WQS_{al}) - \left\{ C_b \times \left(\frac{Q_{7Q10}}{Q_d} \right) \right\}$$

- c. The more stringent of the freshwater and saltwater values derived above for each pollutant will be used so that all waters are protected.
3. Where a Water Effects Ratio (WER) is used to adjust a criterion, derived limits for the adjusted aquatic life criterion ($C_{aqlife-adj}$) are calculated as follows. The WER is a type of site-specific permit effluent limit (as allowed by R.61-68.E.14.c(7)) derived using a ratio determined from EPA methodology. Both DHEC and EPA must approve the WER prior to implementation. See EPA's 1994 "Interim Guidance on the Determination and Use of Water-Effect Ratios (WERs) for Metals." The approved WER will be shown in the water quality spreadsheets on the Data sheet. The revised aquatic life value will be shown with the WER, hardness and dissolved metals adjustments, as appropriate, in the aquatic life columns on the Pollutant spreadsheet.
- a. For metals identified in #2 above, revise the equation for S as follows:

$$S = [CCC \text{ or } CMC \text{ (adjusted for hardness)}] \times WER$$

Follow the remaining calculations in #2 above to get an adjusted C_{aqlife} value that will be used to determine derived limits:

monthly average = $C_{aqlife-adj}$ based on CCC

daily maximum = $C_{aqlife-adj}$ based on CMC

- b. For other parameters, use the appropriate equation in #1 above to derive an adjusted C_{aqlife} value. The monthly average will be calculated as follows using the appropriate WQS_{al} and the daily maximum calculated using the appropriate equations in #1 above.

$$C_{aqlife-adj} = (DF_1 \times WQS_{al} \times WER) - \left\{ C_b \times \left(\frac{Q_{7Q10}}{Q_d} \right) \right\}$$

4. Where the Recalculation Procedure is used to adjust a criterion, derived limits for the adjusted aquatic life criterion ($C_{aqlife-adj}$) are calculated as follows. The Recalculation Procedure is intended to cause a site-specific criterion to appropriately differ from the State-adopted national aquatic life criterion if justified by demonstrated pertinent toxicological differences between the aquatic species that occur at the site and those that were used in the derivation of the criterion. It is important to note that the site (the portion of the waterbody or watershed being affected) must be clearly defined. This procedure is used to develop site-specific criteria in accordance with R.61-68.C.12. Both DHEC and EPA must approve the recalculated criterion prior to implementation. The recalculated criterion will require an update to the Water Classifications and Standards Regulations, R.61-68 and 61-69.

The approved recalculated aquatic life criteria (SS-CCC and SS-CMC, as appropriate) will be shown adjusted for hardness on the Data spreadsheet. The additional dissolved metals adjustments, as appropriate, will be shown in the aquatic life columns on the Pollutant spreadsheet. If the parameter being adjusted is one of the metals in #2 above, SS will include all the appropriate metals adjustments.

$$C_{aqlife-adj} = (DF_1 \times SS - \left\{ C_b \times \left(\frac{Q_{7Q10}}{Q_d} \right) \right\})$$

monthly average = $C_{aqlife-adj}$ based on CCC

daily maximum = $C_{aqlife-adj}$ based on CMC

5. Where a WER and recalculation procedure are combined to adjust a criterion, derived limits ($C_{aqlife-adj}$) for aquatic life protection are calculated by combining the calculations in #3 and #4.

$$C_{aqlife-adj} = (DF_1 \times SS \times WER) - \left\{ C_b \times \left(\frac{Q_{7Q10}}{Q_d} \right) \right\}$$

monthly average = $C_{aqlife-adj}$ based on CCC

daily maximum = $C_{aqlife-adj}$ based on CMC

6. Other scientifically defensible methods for developing site-specific aquatic life effluent limits or site-specific criterion may be used on a case-by-case basis.

ii. Determine derived limits for protection of Human Health

1. The following guidelines apply to determining human health limits:

- a. The human health criterion given by Regulation 61-68 will be applied as a monthly average derived limit after consideration of dilution and background concentrations (C_{HH-avg}).

Exceptions exist based on EPA criteria and are indicated for specific parameters. No limits on human health based on water and organism consumption or drinking water MCLs will be imposed if there is no potential to affect an existing or proposed drinking water intake and no state-approved source water protection area (i.e., if there is no intake downstream of the discharge) in accordance with Regulation 61-68.E.14.c(5).

- b. The daily maximum permit limit will be determined from the monthly average value from (a) above and a multiplier (M) determined using a statistical procedure recommended in Section 5.5 using average = 95th percentile from Table 5-3 in the TSD. The permitted or proposed number of samples per month (n) is used with the coefficient of variation (CV) to determine M .

$$M = \frac{e^{(z_m \sigma - 0.5 \sigma^2)}}{e^{(z_a \sigma_n - 0.5 \sigma_n^2)}}$$

where:

$$\sigma_n^2 = \ln\left(\frac{CV^2}{n} + 1\right)$$

$$\sigma^2 = \ln(CV^2 + 1)$$

CV = coefficient of variation of the effluent concentration. For a data set where $n > 10$, the CV is calculated as standard deviation divided by mean for the data set being evaluated. For data set where $n < 10$, the CV is estimated to equal 0.6. For less than 10 items of data, the uncertainty in the CV is too large to calculate a standard deviation or mean with sufficient confidence.

n = the number of effluent samples per month (where frequency is less than 1/month, $n = 1$)

z_m = the percentile exceedance probability for the daily maximum permit limit (=2.326 for 99th percentile basis)

z_a = the percentile exceedance probability for the monthly average permit limit (=1.645 for 95th percentile basis)

$$C_{HH-max} = M * C_{HH-avg}$$

- c. Consider the background concentration (C_b) of the parameter of concern. If the background concentration is equal to or greater than the applicable standard (WQS , as defined above) for the parameter of concern, then the derived concentration limit (C_{HHc}) for that parameter and for the protection of that standard is established equal to the standard (WQS). An exception exists where the naturally occurring instream concentration for a substance is higher than the derived permit effluent limitation. In those situations, the Department may establish permit effluent limitations (C_{efflim}) at a level higher than the derived limit, but no higher than the natural background concentration (i.e. a “rise above background” limit). In such cases, the Department may require biological instream monitoring and/or whole effluent toxicity (WET) testing (See R.61-68.E.14.c(3)).

If C_b is not based on naturally occurring concentrations and

$$C_b \geq WQS$$

Then, generally,

$$C_{HH} = WQS.$$

If C_b is based on naturally occurring concentrations and

$$C_b \geq WQS$$

Then, generally,

$$C_{HH} < C_{eff\ lim} \leq C_b.$$

2. Human Health – Organism Consumption (C_{org}).

a. For Carcinogens

The Monthly Average is calculated as follows:

$$C_{org} = (DF_2 \times WQS_{org}) - \left\{ C_b \times \left(\frac{AAF_d}{Q_d} \right) \right\}$$

The Daily Maximum is calculated as

$$C_{org-max} = M * C_{org}$$

b. For Non-carcinogens

The Monthly Average is calculated as follows:

$$C_{org} = (DF_1 \times WQS_{org}) - \left\{ C_b \times \left(\frac{Q_{7Q10}}{Q_d} \right) \right\}$$

The Daily Maximum is calculated as

$$C_{org-max} = M * C_{org}$$

3. Human Health – Water and Organism Consumption (C_{wo})

a. For Carcinogens

The Monthly Average is calculated as follows:

$$C_{wo} = (DF_4 \times WQS_{wo}) - \left\{ C_b \times \left(\frac{AAF_i}{Q_d} \right) \right\}$$

The Daily Maximum is calculated as

$$C_{wo-max} = M * C_{wo}$$

b. For Non-carcinogens

The Monthly Average is calculated as follows:

$$C_{wo} = (DF_3 \times WQS_{wo}) - \left\{ C_b \times \left(\frac{Q_{7Q10i}}{Q_d} \right) \right\}$$

The Daily Maximum is calculated as

$$C_{wo-max} = M * C_{wo}$$

4. Human Health – Drinking Water Maximum Contaminant Level (MCL) (C_{mcl}).

a. For Carcinogens

The Monthly Average is calculated as follows:

$$C_{mcl} = (DF_4 \times WQS_{mcl}) - \left\{ C_b \times \left(\frac{AAF_i}{Q_d} \right) \right\}$$

The Daily Maximum is calculated as

$$C_{mcl-max} = M * C_{mcl}$$

b. For Non-carcinogens

The Monthly Average is calculated as follows:

$$C_{mcl} = (DF_3 \times WQS_{mcl}) - \left\{ C_b \times \left(\frac{Q_{7Q10i}}{Q_d} \right) \right\}$$

The Daily Maximum is calculated as

$$C_{mcl-max} = M * C_{mcl}$$

5. Organoleptic criteria (C_{ol}).

The Monthly Average is calculated as follows:

$$C_{ol} = (DF_2 \times WQS_{ol}) - \left\{ C_b \times \left(\frac{AAF_d}{Q_d} \right) \right\}$$

The Daily Maximum is calculated as

$$C_{ol-max} = M * C_{ol}$$

- iii. Parameters given in a wasteload allocation for oxygen-demanding pollutants and nutrients will be limited as

$$\text{monthly average} = C_{wla}$$

$$\text{daily maximum} = 2 \times C_{wla}$$

- c. Determine the most stringent of applicable water quality data using the derived limits determined above:

$$\text{monthly average } C_{effim} = \text{minimum of derived monthly averages } (C_{aqlife}, C_{org}, C_{wo}, C_{mcl}, C_{ol}, C_{wla})$$

$$\text{daily maximum } C_{effim} = \text{minimum of derived daily maximums } (C_{aqlife}, C_{org-max}, C_{wo-max}, C_{mcl-max}, C_{ol-max}, C_{wla-max})$$

- d. Determine whether the discharge causes, has the reasonable potential to cause or contributes to a water quality violation.

Regulation 61-9.122.44(d)(1)(i) states: “Limitations must control all pollutants or pollutant parameters

(either conventional, nonconventional, or toxic pollutants) which the Department determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

When determining whether a discharge causes, has the reasonable potential to cause or contributes to an instream excursion, the Department will use procedures which account for controls on point and nonpoint sources of pollution, the variability of the pollutant in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and, where appropriate, the dilution of the effluent in the receiving water (R.61-9.122.44(d)(1)(ii)).

Based on the above statements, there are three scenarios when limitations are required, as follows:

- i. When data provided by the permit applicant indicates discharge values greater than the proposed limitation derived above, that discharge may cause an excursion above a narrative or numeric water quality criterion.
- ii. A discharge may be determined to contribute to an excursion of a water quality criterion when the waterbody is impaired (e.g., on the 303(d) list) for the parameter of concern and that parameter is also being discharged at levels above the water quality criterion.
- iii. Reasonable potential to cause a water quality violation is determined using the following information:

The Department will primarily use EPA’s Technical Support Document (TSD) for determining reasonable potential using effluent data. Other methods may be used as well to evaluate data sets. All pollutants given in a wasteload allocation or an effluent limitation guideline will be limited in the permit.

When effluent data consists of non-quantifiable/non-detectable values or when no effluent data is available, other factors and information are considered to determine reasonable potential. In situations where a pollutant is known to be present in the wastestream (due to production data or other information), we know it is being discharged and has the potential to impact even though it may not be quantifiable. The fact that it is present will be enough information to say reasonable potential exists for that pollutant. Therefore, a reasonable potential decision is based on various data and information, and not just non-quantifiable/non-detectable data. Consideration is given to existing data, dilution in the waterbody, type of receiving water, designated use, type of industry/wastestream, ambient data, history of compliance, and history of toxic impact. If any source of information indicates reasonable potential to cause or contribute to an exceedance of the water quality standard, a water quality limit will be established.

Note: The result of the following calculations may indicate that reasonable potential does not exist. However, as stated above, other information may “override” this numerical determination to justify the need for a limit.

1. The procedure for determining reasonable potential from actual effluent data is explained in Box 3-2 on page 53 of the TSD. Multiplying factors are determined from Table 3-2 at a 95% confidence level and 95% probability in Section 3.3.2. The following describes the procedures used for determining reasonable potential for chemical-specific parameters and WET, under certain circumstances. More information on determining reasonable potential for WET is given in Item 2 below.

Step 1: Data Analysis: The statistical calculations involved in the “Reasonable Potential” analysis

require discrete numerical data. The following describes how the effluent data will be used in determining reasonable potential.

Actual analytical results should be used whenever possible. Results less than detection and quantification should be used as follows:

- a. If the permittee reports results below the practical quantitation limit (PQL) (as defined by the permit), then the reported “less than PQL” value for a given sample is generally assumed to be zero.
- b. If the permittee uses a detection/quantification level that is **greater** than the PQL, then the reported “less than” value for a given sample is generally assumed to be a discrete value equal to the detection/quantification level used by the permittee.
- c. If the reported data consists of both discrete and non-discrete values and/or the data is reported using varying detection/quantification levels, then, generally, a combination of the above two approaches is used, or the data is evaluated in a manner that is most appropriate for that data set.

Note: For information on the acceptable analytical methods and PQLs please refer to NPDES permit application attachment titled “Practical Quantitation Limits (PQL) and Approved Test Methods.”

Step 2: Using data from the permit application, other data supplied by the applicant and/or Discharge Monitoring Report (DMR) data, determine the total number of observations (n) for a particular set of effluent data and determine the highest value (C_{max}) from that data set. For the monthly average comparison, the data set will include monthly average results and n will be the number of months in which they sampled in the time period being evaluated. For the daily maximum comparison, the data set will include daily maximum results and n will be the total number of samples in the time period being evaluated. Individual results may not necessarily be used in the calculation.

Step 3: Determine the coefficient of variation (CV) for the data set. For a data set where $n > 10$, the CV is calculated as standard deviation divided by mean for the data set being evaluated. For data set where $n < 10$, the CV is estimated to equal 0.6. For less than 10 items of data, the uncertainty in the CV is too large to calculate a standard deviation or mean with sufficient confidence.

$$CV = 0.6 \quad \text{for } n < 10$$

$$CV = \frac{\sigma}{\mu} \quad \text{for } n > 10$$

where: σ = Standard Deviation of the samples
 μ = Mean of the samples

Step 4: Determine the appropriate multiplying factor (MF) from either Table 3-2 or using the formulae in Section 3.3.2 of the TSD.

- a. Determine the percentile represented by the highest concentration in the sample data.

$$p_n = (1 - \text{Confidence Level})^{1/n}$$

where: p_n = Percentile represented by the highest concentration in the data
 n = number of samples
Confidence Level = 0.95 i.e. 95%

- b. Determine the multiplying factor (MF), which is the relationship between the percentile described above (C_p) and the selected upper bound of the lognormal effluent distribution, which in this case will be the 95th percentile (C_{95}).

$$MF = \frac{C_{95}}{C_p} = \frac{e^{(Z_{95}\sigma + 0.5\sigma^2)}}{e^{(Z_p\sigma + 0.5\sigma^2)}}$$

where: Z_{95} is the standardized Z-score for the 95th percentile of the standardized normal distribution = 1.645

Z_p is the standardized Z-score for the p^{th} percentile of the standardized normal distribution. (determined in (b) above)

Note: The values of Z-scores are listed in tables for the normal distribution. If using Microsoft® Excel, this can be calculated using the NORMSINV function.

$$\sigma^2 = \ln(CV^2 + 1)$$

$$\sigma = \sqrt{\ln(CV^2 + 1)}$$

- Step 5: Multiply the highest value from the data set (C_{max}) by the multiplying factor (MF) determined in Step 4 to obtain the maximum receiving water concentration (RWC).

$$RWC = C_{\text{max}} \times MF$$

- Step 6: $RWC \leq$ Derived limit (C_{efflim}) implies that reasonable potential does not exist.

$RWC >$ Derived limit (C_{efflim}) implies that reasonable potential exists.

2. Reasonable potential for Whole Effluent Toxicity (WET) may be determined from numerical data using the following procedure:

- a. When the effluent data is given in terms of percent effluent as an IC_{25} , LC_{50} and/or NOEC values:

Step 1: Convert the given values to toxic units: TU_a for acute data and TU_c for chronic data, respectively, using the following formulae. Please note that an NOEC derived using the IC_{25} is approximately the analogue of an NOEC derived using hypothesis testing. The IC_{25} is the preferred statistical method for determining the NOEC (EPA TSD, March 1991, p.6).

$$TU_a = \frac{100}{LC_{50}}$$

$$TU_c = \frac{100}{NOEC} \text{ or } TU_c = \frac{100}{IC_{25}} \text{ if } IC_{25} \text{ available}$$

- Step 2: Using DMR data or other data provided by the applicant, determine the total number of observations (n) for a particular set of effluent data and determine the highest value ($TU_{a, \max}$ or $TU_{c, \max}$) from that data set.
- Step 3: Determine the coefficient of variation (CV) for the data set. For a data set where $n > 10$, the CV is calculated as standard deviation divided by mean. For data set where $n < 10$, the CV is estimated to equal 0.6. For less than 10 items of data, the uncertainty in the CV is too large to calculate a standard deviation or mean with sufficient confidence.
- Step 4: Determine the appropriate multiplying factor (MF) from either Table 3-2 or using the formulae in Section 3.3.2. (see iii.1, Step 4 above).
- Step 5: Multiply the highest value of $TU_{a, \max}$ or $TU_{c, \max}$ from the data set by the multiplying factor (MF) determined in Step 4 and the dilution at the edge of the mixing zone (the test concentration obtained from mixing zone modeling or demonstration) to obtain the maximum receiving water concentration (RWC)
- RWC for Acute Toxicity = $[TU_{a, \max} * MF * conc. \text{ at } MZ \text{ boundary}]$
 RWC for Chronic Toxicity = $[TU_{c, \max} * MF * conc. \text{ at } MZ \text{ boundary}]$
- Step 6: RWC for Acute Toxicity $\leq 0.3TU_a$ implies that a reasonable potential does not exist
 RWC for Acute Toxicity $> 0.3TU_a$ implies that a reasonable potential exists
- RWC for Chronic Toxicity $\leq 1.0TU_c$ implies that a reasonable potential does not exist
 RWC for Chronic Toxicity $> 1.0TU_c$ implies that a reasonable potential exists
- b. When pass/fail effluent data only is available and all tests have passed, the Department may be able to determine reasonable potential in a manner similar to above assuming the test concentration of interest is greater than or equal to the concentration at which the permittee has tested. If the permittee has not tested at or above the test concentration of interest, the Department cannot say that reasonable potential does not exist, unless perhaps, circumstances related to the discharge have changed. If any failures exist in the data set, reasonable potential may be determined to exist.
- c. Other methods for determining reasonable potential may be used if appropriately justified.

H. Other considerations

1. When the derived permit effluent limitation based on aquatic life numeric criteria is below the practical quantitation limit for a substance, the derived permit effluent limitation shall include an accompanying statement in the permit that the practical quantitation limit using approved analytical methods shall be considered as being in compliance with the limit. Appropriate biological monitoring requirements (in this case toxicity testing) shall be incorporated into the permit to determine compliance with appropriate water quality

standards (R.61-68.E.14.c(2)).

2. When the derived permit effluent limitation based on human health numeric criteria is below the practical quantitation limit for a substance, the derived permit effluent limitation shall include an accompanying statement in the permit that the practical quantitation limit using approved analytical methods shall be considered as being in compliance with the limit (R.61-68.E.14.c(3)).
3. The effluent concentration limits determined above may not necessarily be the NPDES permit limit. NPDES Permit limits are determined after a reasonable potential analysis is conducted using these derived limits and also after evaluating other issues such as anti-backsliding and antidegradation.
4. When mass limits are calculated, the formula to be used is as follows.

$$\text{Mass (lb/day)} = \text{Flow (mgd)} * \text{Concentration (mg/l)} * 8.345$$

5. Per Regulation 61-9.122.45(d), for continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as maximum daily and average monthly discharge limitations for all dischargers other than publicly owned treatment works.
6. Antbacksliding: When a permit is reissued, the terms and conditions of the reissued permit must be at least as stringent as those final limits in the previous permit unless certain exceptions are met (see Regulation 61-9.122.44.1).
7. Fecal Coliform, E. coli and Enterococci: Effluent Limits for Fecal Coliform, E. coli and Enterococci (if applicable) are established to protect SA, SB, SFH waters and recreational uses in accordance with Regulation R.61-68.E.14.c.9. & R.61-68.G. See Part III below for specific limits.

In order to protect recreational uses for all freshwaters of the State, see R.61-68.E.14.c.9. For saltwaters (SA, SB & SFH), see R.61-68.E.14.c.8 & 9. (Unless otherwise identified in Part III below)

8. pH and DO: In accordance with Reg. 61-68.G. (summarized below) the in-stream DO and pH requirements are as follows:

Stream Classification	pH Requirement	D.O. Requirement
Trout Waters: Natural (TN) Put, Grow and Take (TGPT)	Between 6.0 and 8.0	Not less than 6 mg/l
Freshwater (FW) Put and Take (TPT)	Between 6.0 and 8.5	Daily average not less than 5.0 mg/l with a low of 4.0 mg/l
Shellfish Harvesting Waters (SFH)	Shall not vary more than 3/10 of a pH unit above or below that of effluent-free waters in the same geological area having a similar total salinity, alkalinity and temperature, but not lower than 6.5 or above 8.5	Daily average not less than 5.0 mg/l with a low of 4.0 mg/l
Class SA	Shall not vary more than one-half of a pH unit above or below that of effluent-free waters in the same geological area having a similar total salinity, alkalinity and temperature, but not lower than 6.5 or above 8.5	Daily average not less than 5.0 mg/l with a low of 4.0 mg/l

Stream Classification	pH Requirement	D.O. Requirement
Class SB	Shall not vary more than one-half of a pH unit above or below that of effluent-free waters in the same geological area having a similar total salinity, alkalinity and temperature, but not lower than 6.5 or above 8.5	Not less than 4.0 mg/l

9. The calculations for the assessment of effluent limits have been compiled using a Microsoft Excel spreadsheet. This spreadsheet is attached for documentation of individual calculations. The limits noted in Part III below reflect the most restrictive conditions that apply.

10. The wasteload allocation (WLA) completed by the Wasteload Allocation Section is incorporated into this rationale by reference. A copy of the WLA is attached as part of an EXCEL spreadsheet.

III. PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

Types of Coverage: This permit authorizes discharge of the following types of wastewater:

a. Wastewater treatment facilities **with no** compliance schedules and a design flow less than 500,000 gallons per day.

- (1) Page 51 of 67 Part X.A - Flows less than or equal to 50,000 gallons per day
- (2) Page 52 of 67 Part X.B - Flows greater than 50,000 gallons per day and less than 500,000 gallons per day

b. All facilities needing Toxicity Limitations in addition to the items above.

- (1) Page 53 of 67 Part X.C - Wastewater treatment facilities **with no** compliance schedules Whole Effluent Toxicity Limitations and Monitoring Requirements discharging to Freshwaters (FW) or Freshwaters (FW sp)
- (2) Page 54 of 67 Part X.D - Wastewater treatment facilities **with no** compliance schedules Whole Effluent Toxicity Limitations and Monitoring Requirements discharging to Saltwaters Class SA or SA sp or SB or SB sp or SFH (existing)
- (3) Page 55 of 67 Part X.E - Wastewater treatment facilities **with no** compliance schedules Chronic Whole Effluent Toxicity Limitations and Monitoring Requirements discharging to Freshwaters (FW) or Freshwaters (FW sp)
- (4) Page 56 of 67 Part X.F - Wastewater treatment facilities **with no** compliance schedules Chronic Whole Effluent Toxicity Limitations and Monitoring Requirements discharging to Saltwaters Class SA or SA sp or SB or SB sp or SFH (existing)

c. All facilities utilizing the bacterial requirements for documenting compliance with the provisions of R.61-68.E.14(c)(12).

- (1) Page 57 of 67 Part X.G - Limitations and Monitoring Requirements discharging to Freshwaters (FW and FW sp)
- (2) Page 58 of 67 Part X.H - Limitations and Monitoring Requirements discharging to Saltwaters (SA and SA sp)
- (3) Page 59 of 67 Part X.I - Limitations and Monitoring Requirements discharging to Saltwaters (SB and SB sp)
- (4) Pages 60 through 61 of 67 Part X.J - Limitations and Monitoring Requirements discharging to Saltwaters SFH (existing) or any waters regardless of class that can affect shellfish
- (5) Pages 62 through 63 of 67 Part X.K - Bacteria Supplemental Data Sheet (all facilities with bacteria limitations)

See items listed above under a-c for specific pages that would be utilized. Limits would be based on the primary unit operation at the wastewater treatment plant.

On the attached EXCEL spreadsheet for the effluent limits and other permit conditions:

Column A: Permit Number of Existing Wastewater Plant Individual Permit

Column B: Permit Number of New Wastewater Plant General Permit (e.g. SCG000000 through SCG000000)

Column C: Facility Name

Column D: South Carolina County in which facility is located

Column G: Facility Type (e.g POTW, Private, Industrial)

Column I: Waterbody - Surface Water for the discharge point

Column J: 303(d) List - Monitoring Stations

Column K: Is the waterbody currently under a fish advisory? (YES/NONE)

Column L: 303(d) List - Impaired Water Parameter

Column N: SIC Code of Facility

Column O: Wastewater Treatment Plant Classification (e.g. Group III-Biological)

Column P: Wastewater Operator Grade Requirement (e.g. Grade B-Biological)

Column Q: Reliability Classification (e.g Class III)

Column R: Calendar Day To Monitor Monthly Parameters (e.g. First Tuesday)

Column S: 7Q10 Stream flow (cfs) provided by the Wasteload Allocation Section for dilution.

Column T: Average Annual Stream Flow (cfs)

Column U: Instream Waste Concentration

Column V: Water Classification - Surface Water classification from R61-69 (Classified Waters).

Column W: Site Specific Standards applicable to receiving waters

Column Y: Design Flow of wastewater discharge (MGD)

Column AA: Actual Flow of wastewater discharge (MGD)

Column AC and AD: BOD₅ Monthly Average (lb/day) and (mg/L)

Column AE and AF: BOD₅ Weekly Average (lb/day) and (mg/L)

Column AG and AH: BOD₅ Daily Maximum (lb/day) and (mg/L)

Column AI and AJ: TSS Monthly Average (lb/day) and (mg/L)

Column AK and AL: TSS Weekly Average (lb/day) and (mg/L)

Column AM and AN: TSS Daily Maximum (lb/day) and (mg/L)

Column AO and AP: NH₃-N (Mar - Oct) Monthly Average (lb/day) and (mg/L)

Column AQ and AR: NH₃-N (Mar - Oct) Weekly Average (lb/day) and (mg/L)

Column AS and AT: NH₃-N (Mar - Oct) Daily Maximum (lb/day) and (mg/L)

Column AU and AV: NH₃-N (Nov - Feb) Monthly Average (lb/day) and (mg/L)

Column AW and AX: NH₃-N (Nov - Feb) Weekly Average (lb/day) and (mg/L)

Column AY and AZ: NH₃-N (Nov - Feb) Daily Maximum (lb/day) and (mg/L)

Column BA and BB: TRC Monthly Average (lb/day) and (mg/L)

Column BC and BD: TRC Weekly Average (lb/day) and (mg/L)

Column BE and BF: TRC Daily Maximum (lb/day) and (mg/L)

Column BG: Is toxicity testing required at the facility? (Y/N)

Column BH: Type of discharge (e.g. continuous or non-continuous)

Column BI: Toxicity Acute Test Concentration (ATC)

Column BJ: Toxicity Chronic Test Concentration (CTC)

Column BK: Dissolved Oxygen Minimum Limit (mg/L)

Column BL and BM: pH Minimum and Maximum

Column BN and BP: Fecal Coliform Monthly Average and Daily Maximum

Column BQ and BS: E. coli Monthly Average and Daily Maximum

Column BT and BV: Enterococcus Monthly Average and Daily Maximum

Column CG and CH: Secondary Treatment BOD₅ Monthly Average (mg/L) and Weekly Average (mg/L)

Column CI: Secondary Treatment BOD₅ Percent Removal

Column CJ and CK: Secondary Treatment TSS Monthly Average (mg/L) and Weekly Average (mg/L)

Column CL: Secondary Treatment TSS Percent Removal

Column CM and CN: Secondary Treatment CBOD₅ Monthly Average (mg/L) and Weekly Average (mg/L)

Column CO: Secondary Treatment CBOD₅ Percent Removal

Column CP: Limits Pages Used For Flow

Column CQ: Limits Pages Used For Whole Effluent Toxicity

Column CR: Limits Pages Used For Chronic Whole Effluent Toxicity

Column CU: Limits Pages Used For Bacteria

Column CV: Limits Pages Used For Total Phosphorus

Column CW: Limits Pages Used For Total Mercury

Column CX: Permit Number of New Wastewater Plant General Permit (e.g. SCG000000 through SCG000000)

Column CY: Facility Name

Column CZ: Comments

1. Flow:

Page 51 or 52 of 67

1. Previous permit limits: see EXCEL spreadsheet for list
Monthly average: Monitor & Report Only (MGD)
Daily maximum: Monitor & Report Only (MGD)
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: Not applicable.
6. Proposed Limits:
Monthly average: Monitor & Report Only (MGD)
POTWs only, Weekly average: Monitor & Report Only (MGD)
All except POTWs, Daily maximum: Monitor & Report Only (MGD)
Monitoring Frequency is once per month (1/month) for facilities with flows less than 50,000 gallons per day and twice per month (2/month) for facilities with flows greater than or equal to 50,000 gallons per day and less than 500,000 gallons per day.
7. Conclusion: Continue with use of a Monitor & Report for Monthly Average and either Weekly Average or Daily Maximum Flow.

2. 5-Day Biochemical Oxygen Demand (BOD₅):

Page 51 or 52 of 67

1. Previous permit limits: see EXCEL spreadsheet for list
Monthly average: varies based on effluent flow, water quality standard and dilution from 7Q10 from specific stream segment. 1/month sampling frequency
Daily maximum: varies based on effluent flow, water quality standard and dilution from 7Q10 from specific stream segment. 1/month sampling frequency
2. Water Quality Data: Not applicable.
3. Secondary Treatment Limitation: For POTWs, in accordance with Reg.61-9.133.102, 103, or 105.
4. Other information: None
5. Detection Limit: Not applicable.
6. Proposed Limits:
Monthly average: varies based on effluent flow, water quality standard and dilution from 7Q10 from specific stream segment.
Daily maximum: varies based on effluent flow, water quality standard and dilution from 7Q10 from specific stream segment.

Monitoring Frequency is once per month (1/month) for facilities with flows less than 50,000 gallons per day and twice per month (2/month) for facilities with flows greater than or equal to 50,000 gallons per day and less than 500,000 gallons per day.

7. Conclusion: This permit is for variable BOD₅ effluent concentrations based on the effluent flow, and 7Q10 from the specific stream segment. The specific limits for each facility and the 7Q10 flows are noted on the attached EXCEL spreadsheet. Limits for POTWs cannot exceed secondary treatment requirements.

3. Total Suspended Solids (TSS):

Page 51 or 52 of 67

1. Previous permit limits: see EXCEL spreadsheet for list
Monthly average: varies based on type of treatment, effluent flow and specific stream segment. 1/month sampling frequency
Daily maximum: varies based on type of treatment, effluent flow and specific stream segment. 1/month sampling frequency
2. Water Quality Data: Not applicable.
3. Secondary Treatment Limitation: For POTWs, in accordance with Reg.61-9.133.102, 103, or 105.
4. Other information: None
5. Detection Limit: Not applicable.
6. Proposed Limits:
Monthly average: varies based on type of treatment, effluent flow and specific stream segment.
Daily maximum: varies based on type of treatment, effluent flow and specific stream segment.
Monitoring Frequency is once per month (1/month) for facilities with flows less than 50,000 gallons per day and twice per month (2/month) for facilities with flows greater than or equal to 50,000 gallons per day and less than 500,000 gallons per day.
7. Conclusion: This permit is for variable TSS effluent concentrations based on the effluent flow, and 7Q10 from the specific stream segment. The specific limits for each facility and the 7Q10 flows are noted on the attached EXCEL spreadsheet. Limits for POTWs cannot exceed secondary treatment requirements.

4. Total Residual Chlorine (TRC):

Page 51 or 52 of 67

1. Previous permit limits: see EXCEL spreadsheet for list
Monthly average: varies based on effluent flow, CCC instream standard and dilution from 7Q10 from specific stream segment. 1/month sampling frequency
Daily maximum: varies based on effluent flow, CCC instream standard and dilution from 7Q10 from specific stream segment. 1/ month sampling frequency
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: Governing Water Quality Criterion Reg.61-68.
5. Detection Limit: 0.05 mg/l
6. Proposed Limits:
Monthly average: varies based on effluent flow, CCC instream standard and dilution from 7Q10 from specific stream segment.
Daily maximum: varies based on effluent flow, CCC instream standard and dilution from 7Q10 from specific stream segment.
Monitoring Frequency is once per month (1/month) for facilities with flows less than 50,000 gallons per day and twice per month (2/month) for facilities with flows greater than or equal to 50,000 gallons per day and less than 500,000 gallons per day.
7. Conclusion: This permit is for variable TRC effluent concentrations based on the effluent flow, and 7Q10 from the specific stream segment. The specific limits for each facility and the 7Q10 flows are noted on the attached EXCEL spreadsheet.

This permit is for variable TRC effluent concentrations based on the effluent flow, and 7Q10 from the specific

stream segment. The permit limits could vary from a zero 7Q10 condition, where the limits would be the same as the applicable water quality standard from Reg.61-68, to a maximum of maximum effluent TRC limits of 0.5 mg/l (Monthly Average) and 1.0 mg/l (Daily Maximum), after considering dilution.

As an example for a Freshwater Stream, at the maximum effluent TRC limit of .5 mg/l (Monthly Average), the minimum dilution required to meet the instream standard of 0.011 mg/l (Monthly Average) can be calculated: $0.5/0.011 = 45.5:1$. Similarly, at the maximum effluent TRC limit of 1.0 mg/l (Daily Maximum), the minimum dilution required to meet the freshwater instream standard of 0.019 mg/l can be calculated: $1.0/0.019 \text{ mg/l} = 52.6:1$. Therefore, the critical factor necessary to comply with instream TRC standards is a minimum ration between the 7Q10 and the effluent discharge. The 7Q19 is determined y the Department's Wasteload Allocation Section using the United States Geological Survey data and the permit application which includes a map showing the discharge location. So long as the 7Q10 at the discharge point complies with the minimum dilution needed to meet the CCC and CMC instream concentrations, the proposed TRC limits would be protection of the receiving stream. The specific limits for each facility and the 7Q10 flows are noted on the attached EXCEL spreadsheet.

5. pH:

Page 51 or 52 of 67

1. Previous permit limits: see EXCEL spreadsheet for list
Based on Water Quality standards either FW, FW with site-specific standards, SA or SB, or SA or SB with site-specific standards, or SFH.
Sampling frequency: Daily
Sample type: Grab
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: Instream Standards for pH are established in Reg. 61-68.
5. Detection Limit: Not applicable.
6. Proposed Limits:
The S.C. Water Classifications & Standards (Reg. 61-68) instream standard for pH for a Class Freshwater stream is 6.0 to 8.5 standard units. Therefore the limit for pH shall be between 6.0 and 8.5 based on S.C. Water Classifications & Standards (Reg. 61-68) and Classified Waters (Reg. 61-69).

The S.C. Water Classifications & Standards (Reg. 61-68) instream standard for pH for a Class Freshwater with a site specific standard stream is 5.0 to 8.5 standard units. Therefore the limit for pH shall be between 5.0 and 8.5 based on S.C. Water Classifications & Standards (Reg. 61-68) and Classified Waters (Reg. 61-69).

The S.C. Water Classifications & Standards (Reg. 61-68) instream standard for pH for Class SA, SA sp, SB, SB sp, and SFH streams is 6.5 to 8.5 standard units. Therefore the limit for pH shall be between 6.5 and 8.5 based on S.C. Water Classifications & Standards (Reg. 61-68) and Classified Waters (Reg. 61-69).

Monitoring Frequency is once per month (1/month) for facilities with flows less than or equal to 50,000 gallons per day and twice per month (2/month) for facilities with flows greater than 50,000 gallons per day and less than 500,000 gallons per day.

6. Total Mercury:

Page 66 or 67 of 67

1. Previous permit limits: see EXCEL spreadsheet for list
Monthly average: Monitor & Report Only (MGD)
Daily maximum: Monitor & Report Only (MGD)
2. Water Quality Data: Governing Water Quality Criterion Reg.61-68.
3. Categorical Limitation: Not applicable
4. Other information: Monitor and Report if discharge to waterbody listed on 303(d) list or identified with

mercury fish tissue data as impaired.

5. Detection Limit: 0.0005 µg/l
6. Proposed Limits:
Monitor & Report Only (MGD)
Monitoring Frequency is once every 5 years for facilities with flows less than or equal to 50,000 gallons per day and once per year for facilities with flows greater than 50,000 gallons per day and less than 500,000 gallons per day.
7. Conclusion: Continue with use of a Monitor & Report for the appropriate monitoring period.

7. Whole Effluent Acute Toxicity:

Page 53 or 54 of 67

1. Previous permit limits: see EXCEL spreadsheet for list
None
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: Per R61-68.E.14.c.2, if derived permit effluent limitations are below the PQL, the permit must include appropriate biological monitoring to determine compliance with the water quality standards.
5. Detection Limit: Not applicable.
6. Proposed Whole Effluent Toxicity Limitations
An acute toxicity test condition has been included for the following circumstances: (1) For non-continuous dischargers and if the required Total Residual Chlorine limit is below the PQL of 0.05 mg/l.
Unless a mixing zone analysis is provided by the permittee, then effluent Acute Toxicity limits will be based on a ATC of 100% if the Instream Dilution is less than 80%, otherwise the limits will be based on the Instream Dilution from 80% up to 100% (as shown on the attached EXCEL spreadsheet).
Toxicity Test species will be *Ceriodaphnia dubia* for Freshwaters, or Freshwaters with site specific limits, or *Mysidopsis bahia* for dischargers to SA or SB waters.
The proposed sampling frequency is once per year (1/year) for those facilities identified as requiring toxicity testing based on the conditions outlines above.

Whole Effluent Acute Toxicity is only applicable to the following permittees for initial issue. Additional coverages as required based on item 4 (above) and discharge location.

- SCG570007 - High Hills Rural Water Company/Harwood MHP
- SCG570025 - Hanson Brick/Columbia
- SCG570026 - Buck-A-Roo Ranch Inc./Jordan Enterprises Inc.

8. Chronic Whole Effluent Toxicity:

Page 55 or 56 of 67

1. Previous permit limits: see EXCEL spreadsheet for list
None
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: Per R61-68.E.14.c.2, if derived permit effluent limitations are below the PQL, the permit must include appropriate biological monitoring to determine compliance with the water quality standards.
5. Detection Limit: Not applicable.
6. Proposed Chronic Whole Effluent Toxicity Limitations
A toxicity test condition has been included for the following circumstances: (1) For continuous dischargers and if the required Total Residual Chlorine limit is below the PQL of 0.05 mg/l.
Unless a mixing zone analysis is provided by the permittee, then effluent Chronic Toxicity limits will be based on a CTC of 100% if the Instream Dilution is less than 80%, otherwise the limits will be based on the Instream Dilution from 80% up to 100% (as shown on the attached EXCEL spreadsheet).
Toxicity Test species will be *Ceriodaphnia dubia* for Freshwaters, or Freshwaters with site specific limits,

or *Mysidopsis bahia* for dischargers to SA or SB waters.
The proposed sampling frequency is once per year (1/year) for those facilities identified as requiring toxicity testing based on the conditions outlines above.

Chronic Whole Effluent Toxicity is only applicable to the following permittees for initial issue. Additional coverages as required based on item 4 (above) and discharge location.

- SCG570010 - Look Up Forest Homes Association
- SCG570018 - Sumter County/I-95 Rest Area

9. Total Phosphorus

Page 64 or 65 of 67

1. Previous permit limits: see EXCEL spreadsheet for list
Monthly average: Monitor & Report Only (MGD)
Daily maximum: Monitor & Report Only (MGD)
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.05 mg/l
6. Proposed Limits:
Monitor & Report Only (MGD)
Monitoring Frequency is semi-annual (2/year) with specific conditions on when samples should be collected for facilities with flows less than or equal to 50,000 gallons per day and quarterly (1/90) for facilities with flows greater than 50,000 gallons per day and less than 500,000 gallons per day.
7. Conclusion: Continue with use of a Monitor & Report for Monthly Average and either Weekly Average or Daily Maximum Flow.

Total Phosphorus monitoring is only applicable to the following permittees for initial issue. Additional coverages as required based on item 4 (above) and discharge location.

- SCG570008 - JACAAB Utilities, LLC/The Shoals WWTP
- SCG570014 - SC DPRT/Oconee State Park

The following permittees (for the initial permit issuance) were previously required to monitor for phosphorus in the individual NPDES Permit, but are no longer required to monitor for this parameter based on the evaluation of the Department. Discharges to a tributary to a lake greater than 40 acres or to a waterbody upstream of a 303(d) impaired lake would have the additional requirement for phosphorus monitoring. If a specific effluent limit is required, the permittee would not be eligible for coverage under the general permit. Please reference the attached Location Maps as a supplement to this decision. Additional coverages as required based on an analysis of the discharge location.

- SCG570013 - South Carolina Distributors, Inc.
- SCG570017 - SSSD/Clifton WWTP
- SCG570022 - Woodruff Roebuck Water District/Riverdale Mills WWTP

10. Dissolved Oxygen:

Page 51 or 52 of 67

1. Previous permit limits:
Minimum at all times: varies based on water quality standards and specific stream segment.
Sampling frequency: Daily
Sample type: Grab
2. Governing Water Quality Criterion: Effluent Limits for D.O. are established in accordance with Reg. 61-68.G.9 & 10.
Site Specific D.O. Standards applicable to Receiving Waters; See (R.61-69): Yes
If Yes, the site specific standard description is: see EXCEL spreadsheet for list

3. Other Information: None
4. Proposed Limits:
 - Minimum at all times: varies based on water quality standards and specific stream segment, see EXCEL spreadsheet for list.
 - Sampling frequency: Daily
 - Sample type: Grab

11. E. Coli:

Page 57 of 67

1. Previous permit limits: None
2. Water Quality Data:
3. Effluent limitation guidelines: N/A
4. Other information: None
5. Proposed Limits: E. Coli, per R.61-68.E.12(c)(8) [2012 WQS], will be limited to Freshwaters Class FW or FW sp
 - Monthly average: 126/100 ml
 - Maximum: 349/100 ml
 - Sample type: GrabSampling Frequency: Monitoring Frequency is once per month (1/month) for facilities with flows less than 50,000 gallons per day and twice per month (2/month) for facilities with flows greater than or equal to 50,000 gallons per day and less than 500,000 gallons per day.

12. Enterococci:

Page 58 or 59 or 61 of 67

1. Previous permit limits: None
 2. Water Quality Data: Enterococci standards in Regulation 61-68.G [2004 WQS] for all saltwaters except SB: Not to exceed a geometric mean of 35/100ml based on at least four samples collected from a given sampling site over a 30 day period; nor shall samples exceed a single sample maximum of 104/100ml. Enterococci standards in Regulation 61-68.G.13.f [2004 WQS] for Class SB: Not to exceed a geometric mean of 35/100ml based on at least four samples collected from a given sampling site over a 30 day period; nor shall samples exceed a single sample maximum of 501/100ml.
 3. Effluent limitation guidelines: N/A
 4. Other information: None
 5. Detection Limit: 1/100 ml (Standard Method 9221C, 9221 E or 9221 D)
 6. Proposed Limits: Enterococci, per R.61-68.E.12(c)(9), (10), and (11) [2012 WQS], will be limited to Saltwaters Class SA or SA sp or SFH
 - Monthly average: 35/100 ml
 - Maximum: 104/100 ml
 - Sample type: GrabSampling Frequency: Monitoring Frequency is once per month (1/month) for facilities with flows less than 50,000 gallons per day and twice per month (2/month) for facilities with flows greater than or equal to 50,000 gallons per day and less than 500,000 gallons per day.
- Saltwaters Class SB or SB sp
- Monthly average: 35/100 ml
 - Daily maximum: 501/100 ml
 - Sample type: Grab
- Sampling Frequency: Monitoring Frequency is once per month (1/month) for facilities with flows less than 50,000 gallons per day and twice per month (2/month) for facilities with flows greater than or equal to 50,000 gallons per day and less than 500,000 gallons per day.

13. Fecal Coliform:

Page 60 of 67

1. Previous permit limits:
 - Monthly average: varies based on water quality standards and specific stream segment, see EXCEL spreadsheet
 - Daily maximum: varies based on water quality standards and specific stream segment, see EXCEL spreadsheet
 - Sampling frequency: see EXCEL spreadsheet for list
 - Sample type: Grab
2. Governing Water Quality Criterion: Not applicable
3. Other Information: None
4. Cause, Reasonable Potential to Cause or Contribute to excursions of either Aquatic Life Criteria, based on Water Quality Regulation R.61-68.
5. Proposed limits: Fecal Coliform, per R.61-68.E.12(c)(11) [2012 WQS], will be limited to
 - Monthly average: 14/100 ml
 - Daily maximum: 34/100 ml
 - Sampling Frequency: Monitoring Frequency is once per month (1/month) for facilities with flows less than or equal to 50,000 gallons per day and twice per month (2/month) for facilities with flows greater than 50,000 gallons per day and less than 500,000 gallons per day.
 - Sample type: Grab

14. Other Parameters:

Limits for other metals were reviewed and determined not to be required based on the typical characteristics of the wastewater and the specific dilution with receiving stream. Permits that would require metals limitations other than those listed directly above cannot be covered under this general permit.

BCSD/CROSS HIGH SCHOOL - SCG570002

Total Cadmium:

1. Previous permit limits: SC0027103
 - Monthly average: 0.00031 mg/l
 - Daily maximum: 0.0017 mg/l
 - see "SCG570002 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.0001 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from August 2009 to August 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in the ditch to Lake Moultrie. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

Total Copper:

1. Previous permit limits: SC0027103
 - Monthly average: 0.012 mg/l
 - Daily maximum: 0.016 mg/l
 - see "SCG570002 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.01 mg/l
6. Proposed Limits: None

7. Conclusion: A Reasonable Potential Analysis of the DMR data from May 2009 to August 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in the ditch to Lake Moultrie. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

Total Phosphorus:

1. Previous permit limits: SC0027103
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570002 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.05 mg/l
6. Proposed Limits: None
7. Conclusion: A Department evaluation of the discharge location and instream waste concentration has been completed. Results determined this permittee is no longer required to monitor for this parameter. Discharges to a tributary to a lake greater than 40 acres or to a waterbody upstream of a 303(d) impaired lake would have the additional requirement for phosphorus monitoring.

BIC REAL ESTATE HOLDINGS, LLC - SCG570003

Total Cadmium:

1. Previous permit limits: SC0027341
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570003 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.0001 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from November 2009 to August 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in Neelys Creek. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

Total Copper:

1. Previous permit limits: SC0037341
Monthly average: 0.0097 mg/l
Daily maximum: 0.013 mg/l
see "SCG570003 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.01 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from November 2009 to August 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in Neelys Creek. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

Total Lead:

1. Previous permit limits: SC0027341
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570003 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.002 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from November 2009 to August 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in Neelys Creek. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

Total Phosphorus:

1. Previous permit limits: SC0027341
Monthly average: Monitor & Report
Weekly average: Monitor & Report
see "SCG570003 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.05 mg/l
6. Proposed Limits: None
7. Conclusion: A Department evaluation of the discharge location and instream waste concentration has been completed. Results determined this permittee is no longer required to monitor for this parameter. Discharges to a tributary to a lake greater than 40 acres or to a waterbody upstream of a 303(d) impaired lake would have the additional requirement for phosphorus monitoring.

Zinc:

1. Previous permit limits: SC0027341
Monthly average: Monitor & Report
Daily maximum: 0.16 mg/l
see "SCG570003 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.01 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from November 2009 to August 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in Neelys Creek. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

GSWSA/TOWN OF NICHOLS WWTP - SCG570006

Total Mercury:

1. Previous permit limits: SC0041327
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
2. Water Quality Data: Not applicable.

3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.0005 µg/l
6. Proposed Limits:
 Monitor & Report Only (MGD)
 Monitoring Frequency is once per year
7. Conclusion: Continue with use of a Monitor & Report for the appropriate monitoring period.

HIGH HILLS RURAL WATER COMPANY/HARWOOD MHP - SCG5700007

Total Cadmium:

1. Previous permit limits: SC0031704
 Monthly average: 0.00034 mg/l
 Daily maximum: 0.0019 mg/l
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.0001 mg/l
6. Proposed Limits: None
7. Conclusion: This permittee has reported “No Discharge” on each DMR from May 2007 - July 2013. No Reasonable Potential Analysis could be completed because there has been no discharge. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit. There is no expectation that the Water Quality Standards will be exceeded.

Total Copper:

1. Previous permit limits: SC0031704
 Monthly average: 0.0097 mg/l
 Daily maximum: 0.013 mg/l
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.01 mg/l
6. Proposed Limits: None
7. Conclusion: This permittee has reported “No Discharge” on each DMR from May 2007 - July 2013. No Reasonable Potential Analysis could be completed because there has been no discharge. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit. There is no expectation that the Water Quality Standards will be exceeded.

Total Lead:

1. Previous permit limits: SC0031704
 Monthly average: 0.0032 mg/l
 Daily maximum: Monitor & Report
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.002 mg/l
6. Proposed Limits: None
7. Conclusion: This permittee has reported “No Discharge” on each DMR from May 2007 - July 2013. No Reasonable Potential Analysis could be completed because there has been no discharge. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit. There is no expectation that the Water Quality Standards will be exceeded.

Total Zinc:

1. Previous permit limits: SC0031704
Monthly average: Monitor & Report
Daily maximum: 0.16 mg/l
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.01 mg/l
6. Proposed Limits: None
7. Conclusion: This permittee has reported “No Discharge” on each DMR from May 2007 - July 2013. No Reasonable Potential Analysis could be completed because there has been no discharge. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit. There is no expectation that the Water Quality Standards will be exceeded.

JACAAB UTILITIES/THE SHOALS WWTP - SCG570008

Total Phosphorus:

1. Previous permit limits: SC0021873
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see “SCG570008 - REASONABLE POTENTIAL ANALYSIS.xls” for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.05 mg/l
6. Proposed Limits:
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
7. Conclusion: A Department evaluation of the discharge location and instream waste concentration has been completed. Results determined this permittee is still required to monitor for this parameter. Discharges to a tributary to a lake greater than 40 acres or to a waterbody upstream of a 303(d) impaired lake would have the additional requirement for phosphorus monitoring.

Total Nitrogen:

1. Previous permit limits: SC0021873
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see “SCG570008 - REASONABLE POTENTIAL ANALYSIS.xls” for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: Since there is no EPA accepted method to directly measure total nitrogen, total nitrogen should be reported as a sum of the two values of TKN and nitrate-nitrite nitrogen.
5. Detection Limit: None
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from April 2009 to July 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in Lake Hartwell due to the small quantity of nitrogen discharged. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

Total Lead:

1. Previous permit limits: SC0021873
Monthly average: 0.0032 mg/l

Daily maximum: Monitor & Report
see "SCG570008 - REASONABLE POTENTIAL ANALYSIS.xls" for data

2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.002 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from July 2009 to July 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in Lake Hartwell. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

SOUTH CAROLINA DISTRIBUTORS, INC. - SCG570013

Total Phosphorus:

1. Previous permit limits: SC0002755
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570013 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.05 mg/l
6. Proposed Limits: None
7. Conclusion: A Department evaluation of the discharge location and instream waste concentration has been completed. Results determined this permittee is no longer required to monitor for this parameter. Discharges to a tributary to a lake greater than 40 acres or to a waterbody upstream of a 303(d) impaired lake would have the additional requirement for phosphorus monitoring.

SC DPRT/OCONEE STATE PARK - SCG570014

Total Phosphorus:

1. Previous permit limits: SC0024872
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570014 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.05 mg/l
6. Proposed Limits:
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
7. Conclusion: A Department evaluation of the discharge location and instream waste concentration has been completed. Results determined this permittee is no longer required to monitor for this parameter. Discharges to a tributary to a lake greater than 40 acres or to a waterbody upstream of a 303(d) impaired lake would have the additional requirement for phosphorus monitoring.

SSSD/CLIFTON WWTP - SCG570017

Total Phosphorus:

1. Previous permit limits: SC0042668
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570017 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.05 mg/l
6. Proposed Limits: None
7. Conclusion: A Department evaluation of the discharge location and instream waste concentration has been completed. Results determined this permittee is no longer required to monitor for this parameter. Discharges to a tributary to a lake greater than 40 acres or to a waterbody upstream of a 303(d) impaired lake would have the additional requirement for phosphorus monitoring.

SUMTER COUNTY/I-95 REST AREA - SCG5700018

Total Cadmium:

1. Previous permit limits: SC0038962
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570018 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.0001 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from March 2009 to June 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in Pudding Swamp. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

Total Copper:

1. Previous permit limits: SC0038962
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570018 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.01 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from March 2009 to June 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in Pudding Swamp. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

Total Lead:

1. Previous permit limits: SC0038962
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570018 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.

3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.002 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from March 2009 to June 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in Pudding Swamp. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

Total Zinc:

1. Previous permit limits: SC0038962
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570018 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.01 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from March 2009 to June 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in Pudding Swamp. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

UNITED UTILITY COMPANIES, INC./FAIRWOODS SD - SCG570020

Total Lead:

1. Previous permit limits: SC0035041
Monthly average: 0.011 mg/l
Daily maximum: Monitor & Report
see "SCG570020 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.002 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from May 2009 to May 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in the Fairforest Creek. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

WOODRUFF ROEBUCK WATER DISTRICT/RIVERDALE MILLS WWTP - SCG570022

Total Phosphorus:

1. Previous permit limits: SC0035734
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570022 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.05 mg/l

6. Proposed Limits: None
7. Conclusion: A Department evaluation of the discharge location and instream waste concentration has been completed. Results determined this permittee is no longer required to monitor for this parameter. Discharges to a tributary to a lake greater than 40 acres or to a waterbody upstream of a 303(d) impaired lake would have the additional requirement for phosphorus monitoring.

Total Nitrogen:

1. Previous permit limits: SC0035734
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570022 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: Since there is no EPA accepted method to directly measure total nitrogen, total nitrogen should be reported as a sum of the two values of TKN and nitrate-nitrite nitrogen.
5. Detection Limit: None
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from March 2009 to August 2013 shows no significant loading to the receiving stream. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

Total Zinc:

1. Previous permit limits: SC0035734
Monthly average: Monitor & Report
Daily maximum: Monitor & Report
see "SCG570022 - REASONABLE POTENTIAL ANALYSIS.xls" for data
2. Water Quality Data: Not applicable.
3. Categorical Limitation: Not applicable
4. Other information: None
5. Detection Limit: 0.01 mg/l
6. Proposed Limits: None
7. Conclusion: A Reasonable Potential Analysis of the DMR data from June 2009 to June 2013 shows no reasonable potential for this discharge to adversely impact the quality of aquatic life or human health in the Enoree River. Therefore it is appropriate to remove the previous effluent limitations and monitoring requirements from this permit.

**South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201**

FACT SHEET

**APPLICATION FOR
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE WASTEWATER TREATMENT FACILITY WATERS
TO STATE WATERS
Domestic Wastewater Design Flow less than 500,000 GPD**

Application No. SCG570000

Date: October 2013

1. SYNOPSIS OF APPLICATION

A. Name of and Address of Applicant

Those facilities which have discharges from wastewater treatment plants (or other covered activities) with total limits as proposed in the General Permit conditions Part X.

B. Facility Location

Within the geographic boundaries of the State of South Carolina.

C. Description of Applicant's Operation

1. Types of Coverage: This permit authorizes discharge of the following types of wastewater:

a. Wastewater treatment facilities **with no** compliance schedules and a design flow less than or equal to 50,000 gallons per day and:

- (1) A POTW with a discharge to Class Freshwaters (FW or FW sp).
- (2) A POTW with a discharge to Class Saltwaters (SA or SA sp).
- (3) A POTW with a discharge to Class Saltwaters (SB or SB sp).
- (4) A POTW with a discharge to Class Saltwaters (SFH, existing facilities only).
- (5) A privately owned treatment works with a discharge to Class Freshwaters (FW or FW sp).
- (6) A privately owned treatment works with a discharge to Class Saltwaters (SA or SA sp).
- (7) A privately owned treatment works with a discharge to Class Saltwaters (SB or SB sp).
- (8) A privately owned treatment works with a discharge to Class Saltwaters (SFH, existing facilities only).
- (9) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Freshwaters (FW or FW sp).
- (10) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SA or SA sp).
- (11) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SB or SB sp).

- (12) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SFH, existing facilities only).
- b. Wastewater treatment facilities **with no** compliance schedules and a design flow greater than 50,000 gallons per day and less than 500,000 gallons per day and:
- (1) A POTW with a discharge to Class Freshwaters (FW or FW sp).
 - (2) A POTW with a discharge to Class Saltwaters (SA or SA sp).
 - (3) A POTW with a discharge to Class Saltwaters (SB or SB sp).
 - (4) A POTW with a discharge to Class Saltwaters (SFH, existing facilities only).
 - (5) A privately owned treatment works with a discharge to Class Freshwaters (FW or FW sp).
 - (6) A privately owned treatment works with a discharge to Class Saltwaters (SA or SA sp).
 - (7) A privately owned treatment works with a discharge to Class Saltwaters (SB or SB sp).
 - (8) A privately owned treatment works with a discharge to Class Saltwaters (SFH, existing facilities only).
 - (9) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Freshwaters (FW or FW sp).
 - (10) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SA or SA sp).
 - (11) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SB or SB sp).
 - (12) An industrial facility with domestic wastewater only (no process wastewater) with a discharge to Class Saltwaters (SFH, existing facilities only).
- c. All facilities needing Toxicity Limitations in addition to the items above.
- d. All facilities utilizing the bacterial requirements for documenting compliance with the provisions of R.61-68.E.14(c)(12).

2. Limitations on Coverage

The following wastewater treatment plant discharges are not authorized by this permit:

- a. discharges that are:
 - (1) mixed with other wastewater from categorical sources per R.61-9.403 and/or process wastewater unless those discharges are in compliance with a different NPDES permit; or
 - (2) discharges of hazardous substances or oils, identified by and in compliance with Part VIII.A;
- b. discharges which are subject to an existing effluent limitation guideline addressing them;
- c. discharges that are subject to an existing NPDES individual or general permit; are located at a facility where an NPDES permit has been terminated or denied; or which are issued a permit in accordance with Part V.N (Requiring an Individual Permit or an Alternative General Permit) of this permit. Such discharges may be authorized under this permit after an existing permit expires or is canceled.

- d. discharges for waters other than those described;
- e. discharges whose receiving waters are not Freshwater (Class FW or FW sp) or Saltwater (Class SA, SA sp, SB, or SB sp), or Shellfish Harvesting Waters (Class SFH, as qualified in Part II. A. above) as classified by S.C. Reg. 61-68, *Water Classifications and Standards and 61-69, Classified Waters*. This permit does not authorize discharges to Trout Waters (Class TPGT or TN), Outstanding Resource Waters (Class ORW), or Outstanding National Resource Waters (ONRW) as classified by S.C. Regulation 61-69.
- f. discharges that the Department has determined to be or which may reasonably be expected to be contributing to a violation of a water quality standard; and
- g. discharges that would adversely affect a listed endangered or threatened species or its critical habitat.

D. Receiving Water Name

Freshwater (Class FW or FW sp) or Saltwater (Class SA, SA sp, SB, or SB sp) or Shellfish Harvesting Waters (SFH) as classified by *S.C. Reg. 61-68, Water Classifications and Standards and 61-69, Classified Waters*. This permit does not authorize discharges to Trout Waters (Class TPGT or TN), Outstanding Resource Waters (Class ORW), or Outstanding National Resource Waters (ONRW) as classified by *S.C. Regulation 61-69*.

E. Description of Existing Pollution Abatement Facilities

See NPDES permit application information.

F. Permitting Action

Issue of a new General Permit replacing existing Individual NPDES Permits for discharges from wastewater treatment plants (or other covered activities) as described above in the State of South Carolina.

2. PROPOSED EFFLUENT LIMITATIONS

See Part X. of the General Permit.

3. RATIONALE FOR DETERMINING EFFLUENT LIMITATIONS

The Department's use of Regulation 61-9 and water quality standards from Regulation 61-68 have been used to justify the permit limits. See additional justification in permit rationale.

See General Permit Rationale.

4. MONITORING REQUIREMENTS

A. Measurement Frequency:

See General Permit Rationale.

B. Submission of Discharge Monitoring Reports (DMR's):

Discharge monitoring reports are to be recorded and maintained on-site. The on-site data must be updated by the 28th day of each month to include the previous month's discharge monitoring report. These reports are to be submitted to the Department on a yearly basis.

5. SCHEDULE FOR MEETING LIMITS

See compliance schedules for Toxicity Testing in permit conditions. Not all facilities will have these requirements.

6. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

See permit conditions related to Toxicity Testing Compliance Schedule.

7. PERMIT DURATION

Five (5) years from the effective date of the permit.

8. PROCEDURES FOR REACHING A FINAL PERMIT DECISION

A. Comment Period (R.61-9.124.10 and 11)

The Department of Health and Environmental Control proposes to issue an NPDES permit to this applicant subject to the effluent limitations and special conditions outlined in this document. These determinations are tentative.

During the public comment period, any interested person may submit written comments on the draft permit to the following address:

SC Dept. of Health and Environmental Control
Water Facilities Permitting Division
Bureau of Water
2600 Bull Street
Columbia, South Carolina 29201

For additional information, interested persons may contact

Per R.61-9.124.17, the Department is only required to issue a response to comments when a final permit is issued. This response shall:

1. Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and
2. Briefly describe and respond to all significant comments on the draft permit raised during the public comment period, or during any hearing.

The response to comments shall be available to the public.

B. Public Hearings (R.61-9.124.11 and 12)

During the public comment period, any interested person may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

1. Determinations and Scheduling.

a. Within the thirty (30) day comment period or other applicable comment period

provided after posting or publishing of a public notice, an applicant, any affected state or interstate agency, the Regional Administrator or any other interested person or agency may file a petition with the Department for a public hearing on an application for a permit. A petition for a public hearing shall indicate the specific reasons why a hearing is requested, the existing or proposed discharge identified therein and specifically indicate which portions of the application or other permit form or information constitutes necessity for a public hearing. If the Department determines that a petition constitutes significant cause or that there is sufficient public interest in an application for a public hearing, it may direct the scheduling of a hearing thereon.

b. A hearing shall be scheduled not less than four (4) nor more than eight (8) weeks after the Department determines the necessity of the hearing in the geographical location of the applicant or, at the discretion of the Department, at another appropriate location, and shall be noticed at least thirty (30) days before the hearing. The notice of public hearing shall be transmitted to the applicant and shall be published in at least one (1) newspaper of general circulation in the geographical area of the existing or proposed discharge identified on the permit application and shall be mailed to any person or group upon request thereof. Notice shall be mailed to all persons and governmental agencies which received a copy of the notice or the fact sheet for the permit application.

c. The Department may hold a single public hearing on related groups of permit applications.

d. The Department may also hold a public hearing at its discretion, whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision;

e. Public notice of the hearing shall be given in accordance with R.61-9.124.10.

f. Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing may be required. The public comment period under R.61-9.124.10 shall automatically be extended to the close of any public hearing under this section. The hearing officer may also extend the comment period by so stating at the hearing.

g. A tape recording or written transcript of the hearing shall be made available to the public.

C. Obligation to raise issues and provide information during the public comment period. (R.61-

9.124.13)

All persons, including applicants, who believe any condition of a draft permit is inappropriate or that the Department's tentative decision to deny an application, terminate a permit, or prepare a draft permit is inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including any public hearing). No issue shall be raised during an appeal by any party that was not submitted to the administrative record as part of the preparation and comment on a draft permit, unless good cause is shown for the failure to submit it. Any supporting materials which are submitted shall be included in full and may not be incorporated by reference, unless they are already part of the administrative record in the same proceeding, or consist of State or Federal statutes and regulations, Department and EPA documents of general applicability, or other generally available reference materials. Commenters shall make supporting materials not already included in the administrative record available. (A comment period longer than 30 days may be necessary to give commenters a reasonable opportunity to comply with the requirements of this section. Additional time shall be granted under R.61-9.124.10 to the extent that a commenter who requests additional time demonstrates the need for such time).

D. Issuance and Effective Date of the Permit

1. After the close of the public comment period on a draft permit, the Department shall issue a final permit decision. The Department shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice shall include reference to the procedures for appealing a decision on a permit. For the purposes of this section, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.
2. A final permit decision shall become effective 30 days after the service of notice of the decision unless:
 - a. A later effective date is specified in the decision; or
 - b. No comments requested a change in the draft permit, in which case the permit shall become effective on the effective date shown in the issued permit.
3. Issuance or Denial of Permits. An appeal to a final determination of the Department or to a condition of a permit issued or the denial of a permit pursuant to the State law and Regulation 61-9, shall be in accordance with and subject to 48-1-200 of the SC Code (see E below).

E. Adjudicatory Hearings

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of \$100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference.

1. Filing of Request for Final Review

- a. A written Request for Final Review (RFR) and the required filing fee of one hundred dollars (\$100) must be received by Clerk of the Board within fifteen (15) calendar days after notice of the staff decision has been mailed to the applicant, permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after 5:00 p.m.
- b. RFRs shall be in writing and should include, at a minimum, the following information:
 - The grounds for amending, modifying, or rescinding the staff decision;
 - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
 - the relief requested; and
 - a copy of the decision for which review is requested.
 -
- c. RFRs should be filed in person or by mail at the following address:

South Carolina Board of Health and Environmental Control
Attention: Clerk of the Board
2600 Bull Street
Columbia, South Carolina 29201

Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail (boardclerk@dhec.sc.gov).

- d. The filing fee may be paid by cash, certified check or credit card. If a RFR is filed by facsimile or electronic mail, the filing fee may be mailed to the Clerk of the Board and the envelope must be postmarked within the time allowed for filing a RFR.
- e. If there is any perceived discrepancy in compliance with this RFR filing procedure, the Clerk should consult with the Chairman or, if the Chairman is unavailable, the Vice-Chairman. The Chairman or the Vice-Chairman will determine whether the RFR is timely and properly filed and direct the Clerk to (1) process the RFR for consideration by the Board or (2) return the RFR and filing fee to the requestor with a cover letter explaining why the RFR was not timely or properly filed. Processing an RFR for consideration by the Board shall not be interpreted as a waiver of any claim or defense by the agency in subsequent proceedings concerning the RFR.
- f. If the RFR will be processed for Board consideration, the Clerk will send an Acknowledgement of RFR to the Requestor and the applicant, permittee, or licensee, if other than the Requestor.
- g. The Clerk will email the RFR to all Board members for review, and all Board members will

confirm receipt of the RFR to the Clerk by email. If a Board member does not confirm receipt of the RFR within twenty-four (24) hour period, the Clerk will contact the Board member and confirm receipt. If a Board member believes the RFR should be considered by the RFR Committee, he or she will respond to the Clerk's email within forty-eight (48) hours and will request further review. If no Board member requests further review of the RFR within the forty-eight (48) hour period, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Final Review Conference. A copy of the Notice of Appeal Procedure will be included with the letter.

NOTE: If the time periods described above end on a weekend or State holiday, the time is automatically extended to 5:00 p.m. on the next business day.

- h. If the RFR is to be considered by the RFR Committee, the Clerk will forward a copy of the RFR to Department staff and Office of General Counsel. A Department response to the RFR should be provided by Department staff to the Clerk within eight (8) working days after the RFR is forwarded.

2. Final Review Conference Scheduling

- a. If a Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, informing the Requestor of the determination.
- b. The Clerk will request Department staff provide the Administrative Record.
- c. The Clerk will send Notice of Final Review Conference to the parties at least ten (10) days before the Conference.

The Conference will be publically noticed and should:

- include the place, date and time of the Conference;
 - state the presentation times allowed in the Conference;
 - state evidence may be presented at the Conference;
 - if the conference will be held by committee, include a copy of the Chairman's order appointing the committee; and
 - inform the Requestor of his or her right to request a transcript of the proceedings of the Conference prepared at Requestor's expense.
- d. If a party requests a transcript of the proceedings of the Conference and agrees to pay all related costs in writing, including costs for the transcript, the Clerk will schedule a court reporter for the Conference.

3. Final Review Conference and Decision

- a. The order of presentation in the Conference will, subject to the presiding officer's discretion, be as follows:
 - Department staff will provide an overview of the staff decision and the applicable law to include [10 minutes]:

- Type of decision (permit, enforcement, etc.) and description of the program.
 - Parties
 - Description of facility/site
 - Applicable statutes and regulations
 - Decision and materials relied upon in the administrative record to support the staff decision.
- Requestor(s) will state the reasons for protesting the staff decision and may provide evidence to support amending, modifying, or rescinding the staff decision. [15 minutes] *NOTE: The burden of proof is on the Requestor(s)*
 - Rebuttal by Department staff [15 minutes]
 - Rebuttal by Requestor(s) [10 minutes]
- Note: Times noted in brackets are for information only and are superseded by times stated in the Notice of Final Review Conference or by the presiding officer.
- b. Parties may present evidence during the conference; however, the rules of evidence do not apply.
 - c. At any time during the conference, the officers conducting the conference may request additional information and may question the Requestor, the staff, and anyone else providing information at the conference.
 - d. The presiding officer, in his or her sole discretion, may allow additional time for presentations and may impose time limits on the Conference.
 - e. All Conferences are open to the public.
 - f. The officers may deliberate in closed session.
 - g. The officers may announce the decision at conclusion of the Conference or it may be reserved for consideration.
 - h. The Clerk will mail the written final agency decision (FAD) to parties within 30 days after the Conference. The written decision must explain the basis for the decision and inform the parties of their right to request a contested case hearing before the Administrative Law Court. The FAD will be sent by certified mail, return receipt requested.
 - i. Communications may also be sent by electronic mail, in addition to the forms stated herein, when electronic mail addresses are provided to the Clerk.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.