

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Application Review**

**Issue Date:**

**Region:** Mooresville Regional Office  
**County:** Gaston  
**NC Facility ID:** 3600039  
**Inspector's Name:** Jim Hafner  
**Date of Last Inspection:** 07/17/2018  
**Compliance Code:** 3 / Compliance - inspection

<b>Facility Data</b>	<b>Permit Applicability (this application only)</b>
<b>Applicant (Facility's Name):</b> Duke Energy Carolinas, LLC - Allen Steam Station  <b>Facility Address:</b> Duke Energy Carolinas, LLC - Allen Steam Station 253 Plant Allen Road Belmont, NC 28012  <b>SIC:</b> 4911 / Electric Services <b>NAICS:</b> 221112 / Fossil Fuel Electric Power Generation  <b>Facility Classification: Before:</b> Title V <b>After:</b> Title V <b>Fee Classification: Before:</b> Title V <b>After:</b> Title V	<b>SIP:</b> 15A NCAC 02D .0521, 02D .1111 MACT <b>NSPS:</b> NA <b>NESHAP:</b> 40 CFR Part 63, Subpart DDDDD <b>PSD:</b> NA <b>PSD Avoidance:</b> NA <b>NC Toxics:</b> NA <b>112(r):</b> NA <b>Other:</b> NA

Contact Data			Application Data
<b>Facility Contact</b>	<b>Authorized Contact</b>	<b>Technical Contact</b>	<b>Application Number:</b> 3600039.18A <b>Date Received:</b> 07/20/2018 <b>Application Type:</b> Modification <b>Application Schedule:</b> TV-Significant <b>Existing Permit Data</b> <b>Existing Permit Number:</b> 03757/T44 <b>Existing Permit Issue Date:</b> 03/12/2018 <b>Existing Permit Expiration Date:</b> 02/28/2023
M. Randy Gantt Lead EHS Professional (704) 829-2587 253 Plant Allen Road Belmont, NC 28012	Terry Tuck General Manager (704) 829-2400 253 Plant Allen Road Belmont, NC 28012	Ann Quillian Lead Environmental Specialist (919) 546-6610 410 South Wilmington Street Raleigh, NC 27601	

**Total Actual emissions in TONS/YEAR:**

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2017	354.02	1610.22	14.47	454.95	65.21	9.38	6.07 [Hydrogen chloride (hydrochlori)]
2016	676.03	2168.28	21.59	718.46	88.05	13.59	8.79 [Hydrogen chloride (hydrochlori)]
2015	1127.94	2682.31	21.27	353.68	178.19	20.96	17.92 [Hydrogen chloride (hydrochlori)]
2014	1718.20	4018.53	29.88	984.77	291.49	28.98	24.87 [Hydrogen chloride (hydrochlori)]
2013	846.27	3155.95	25.31	884.92	322.22	29.05	23.95 [Hydrogen chloride (hydrochlori)]

<b>Review Engineer:</b> Ed Martin  <b>Review Engineer's Signature:</b> _____ <b>Date:</b> _____  <b>DRAFT</b>	<b>Comments / Recommendations:</b> Issue 03757/T45 <b>Permit Issue Date:</b> <b>Permit Expiration Date:</b> 02/28/2023
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**I. Purpose of Application**

Duke is requesting that the auxiliary boiler (ID No. ES-6 (AuxB), which is subject to 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters", be categorized as a limited-use boiler under this rule. The permit is being revised to meet the Subpart DDDDD requirements as shown in Section II.

No equipment or new sources are being added.

This is a significant Title V permit modification. Duke has requested the modification follow the permitting procedures pursuant to rule 15A NCAC 02Q .0501(b)(1). This rule specifies that if the owner or operator proposes to make a significant modification that would contravene or conflict with a condition in the existing permit, the owner or operator shall not begin construction or make the modification until the owner or operator has obtained a construction and operation permit following the Title V permitting procedures set forth in Section 02Q .0500. Public notice is required.

**II. Permit Changes**

The following changes were made to the Duke Energy Carolinas LLC – Allen Steam Station Air Permit No. 03757T44:

Old Page	Old Section	New Page	New Section	Description of Change(s)
Cover	--	Cover	--	Amended permit numbers and dates.
36	2.1.B.3.c	36	2.1.B.3.c	Changed to indicate no monitoring/recordkeeping/reporting is required for visible emissions.
--	--	38	2.1.B.6.b	Added condition for limited-use boilers.
39	2.1.B.6.d.i	39	2.1.B.6.e	Removed reference to the one-time energy assessment which is not required for limited-use boilers.
39	2.1.B.6.d.ii	--	--	Removed section since limited-use boilers are not subject to the initial compliance requirements.
39	2.1.B.6.e	39	2.1.B.6.f	Removed reference to emission standards (replaced with work practice standards) and startup and shutdown requirements since limited-use boilers are not subject to the emission limits in Table 3 of Subpart 5D.
39	2.1.B.6.g	39	2.1.B.6.h	Removed emission limits since limited-use boilers are not subject to emission limits.
40	2.1.B.6.h	39	2.1.B.6.i	Removed second sentence since limited-use boilers are not subject to emission limits.
40	2.1.B.6.i	39	2.1.B.6.j	Revised condition for submittal of Notification of Compliance Status only.
40	2.1.B.6.j	--	--	Removed sections since limited-use boilers are not subject to the notifications, initial compliance requirements, subsequent compliance requirements or monitoring requirements.
40	2.1.B.6.k	--	--	
40	2.1.B.6.l	--	--	
40	2.1.B.6.m	--	--	

40	2.1.B.6.n	--	--	
40	2.1.B.6.o	--	--	
41	2.1.B.6.p	--	--	
41	2.1.B.6.q	39	2.1.B.6.k	Revised requirement to conduct a tune-up of the source from every year to every five years for limited-use boilers.
41	2.1.B.6.q.i	39	2.1.B.6.k.i	Revised for performing boiler inspections for limited-use boilers.
41	2.1.B.6.r	40	2.1.B.6.l	Revised tune-up requirement for limited-use boilers.
41	2.1.B.6.u	--	--	Removed condition for the energy assessment which is not required for limited-use boilers.
41	2.1.B.6.v	40	2.1.B.6.o	Removed “semiannual” from each “semiannual compliance report” that has been submitted for which a copy is to be kept.
				Removed sections ii, iv, v and vi since limited-use boilers are not subject to those requirements.
				Changed annual report to tune-up report in Section 2.1.B.6.o.ii.
				Changed “annual adjustment” to “tune-up” in Section 2.1.B.6.o.ii.C.
				Added requirement to keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and keep fuel use records for the days the boiler was operating for limited-use boilers in section 2.1.B.6.o.iii.
42	2.1.B.6.x	40	2.1.B.6.q	Revised for submittal of compliance report every five years.
42	2.1.B.6.y	40	2.1.B.6.r	Removed reporting of deviations from emission limits since limited-use boilers are not subject to emission limits.
42	2.1.B.6.z	--	--	Removed section since limited-use boilers are not subject to those requirements.
65-73	3	63-71	3	Updated General Conditions to version 5.3, 08/21/2018.  Condition K changed: Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least <u>six</u> months before the date of permit expiration.
--	List of Acronyms	--	List of Acronyms	Corrected definition of AOS to Alternative Operating Scenario.

### III. Facility Description

Duke Energy’s Allen Steam Station is an electric utility that generates electrical power. The Allen Steam Station is permitted for five coal/No. 2 fuel oil-fired electric utility boilers (ID Nos. ES-1 (U1 Boiler), ES-2 (U2 Boiler), ES-3 (U3 Boiler), ES-4 (U4 Boiler), and ES-5 (U5 Boiler)), one No. 2 fuel oil-fired auxiliary boiler (ID No. ES-6 (AuxB)), and other supporting ancillary sources.

**IV. Emissions and Regulatory Evaluation**

The following describes the changes made to the new sections of the permit and to remove the old sections of the permit as shown in Section II above to comply with the Subpart DDDDD MACT for a limited-use boiler:

Permit Section	Subpart DDDDD Section	Subpart DDDDD Requirement
<b>New Permit Sections Changed or Added</b>		
2.1.B.6.b	§63.7575	Defines a limited-use boiler as any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable annual capacity factor of no more than 10 percent.
2.1.B.6.h 2.1.B.6.k	§63.7500(c) §63.7540(a)(12)	Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in §63.7540.
2.1.B.6.k.i	§63.7540(a)(10) §63.7540(a)(12)	If the boiler meets the definition of limited-use boiler in §63.7575, the Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown, but must inspect each burner at least once every 72 months.
2.1.B.6.l	§63.7515(d)	Each 5-year tune-up specified in §63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up.
2.1.B.6.e	§63.7500(c)	Limited-use boilers are not subject to the energy assessment.
2.1.B.6.f 2.1.B.6.h 2.1.B.6.i 2.1.B.6.j	§63.7500(c)	Limited-use boilers are not subject to the emission limits requirements.
2.1.B.6.o.iii	§63.7525(k)	For units in the limited use subcategory, the Permittee must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.
2.1.B.6.q	§63.7550	For units that are subject only to a requirement to conduct a 5-year tune-up, the facility may submit only a 5-year compliance report instead of a semi-annual compliance report, according to the dates the permitting authority has established.
<b>Old Permit Sections Removed</b>		
2.1.B.6.d.ii 2.1.B.6.j 2.1.B.6.k 2.1.B.6.l 2.1.B.6.m 2.1.B.6.n 2.1.B.6.o 2.1.B.6.p 2.1.B.6.r 2.1.B.6.u 2.1.B.6.y 2.1.B.6.z	§63.7500(c)	Limited-use boilers are not subject to the emission limits or energy assessment. Accordingly, the notifications, initial compliance requirements, subsequent compliance requirements, monitoring requirements, performance tests, fuel analyses; or associated recordkeeping and reporting requirements do not apply.

Separate from the Subpart DDDDD changes for the auxiliary boiler, the Method 9 testing to be completed before the source operates more than 1,100 hours using No. 2 fuel oil under 15A NCAC .0521 in Section 2.1.B.3.c of the permit was removed to indicate that no monitoring/recordkeeping/reporting is required for visible emissions. DAQ has decided that this testing, which was negotiated with Duke many years ago, is not

necessary for compliance when burning No. 2 fuel oil in accordance with the permit condition shell for combustion sources burning natural gas/propane/No. 2 fuel oil.

**V. Public Notice**

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also, pursuant to 15A NCAC 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 15A NCAC 02Q .0521 above.

**VI. Other Requirements**

PE Seal

A PE seal is not required since no new control devices are being installed.

Zoning

A Zoning Consistency Determination is not required since there is no expansion of the facility.

Fee Classification

The facility fee classification before and after this modification will remain as “Title V”.

Increment Tracking

Gaston County has triggered increment tracking under PSD for PM-10, SO<sub>2</sub> and NO<sub>x</sub>. However, this permit modification does not consume or expand increments for any pollutants.

**VII. Recommendations**

Pending public notice.