

Bureau of Air Quality Synthetic Minor Construction Permit

Santee Cooper Cross Generating Station 553 Cross Station Road Pineville, South Carolina 29468 Berkeley County

In accordance with the provisions of the Pollution Control Act, Sections 48-1-50(5), 48-1-100(A), and 48-1-110(a), the 1976 Code of Laws of South Carolina, as amended, and South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards, the Bureau of Air Quality authorizes the construction of this facility and the equipment specified herein in accordance with the plans, specifications, and other information submitted in the construction permit application received on November 17, 2022, as amended. All official correspondence, plans, permit applications, and written statements are an integral part of the permit. Any false information or misrepresentation in the application for a construction permit may be grounds for permit revocation.

The construction and subsequent operation of this facility is subject to and conditioned upon the terms, limitations, standards, and schedules contained herein or as specified by this permit and its accompanying attachments.

Permit Number: CP-50000034 v1.0

Agency Air Number: 0420-0030

Issue Date: December 31, 2024

Steve McC<mark>aslin, P. E., Di</mark>rector Air Permitting Division

Bureau of Air Quality

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RECORD OF R	REVISIONS
Date	Description of Changes

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A. PROJECT DESCRIPTION, EQUIPMENT, AND CONTROL DEVICE(S)

Under Section 169A of the Clean Air Act, the South Carolina Implementation Plan (SIP) is required to contain measures necessary to make reasonable progress toward meeting the national goal for visibility protection for Federal Class I areas. This construction permit documents the limits that will be promulgated into 40 CFR 52 – Approval and Promulgation of Implementation Plans, Subpart PP – South Carolina. A limit of less than or equal to 0.20 lbs per million British thermal units (lb/MMBtu) of sulfur dioxide (SO₂) from boilers B01, B02, B03, and B04 will be established with this construction permit.

A.1 EQUIPMENT			
Equipment ID	Equipment Description	Control Device ID	Emission Point ID
B01	Existing 5,200 Million Btu/hr nominally rated Boiler #1	ESP 1A, ESP 1B, Scrubber 1, SCR1	CROSS1
B02	Existing 5,200 Million Btu/hr nominally rated Boiler #2	ESP 2A, ESP 2B, Scrubber 2, SCR2	CROSS2
B03	Existing 5,400 Million Btu/hr nominally rated (660 MW) Boiler #3 equipped with Low NO _X Burners	ESP 3, Scrubber 3, SCR 3	CROSS3
B04	Existing 5,400 Million Btu/hr nominally rated (660 MW) Boiler #4 equipped with Low NO _X Burners	ESP 4, Scrubber 4, SCR 4	CROSS4

A.2 CONTROL DEVICES				
Control Device ID	Control Device Description	Pollutant(s) Controlled	Emission Point ID	
ESP 1A	Electrostatic Precipitator	PM/PM ₁₀	ESP 1A	
ESP 1B	Electrostatic Precipitator	PM/PM ₁₀	ESP 1B	
Scrubber 1	Wet Limestone FGD SO ₂ Scrubber	SO_2	Scrubber 1	
SCR1	Selective Catalytic Reduction for NO _X emissions control on Unit 1	NO_X	SCR1	
ESP 2A	Electrostatic Precipitator	PM/PM ₁₀	ESP 2A	
ESP 2B	Electrostatic Precipitator	PM/PM ₁₀	ESP 2B	
Scrubber 2	Wet Limestone FGD SO ₂ Scrubber	SO ₂	Scrubber 2	
SCR2	Selective Catalytic Reduction for NO_X emissions control on Unit 2	NO_X	SCR2	
ESP 3	Electrostatic Precipitator	PM/PM ₁₀	ESP 3	
Scrubber 3	Wet Limestone FGD SO ₂ Scrubber	SO ₂	Scrubber 3	
SCR 3	Selective Catalytic Reduction System	NO_X	SCR 3	

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A.2 CONT	ROL DEVICES		
Control Device ID	Control Device Description	Pollutant(s) Controlled	Emission Point ID
Scrubber 4	Wet Limestone FGD SO ₂ Scrubber	SO ₂	Scrubber 4

ESP 4

PM/PM₁₀

Electrostatic Precipitator

ESP 4

Condition Number	Conditions		
	Equipment	t ID: B01, B02, B	03, B04
	Control De	evice ID: Scrubb	er 1, Scrubber 2, Scrubber 3, Scrubber 4
(S.C. Regulation 61-62.1, Section II.E) The facility has a requested a federally enforceal limitation to limit its potential emissions to the following:			
	of 0.20 pour Compliance averaging, B03, B04) of SO ₂ emission (4) coal-fire defined as The following	inds per million with the SO ₂ using the Part 7 operating at the ons average for d units over the day in which one	ed boilers (B01, B02, B03, B04) is subject to a SO_2 emission rate limitation British thermal units (lb/MMBtu) averaged over 30 boiler operating days limit may be achieved on a unit-by-unit basis or based on emission 75 certified SO_2 CEMS associated with each of the four boilers (B01, B02 facility. If compliance is determined based on emissions averaging, the the facility will be based on all the operating hours from each of the four previous 30-group boiler operating days. A group boiler operating day is e or more units has operated, excluding periods of start-up or shutdown sed on Equation 2a, from 40 CFR 63 Subpart UUUUU (2/16/2012 Version 20-day SO_2 emissions average for the facility.
B.1	WAER _{CGS}	$=\frac{\left(\sum_{i=1}^{n}ER1_{i}*\right.}$	$\frac{HI1_{i}) + \left(\sum_{i=1}^{n} ER2_{i} * HI2_{i}\right) + \left(\sum_{i=1}^{n} ER3_{i} * HI3_{i}\right) + \left(\sum_{i=1}^{n} ER4_{i} * HI4_{i}\right)}{\sum_{i=1}^{n} HI1_{i} + \sum_{i=1}^{n} HI2_{i} + \sum_{i=1}^{n} HI3_{i} + \sum_{i=1}^{n} HI4_{i}}$
	Where:	WAER _{CGS} ER1 _i HI1 _i ER2 _i HI2 _i ER3 _i HI3 _i ER4 _i HI4 _i	 = Qualifying weighted average emission rate (lb/MMBtu) = Hourly SO₂ emission rate for B01 (lb/MMBtu) = Hourly heat input for B01 (mmBtu/hr) = Hourly SO₂ emission rate for B02 (lb/MMBtu) = Hourly heat input for B02 (mmBtu/hr) = Hourly SO₂ emission rate for B03 (lb/MMBtu) = Hourly heat input for B03 (mmBtu/hr) = Hourly SO₂ emission rate for B04 (lb/MMBtu) = Hourly heat input for B04 (MMBtu/hr)

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B. LIMITATIONS, MONITORING, AND REPORTING

Condition Number	Conditions		
	operating day period may be zero hours.		
	Emissions from periods of startup and, shutdown shall be excluded from the 30-day operating day period.		
	The SO_2 CEMS shall be calibrated, maintained, and operated in accordance with 40 CFR 75 – Continuous Emission Monitoring.		
	Reports of the thirty (30) day rolling SO_2 averages, calculated for each thirty (30) day rolling average in the reporting period, shall be submitted quarterly.		
	Equipment ID: B01, B02, B03, B04 Control Device ID: Scrubber 1, Scrubber 2, Scrubber 3, Scrubber 4		
	§ 63.10000 What are my general requirements for complying with this subpart?		
	40 CFR 63.10000(a) [Y]ou are required to meet the work practice requirements, items 3(a), (c), (d) and 4, with exception of the two paragraphs that begin with "If, in addition" and "Relative", in Table 3 to this subpart during periods of startup or shutdown.		
	40 CFR 63.10010(f)		
בם	(1) If you use an SO_2 CEMS, you must install the monitor at the outlet of the EGU, downstream of all emission control devices, and you must certify, operate, and maintain the CEMS according to part 75 of this chapter.		
B.2	(2) For on-going QA, the SO_2 CEMS must meet the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO_2 CEMS has a span value of 30 ppm or less.		
	(3) Calculate and record a 30-boiler operating day rolling average SO_2 emission rate in the units of the standard, updated after each new boiler operating day. Each 30-boiler operating day rolling average emission rate is the average of all of the valid hourly SO_2 emission rates in the 30 boiler operating day period.		
	(4) Use only unadjusted, quality-assured SO_2 concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO_2 data and do not use part 75 substitute data values. For startup or shutdown hours (as defined in § 63.10042) the default gross output and the diluent cap are available for use in the hourly SO_2 emission rate calculations, as described in § 63.10007(f). Use a flag to identify each startup or shutdown hour and report a special code if the		

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B. LIMITATIONS, MONITORING, AND REPORTING

Condition Number	Conditions
Number	diluent cap or default gross output is used to calculate the SO_2 emission rate for any of these hours. 40 CFR 63.10042 Startup shall have the meaning outlined in paragraph (1) of the definition of startup.
	(1) The first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on-site use). Any fraction of an hour in which startup occurs constitutes a full hour of startup.
	40 CFR 63.10(b)(1) The owner or operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on
	microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
	Equipment ID: B01, B02, B03, B04 Control Device ID: Scrubber 1, Scrubber 2, Scrubber 3, Scrubber 4
B.3	The SO_2 CEMS and SO_2 controls shall be calibrated, maintained, and operated in accordance 40 CFR 75 – Continuous Emission Monitoring, Subpart A (General):
	§ 75.4 Compliance dates, in accordance with paragraphs (e), (g)(1)-(3), (i), and (j).
	§ 75.5 Prohibitions, in accordance with paragraphs (a)-(f).
	Equipment ID: B01, B02, B03, B04
	Control Device ID: Scrubber 1, Scrubber 2, Scrubber 3, Scrubber 4
B.4	The SO ₂ CEMS and controls shall be calibrated, maintained, and operated in accordance with 40 CFR 75 – Continuous Emission Monitoring, Subpart B (Monitoring Provisions):
	§ 75.10 General operating requirements, in accordance with paragraphs (a)(1), (a)(3)-(5), and (b)-(g).
	§ 75.11 Specific provisions for monitoring SO_2 emissions, in accordance with paragraphs (a)-(c).
	Equipment ID: B01, B02, B03, B04
	Control Device ID: Scrubber 1, Scrubber 2, Scrubber 3, Scrubber 4
B.5	The SO_2 CEMS and controls shall be calibrated, maintained, and operated in accordance with 40 CFR 75 – Continuous Emission Monitoring, Subpart F (Recordkeeping Requirements):
	§ 75.53 Monitoring plan, in accordance with paragraphs (a), (b), (e), (f)(4). (g), and (h)(6).

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B. LIMITATIONS, MONITORING, AND REPORTING

Condition Number	Conditions		
	§ 75.57 General recordkeeping provisions, in accordance with paragraphs (a)-(c), Table 4a of (c), (e), (g), and (h).		
	§ 75.58 General recordkeeping provisions for specific situations, in accordance with paragraphs (b)(1) and (3) and (c)(1), (5), and (8).		
	Equipment ID: B01, B02, B03, B04 Control Device ID: Scrubber 1, Scrubber 2, Scrubber 3, Scrubber 4		
	The SO_2 CEMS and controls shall be calibrated, maintained, and operated in accordance with 40 CFR 75 – Continuous Emission Monitoring, Subpart G (Reporting Requirements):		
	§ 75.60 General provisions, in accordance with paragraphs (a)-(c).		
B.6	§ 75.61 Notifications, in accordance with paragraphs (a)(1)-(4), (a)(6)-(7), (b), and (c).		
	§ 75.62 Monitoring plan submittals, in accordance with paragraphs (a)-(d).		
	§ 75.63 Initial certification or recertification application, in accordance with paragraphs (a)(i), (a)(2), (b)-(d), (f), and (g).		
	§ 75.64 Quarterly reports, in accordance with paragraphs (a)(1)-(8), (a)(10)-(12), (a)(15), (b)-(d), (f).		
	Equipment ID: B01, B02, B03, B04 Control Device ID: Scrubber 1, Scrubber 2, Scrubber 3, Scrubber 4		
B.7	The owner or operator shall continue to operate under all applicable requirements, including emission limits and standards, testing, monitoring, record keeping, and reporting under the existing Title V Operating Permit (TV-0420-0030) and any unincorporated construction permits that are not changed or contravened by this construction permit.		

C. NESHAP (40 CFR 63)

Condition Number	Conditions
C.1	(40 CFR §63.9(a)(4)(ii) and §63.10(a)(4)(ii)) All NESHAP notifications and reports shall be sent to the Department. Electronic submission of notifications or reports to the United States Environmental Protection Agency (US EPA) via CEDRI (Compliance and Emissions Data Reporting Interface) shall serve as the submission to the Department. CEDRI can be accessed through the EPA's Central Data Exchange (CDX).
C.2	(40 CFR §63.9(a)(4)(ii) and §63.10(a)(4)(ii)) All NESHAP notifications and reports requiring electronic submission to US EPA shall be submitted to EPA via CEDRI. Notifications and reports for specific

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C. NESHAP (40 CFR 63)		
Condition Number	Conditions	
	NESHAP subparts not yet requiring electronic submission may also be submitted via CEDRI. Notifications and the accompanying cover letter for periodic reports not submitted via CEDRI shall be sent to the US EPA Region 4 Air and Radiation Division as required by the applicable subpart.	
C.3	This facility has processes subject to the provisions of S.C. Regulation 61-62.63 and 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants, Subparts A and UUUUU, National Emission Standards for Hazardous Air Pollutants from Coal and Oil-Fired Electric Utility Steam Generating Units. Existing affected sources shall be in compliance with the requirements of these Subparts by the compliance date, unless otherwise noted. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.	

D. NESHAP (40 CFR 63) PERIODIC REPORTING SCHEDULE SUMMARY

NESHAP Part	NESHAP Subpart	Compliance Monitoring Report Submittal Frequency	Reporting Period	Report Due Date
63	υυυυυ	Quarterly	January-March April-June July-September October-December	April 30 th July 30 th October 30 th January 30 th

- 1. This table summarizes only the periodic compliance reporting schedule. Additional reports may be required. See specific NESHAP Subpart for additional reporting requirements and associated schedule.
- 2. This reporting schedule does not supersede any other reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, 40 CFR Part 63, and/or Title V. The MACT reporting schedule may be adjusted to coincide with the Title V reporting schedule with prior approval from the Department in accordance with 40 CFR 63.10(a)(5). This request may be made 1 year after the compliance date for the associated MACT standard.

E. GENERAL FACILITY WIDE		
Condition Number	Conditions	
E.1	The owner or operator shall comply with S.C. Regulation 61-62.6, Control of Fugitive Particulate Matter, Section III Control of Fugitive Particulate Matter Statewide.	
E.2	The permittee shall pay permit fees to the Department in accordance with the requirements of S.C. Regulation 61-30, Environmental Protection Fees.	
E.3	In the event of an emergency, as defined in S.C. Regulation 61-62.1, Section II(L), the owner or operator may document an emergency situation through properly signed, contemporaneous operating logs, and other relevant evidence that verify: 1. An emergency occurred, and the owner or operator can identify the cause(s) of the	

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E. GENERAL FACILITY WIDE

Condition Number	Conditions
	emergency;
	2. The permitted source was at the time the emergency occurred being properly operated;
	 During the period of the emergency, the owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
	4. The owner or operator gave a verbal notification of the emergency to the Department within twenty-four (24) hours of the time when emission limitations were exceeded, followed by a written report within thirty (30) days. The written report shall include, at a minimum, the information required by S.C. Regulation 61-62.1, Section II(J)(1)(c)(i) through (J)(1)(c)(viii). The written report shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
	This provision is in addition to any emergency or upset provision contained in any applicable requirement.
	(S.C. Regulation 61-62.1, Section II(O)) Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow the Department or an authorized representative to perform the following:
	1. Enter the facility where emissions-related activity is conducted, or where records must be kept under the conditions of the permit.
E.4	2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.
	3. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
	4. As authorized by the Federal Clean Air Act and/or the S.C. Pollution Control Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
E.5	(S.C. Regulation 61-62.1, Section II(J)(1)(a)) No applicable law, regulation, or standard will be contravened.
E.6	(S.C. Regulation 61-62.1, Section II(J)(1)(e)) Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this regulation or with the terms of any approval to construct, or who commences construction after the effective date of these regulations without applying for and receiving approval hereunder, shall be subject to enforcement action.

F. EMISSIONS INVENTORY REPORTS - RESERVED

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G. GENERAL RECORD KEEPING AND REPORTING

Number	Conditions
G.1	(S.C. Regulation 61-62.1, Section II(J)(1)(g)) A copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. The owner or operator shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least five (5) years from the date the record was generated and shall be made available to a Department representative upon request.
G.2	The owner or operator shall submit reports required in this permit in a timely manner and according to the reporting schedule established through the Department's approved electronic permitting system.
G.3	All reports and notifications required under this permit shall be submitted to the Department.
G.4	(S.C. Regulation 61-62.1, Section II(A)(3)) The owner or operator shall submit written notification to the Department of the date construction is commenced, postmarked within thirty (30) days after such date.
G.5	 (S.C. Regulation 61-62.1, Section II(J)(1)(c)) For sources not required to have continuous emission monitors, any malfunction of air pollution control equipment or system, process upset, or other equipment failure which results in discharges of air contaminants lasting for one (1) hour or more and which are greater than those discharges described for normal operation in the permit application, shall be reported to the Department within twenty-four (24) hours after the beginning of the occurrence and a written report shall be submitted to the Department within thirty (30) days. The written report shall include, at a minimum, the following: The identity of the stack and/or emission point where the excess emissions occurred; The magnitude of excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the excess emissions; The time and duration of excess emissions; The identity of the equipment causing the excess emissions; The nature and cause of such excess emissions; The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction; The steps taken to limit the excess emissions; and, Documentation that the air pollution control equipment, process equipment, or processes

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G. GENE	RAL RECORD KEEPING AND REPORTING
Condition Number	Conditions
	Office.
	The written report should be sent to the Department.

H. PERM	H. PERMIT EXPIRATION AND EXTENSION	
Condition Number	Conditions	
	(S.C. Regulation 61-62.1, Section II(A)(4) and (5) and S.C. Regulation 61-62.1, Section II(J)(1)(f)) Approval to construct shall become invalid if construction:	
	a. Is not commenced within eighteen (18) months after receipt of such approval;	
	b. Is discontinued for a period of eighteen (18) months or more; or	
	c. Is not completed within a reasonable time as deemed by the Department.	
H.1	The Department may extend the construction permit for an additional eighteen (18) month period upon a satisfactory showing that an extension is justified. This request must be made prior to the permit expiration.	
	This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within eighteen (18) months of the projected and approved commencement date.	

I. PERM	I. PERMIT TO OPERATE	
Condition Number	Conditions	
1.1	(S.C. Regulation 61-62.1, Section II(F)(2)) When a Department issued construction permit includes only emission limits, monitoring, reporting, and/or other requirements that do not establish engineering or construction specifications for the project, the owner or operator may operate the source in compliance with the terms and conditions of the construction permit until the operating permit is issued by the Department.	
1.2	(S.C. Regulation 61-62.1, Section II(F)(1)) The owner or operator shall submit written notification to the Department of the actual date of initial startup of each new or altered source, postmarked within fifteen (15) days after such date. Any source that is required to obtain an air quality construction permit issued by the Department must obtain an operating permit when the new or altered source is placed into operation and shall comply with the requirements of this section.	
1.3	(S.C. Regulation 61-62.1, Section II(F)(4)(a)) For sources covered by an effective Title V Operating Permit, the modification request required by S.C. Regulation 61-62.70 shall serve as the request to	

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I. PERMIT TO OPERATE	
Condition Number	Conditions
	operate for the purposes of S.C. Regulation 61-62.1, Section II(F). The request should be made using the appropriate Title V modification form.

Condition Number	Conditions
J.1	Air dispersion modeling (or other method) has previously demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard Any changes in the parameters used in this demonstration may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exi temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded. The owner or operator shall maintain this facility at or below the emission rates used in the most recent air dispersion modeling (or other method) demonstration submitted to and approved by the Department, not to exceed the pollutant limitations of this permit. Should the facility wish to increase the emission rates used in the demonstration, not to exceed the pollutant limitations in the body of this permit, it may do so by submitting a new demonstration for approval. This condition along with the referenced modeling demonstration will also serve to meet the intent of S.C. Regulation 61-62.5