

TITLE V PERMIT STATEMENT

MINOR MODIFICATION #2

Facility Name: Tennessee Valley Authority – Lagoon Creek Combined Cycle Plant (TVA-LCC)
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City: Brownsville

County: Haywood

Applications Dated: November 8, 2018

Date Application Deemed Complete: November 8, 2018

Emission Source Reference No.: 38-0069

Permit No.: 575562

INTRODUCTION

This narrative is being provided to assist the reader in understanding the content of the attached Title V operating permit, and is written pursuant to Tennessee Air Pollution Control Rule (TAPCR) 1200-03-09-.02(11)(f)1.(v). The primary purpose of the Title V operating permit is to consolidate and identify existing state and federal air requirements applicable to the above referenced facility, and to provide practical methods for assuring compliance with these requirements. This narrative is designed to accompany the Title V Operating Permit. It initially describes the facility receiving the permit, then the applicable requirements and their significance, and finally the compliance status with those applicable requirements. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public participation process will be described in an addendum to this narrative.

Acronyms

PSD -	Prevention of Significant Deterioration
NESHAP -	National Emission Standards for Hazardous Air Pollutants
NSPS -	New Source Performance Standards
MACT -	Maximum Achievable Control Technology
NSR -	New Source Review
GHGs -	Greenhouse Gases

I. Identification Information

A. Source Description

This source is an electric power generating facility, consisting of a two natural gas-fired combined-cycle combustion turbines each with a heat recovery steam generator (38-0069-02), a natural gas fired auxiliary boiler (38-0069-03), two natural gas fired fuel heaters (38-0069-04), and a diesel fired emergency fire pump engine (38-0069-05).

B. Facility Classification

1. Attainment or Non-Attainment Area Location

Area is designated as an attainment area for all criteria pollutants.

2. Facility is located in a Class II area. (this means that the facility is not located within a national park or national wilderness area; see 40 CFR 52.21(e) for complete definition).

C. Regulatory Status

1. PSD/NSR

This facility is a major source under PSD/NSR.

2. Title V Major Source Status by Pollutant

Pollutant	Is the pollutant emitted?	Allowable amounts indicated from application	
		Major Source Status	Non-Major Source Status
PM	Yes		61 tpy
PM ₁₀	Yes		< 100 tpy
SO ₂	Yes		10.3 tpy
VOC	Yes	108 tpy	
NO _x	Yes	176 tpy	
CO	Yes	550 tpy	
Individual HAP	Yes		<10 tpy
Total HAPs	Yes		<25 tpy
CO _{2e}	Yes	~424,000 tpy	

3. MACT Standards

This facility is an area source for HAP, and is subject to the following MACT Standards:

40 CFR 63, Subpart ZZZZ, Reciprocating Internal Combustion Engines

One emergency diesel fire pump engine (290 hp) with heat input rating of 1.875 MMBtu/hr (designated as an insignificant activity)

4. Program Applicability

Are the following programs applicable to the facility?

PSD: yes

NESHAP: 40 CFR 63, Subpart ZZZZ

NSPS: 40 CFR 60, Subparts Dc, IIII, and KKKK

II. Compliance Information

A. Compliance Status

Is the facility currently in compliance with all applicable requirements?

If no, explain. (*yes*)

Are there any applicable requirements that will become effective during the permit term?

If yes, explain. (*no*)

III. Other Requirements

A. CSAPR NO_x Annual Trading Program

The permittee shall comply with the applicable provisions of 40 CFR 97 Subparts AAAAAA (CSAPR NO_x Annual Trading Program), CCCCCC (CSAPR SO₂ Group 1 Trading Program), and EEEEE (CSAPR NO_x Ozone Season Group 2 Trading Program). CSAPR general requirements are included in Attachment 5.

B. Acid Rain Requirements

The Acid Rain permit for this facility (#877424) is to be issued along with the major source (Title V) operating permit (see Attachment 2), in accordance with requirements of Title IV of the Clean Air Act.

C. Prevention of Accidental Releases

Not Applicable

D. Greenhouse Gas (GHG) Emissions

This facility is a major source of greenhouse gas emissions

E. Compliance Assurance Monitoring

40 CFR 64.2(b)(1)(vi) exempts the facility from CAM requirements

IV. Previous Permit

1. 567019

There were no changes during permit term

V. Public Participation Procedures

Notification of this draft permit was emailed to the following environmental agencies:

1. EPA – Region IV
2. State of Arkansas, State of Missouri, State of Mississippi
3. Memphis/Shelby County
4. Jackson EFO

VI. Public Notice Publication Date: December 18, 2019

VII. EPA/Public Comments: No comments were received.

VII. Public Hearing Requested: A hearing was not requested.

VIII. Permit History

Title V Operating Permit No. 575562 represents the second renewal of the original Title V Permit No. 555299 issued September 8, 2008. The following changes have occurred with this renewal:

Revised fee requirements in A8

Updated standard language in A12, A20, B6, and D9

Revised condition B11 to be consistent with revised 1200-03-30-.06(2), (3), and (4)

Revised B6 to correct name of EPA branch

Added D11 through D14

Revised D7 to remove “oil”.

Moved acid rain requirements from Section A to Section E

Revised E1 to update fee requirements and standard language, corrected allowable emissions of sulfuric acid mist

Revised E2 to update standard language for SAR and ACC
Deleted Clean Air Interstate Rule requirements from E3-4
Added CSAPR requirements to E3-10
Updated Boiler MACT reporting in E4-1
Removed source specific requirements for the insignificant emergency engine designated as source 05
Added new Acid Rain permit to Attachment 2

Permitting Activities since Permit Issuance of 575562

1. Minor Modification #1 to Title V Permit 575562

The purpose of this modification is based on an internal post review audit. Revisions are as follows:

- Condition E1 – Updated annual accounting period to reflect calendar year versus fiscal year.
- Condition E2 – Removed Conditions E5-1, E6-1, and E7-1 from semiannual submittals, since none of the conditions necessitate recordkeeping requirements.
- Conditions E3-8, E3-9, E3-11, E4-1, E5-2, and E7-4 were revised to include the ‘TAPCR 1200-03-09-.03(8)’ citation.
- Condition E3-11 was updated to include a change in Responsible Official.
- Conditions E4-1 and E5-12 were updated/revised to include additional language from the federal regulations.
- Condition E5-11 was revised to include a compliance method.
- Conditions E6-7 and E7-6 were revised to clarify language in the conditions.

2. Reopen for Cause #1 to Title V Permit 575562

The purpose of this reopening is to reclassify this facility as an area source of HAP. A letter dated March 3, 2022, requesting this reopening was submitted by TVA. The request included calculations demonstrating that the facility’s potential to emit for single HAP and combined HAP does not exceed major source thresholds. The facility’s potential to emit was already below the thresholds at the time of issuance of Title V Operating Permit 575562.

The following changes have occurred with Reopen for Cause #1 to Permit 575562.

- Condition E3-12 was added. This condition was added to the semiannual reporting requirements in Condition E2(a). Reporting for this condition is only necessary in the instances specified in this condition.
- Conditions E4, E5-13, E6-5, and E7-5 (40 CFR 63 Subpart YYYY and DDDDD requirements) were removed from the permit.
- An agreement letter was requested for Conditions E5-2, E6-2, and E7-2. A reference to the letter was added to the conditions and the letter was added to the permit as Attachment 6.
- The Responsible Official for the facility was updated (Condition E3-11).
- Condition E5-5 was updated to reference the newest version of the monitoring plan, dated November 29, 2018.

3. Minor Modification #2 to Title V Permit 575562

- Issued **
- Application dated September 18, 2023
- Minor Modification #2 incorporates the facility request to replace the Auxiliary Boiler (Source 03) with a new natural gas fired boiler that has the same heat input rating (25 MMBtu/hr) as the existing one. The previous auxiliary boiler was actually rated 25 MMBtu/hr but was erroneously rated at 48.78 MMBtu/hr in the permit.
- The permit shell was updated to the current format for permit modifications.
- Condition E1 was revised to the current format and new APC address. Annual accounting period dates were updated.
- Condition E2 language was updated to current format. The semiannual reporting and annual compliance certification dates have been updated.
- Title V Fee selection form (APC 36) is added as Attachment 7

- Emissions following issuance of Minor Modification #2 to Permit Number 575562:

Current Total Allowable Emissions (ton/yr)								
Pollutant ►	PM	SO ₂	CO	VOC	NO _x	Individual HAP	Total HAP	H ₂ SO ₄
Source (38-0069) ▼								
02	58.6	10.3	541	107	170			
03	0.31	0.02	3.42	0.12	1.09			
04	0.7	0.0438	5.08	1.0074	8.4096			
Insignificant Sources	0.02	0.022	0.0815	0.048	0.8675			
Plant-wide Total	59.63	10.38	549.58	108.18	180.37			
Allowable Emissions	59.61	10.36	549.50	108.13	179.50	9.9	24.9	15.16

Note: Allowable emissions for Source 02, 04 and Insignificant sources in the table above are from the Title V renewal application dated July 11, 2024.

Public Participation Important Dates (for Minor Modification #2):

EPA concurrent review requested	_____
Public Notice publication date	_____
Public Notice period completion date	_____
Public Notice publication comments	_____
EPA Notification date	_____
EPA review period completion date	_____
EPA review comments received	_____
Final Permit issuance date	_____