

**TENTATIVE AGENDA
STATE OF TENNESSEE
REGULAR MEETING
AIR POLLUTION CONTROL BOARD
Nashville Room, 3rd Floor Tennessee Tower
312 Rosa L. Parks Avenue
In Person and
Remote Access Via WebEx link**

**Wednesday, March 13, 2024
9:30 A.M.**

******Public Comments:** If you wish to speak on topic(s) shown here, please print your name on the Sign-In Sheet provided at the guest table or type your name into the Webex chat box. Someone will recognize you during the meeting for comments or questions. *********

	Item	Presenter	Page
1.	Roll Call		
2.	Approval of the January 10, 2023, Board Meeting Minutes		02
3.	Knoxville Area Second Ozone Maintenance Plan BO# 24-002 **Comments from the Public or Online participants**	Mark Reynolds	06
4.	Revised Title 5 Application BO# 24-003 **Comments from the Public or Online participants**	Jimmy Johnston	57
5.	Withdrawal of NSPS Rulemaking	Mark Reynolds	108
	General Business: Retrospective Rule Repeals	Travis Blake	113
	Comments from the Public or Online Participants		

The meeting will be held in compliance with Tennessee Code Annotated Section 8-44-108, as amended by Chapter 490 of the 1999 Public Acts of the Tennessee General Assembly. The meeting will be conducted permitting participation by electronic or other means of communication. Consequently, some members of the Tennessee Air Pollution Control Board are allowed to and may participate by electronic or other means of communication and may not be physically present at the announced location of the meeting.

Air Pollution Control Board
of the
State of Tennessee
Regular Meeting

On Wednesday January 10, 2024, at 9:30 A.M., the Air Pollution Control Board of the State of Tennessee, (hereinafter, referred to as the “Board”), began its meeting on the 3rd Floor of the Tennessee Tower. The following Board members were physically present.

Dr. Ronne’ Adkins
Dr. John Benitez
Dr. Kyle Etheridge
Mr. Mike Haverstick
Dr. Shawn Hawkins
Mr. Stephen Moore
Mr. Nicholas Ramos
Ms. Amy Spann
Mayor Larry Waters
Mr. Jimmy West

The following Board members joined the meeting via WebEx:
Dr. Joshua Fu
Dr. Chunrong Jia

The following Board members were absent:
Ms. Caitlin Jennings
Mayor Ken Moore

Since the Chairman, David Salyers, P.E., could not attend the meeting, Dr. Ronne’ Adkins represented the Chairman by proxy. Ms. Michelle Owenby, Director, Division of Air Pollution Control, served as Technical Secretary.

Ms. Michelle Owenby, Technical Secretary, welcomed Board members and those attending via WebEx.

The first item on the agenda was to elect a Vice Chair for 2024. Mayor Larry Waters was nominated for Vice Chair by Ms. Spann and Mr. West seconded the nomination.

The Technical Secretary call for a roll call and the response was as follows:

Dr. Adkins	Yes	Dr. Benitez	Yes
Dr. Etheridge	Yes	Dr. Fu	Yes
Mr. Haverstick	Yes	Dr. Hawkins	Yes
Dr. Jia	Yes	Mr. Moore	Yes
Ms. Spann	Yes	Mr. Ramos	Yes
Mayor Waters	Abstain	Mr. West	Yes

The motion carried with Eleven (11) affirmative votes; Mayor Waters accepted the nomination.

The Vice-Chairman, Mayor Larry Waters, called the meeting to order and asked for a roll call and the response was as follows:

Dr. Adkins	Present	Dr. Benitez	Present
Dr. Etheridge	Present	Dr. Fu	Present
Mr. Haverstick	Present	Dr. Hawkins	Present
Ms. Jennings	Absent	Dr. Jia	Present
Mayor Moore	Absent	Mr. Moore	Present
Ms. Spann	Present	Mr. Ramos	Present
Mayor Waters	Present	Mr. Jimmy West	Present

Ten (10) Board members were present, two (2) participated via WebEx and two (2) were absent.

The next item on the agenda was the approval of the minutes from the November 08, 2023, Board meeting. The Vice-Chairman requested a motion to approve the minutes. Dr. Benitez made a motion to approve the minutes and Ms. Spann seconded the motion. The Vice-Chairman asked if there were any additions or corrections to the minutes. Hearing none, the Vice-Chair asked for a roll call and the response was as follows:

Dr. Adkins	Yes	Dr. Benitez	Yes
Dr. Etheridge	Yes	Dr. Fu	Yes
Mr. Haverstick	Yes	Dr. Hawkins	Yes
Ms. Jennings	Absent	Dr. Jia	Yes
Mayor Moore	Absent	Mr. Moore	Yes
Ms. Spann	Yes	Mr. Ramos	Yes
Mayor Waters	Yes	Mr. Jimmy West	Yes

The motion carried with Twelve (12) affirmative votes; the minutes were approved as presented.

The Vice-Chairman called on Ms. Emily Vann, Office of General Counsel, to discuss the annual Disclosure of Financial Interests or Other Potential Conflicts of Interest. Ms.Vann discussed the need for the annual disclosure and collected the signed documents. Ms. Vann stated that she would review the documents and present the results later in the meeting.

The Vice-Chairman called on Ms. Chelsea Materi with Air Pollution Control to present the Eastman Chemical Company variance request, Board Order number 24-001.

Ms. Materi with the Division of Air Pollution Control presented a request to renew an existing variance from Eastman Chemical Company. With this variance, Eastman will not have to report excess emissions of sulfur dioxide within 24 hours of the excess emissions event. This only applies for excess emissions events that occur for less than 24 hours if no damage to property and/or public health is anticipated and the source of the excess emissions is not a source on Eastman’s SO2 SIP permit, which includes Eastman’s coal-fired boilers. Ms. Materi answered questions from the board, there were no questions from the public.

The Vice-Chairman requested a motion to approve the Eastman Chemical Variance Board Order number 24-001. Mr. Etheridge made a motion to approve the Board Order and Dr. Hawkins seconded the motion. The Vice-Chair asked for a roll call and the response was as follows:

Dr. Adkins	Yes	Dr. Benitez	Yes
Dr. Etheridge	Yes	Dr. Fu	Yes
Mr. Haverstick	Yes	Dr. Hawkins	Yes
Ms. Jennings	Absent	Dr. Jia	Yes
Mayor Moore	Absent	Mr. Moore	Abstain
Ms. Spann	Yes	Mr. Ramos	Yes
Mayor Waters	Yes	Mr. Jimmy West	Yes

The Vice-Chairman then called to allow Ms. Michelle Oakes, Manager of Regulatory and Planning with Air Pollution Control to present the Tennessee Volunteer Emission Reduction Strategy Program – Greenhouse Gas Inventory. Ms. Oakes presented the Inventory development, Results, Inventory limitations and potential opportunities for inventory improvements.

The Vice-Chairman then called to allow Ms. Vann to collect the documents, finalizing the annual Disclosure of Financial Interests or Other Potential Conflicts of Interest. Ms. Vann stated,“ the Majority of the Board, represents the public interest” as defined by Tenn. Comp. R. & Regs. 0400-30-17-.02(2).

There being no further business to discuss before the Board, nor members of the public wishing to address the Board, the meeting was adjourned at 10:23am.

(Signed) Michelle Owenby, Technical Secretary
Tennessee Air Pollution Control Board

Approved at Nashville, Tennessee on

(Signed) Mayor Larry Waters, Vice-Chairman
Tennessee Air Pollution Control Board

(Signed) David Salyers, Chairman
Tennessee Air Pollution Control Board



Department of
**Environment &
Conservation**

Knoxville Area Ozone Maintenance Plan

Nonattainment Area

- On March 12, 2008, EPA promulgated a revised 8-hour ozone National Ambient Air Quality Standard (NAAQS) of 75 ppb
- EPA subsequently designated the Knoxville area as nonattainment for the 8-hour ozone NAAQS on May 21, 2012
 - Design value of 76 ppb in 2011 at controlling monitor
- Knoxville ozone nonattainment area includes part of Anderson County and all of Blount and Knox Counties

Nonattainment Area

- Air quality monitoring data for 2011 through 2013 indicated declining ozone concentrations in the Knoxville area
- Design value at the controlling monitor was 74 ppb

Redesignation to Attainment

- On November 14, 2014, TDEC requested that EPA redesignate the Knoxville Area to attainment
- This request also included the first ozone maintenance plan

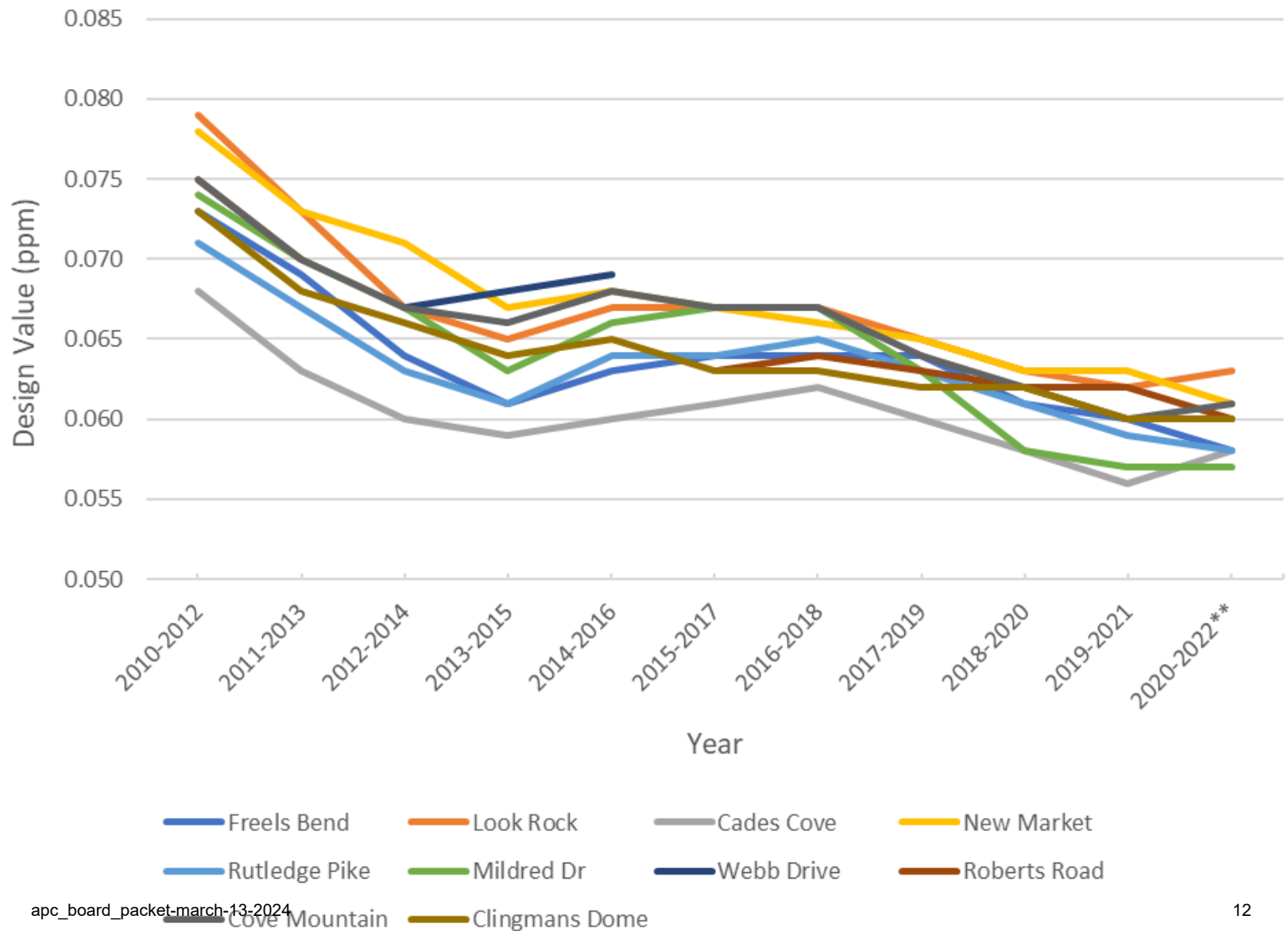
Redesignation to Attainment

- On July 13, 2015, the EPA approved the redesignation request and maintenance plan with an effective date of August 12, 2015
- 2nd Maintenance Plan is due 8 years after effective date of redesignation (August 12, 2023)

Monitoring Data

- Current ambient monitoring data is below 75 ppb 2008 ozone NAAQS
- Also below 70 ppb 2015 ozone NAAQS

Knoxville Area Ozone Design Values from 2012-2022



2nd Ozone Maintenance Plan

- Previous modeling studies have demonstrated that anthropogenic NO_x emission reductions are much more effective at reducing 8-hour maximum ozone concentrations in the Knoxville area compared to anthropogenic VOC emission reductions
- The Knoxville area is deemed NO_x limited, meaning that changes in the VOC concentration result in little to no change in ozone concentration

2nd Ozone Maintenance Plan

- Maintenance Demonstration & Emission Inventory
 - NO_x & VOC emissions for 3 counties
 - 2017 base year and 2035 future year
 - Projection years: 2020, 2023, 2026, 2029, 2032, 2035
 - Show that 2035 emissions are less than 2017 emissions

Emissions Inventory

- Total NOx emissions in 2035 (25.76 TPD) are less than NOx emissions in 2017 (39.17 TPD)
 - TVA Bull Run coal plant closure at end of 2023
 - Onroad mobile decreased significantly from 2017 to 2035

Emissions Inventory & MVEB

- The difference of 13.41 TPD between 2017 and 2035 is referred to as the safety margin
- A portion of the safety margin (10.06 TPD) was added to the onroad sector emissions (6.68 TPD) to establish a Motor Vehicle Emissions Budget (MVEB) of 16.74 TPD in 2035
 - These budgets are to be used by the transportation authorities to assure that transportation plans, programs, and projects are consistent with, and conform to, the maintenance of acceptable air quality in the Knoxville area

Emissions Inventory & MVEB

- Total VOC emissions in 2035 (44.62 TPD) are higher than VOC emissions in 2017 (35.60 TPD)
- While VOC emissions increase in 2035, the added VOC is not expected to increase ozone concentrations since the area is NO_x-limited
- An additional 3.0 TPD was added to the onroad sector emissions (4.22 TPD) to establish a Motor Vehicle Emissions Budget (MVEB) of 7.22 TPD in 2035

Maintenance Demonstration

- Continued Maintenance is demonstrated since there is a:
 - Decrease in NOx emissions from 2017 to 2035
 - Knoxville area is NOx-limited
 - Monitoring design values are well below 75 ppb

2nd Ozone Maintenance Plan

- Contingency measures
 - Control measures that could be put in place if air quality violated NAAQS

Schedule

Event	Date
APC Board Briefing	August 16, 2023
Pre-Draft of SIP sent to EPA & IAC	August 16-17, 2023
Public Notice (30-day comment period)	January 12, 2024
Public Hearing	February 20, 2024
APC Board Vote	March 13, 2024
Submit final SIP to EPA	March 2024

Questions

Mark A. Reynolds

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Conservation

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Knoxville Ozone Maintenance Plan

The appedices to the maintenance plan and the MOVES files are located on the following Dropbox site:

<https://www.dropbox.com/scl/fo/6r5hhc7gg8jbpsivrxzi/h?rlkey=1o3c1iv5ctnejr5iwm8dy7nqc&dl=0>

**Second Ozone Maintenance Plan
for the
Knoxville, Tennessee Area
(2008 Ozone NAAQS)**

Final
March 13, 2024

Prepared by:

State of Tennessee
Department of Environment and Conservation
Division of Air Pollution Control
WRS Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243



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Appendix B	Seasonal Adjustment Factors
Appendix C	Point Source Emissions
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Appendix H	Pre-Draft Comments and Response to Comments
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List of Acronyms

Acronym	Definition
AERR	Air Emissions Reporting Requirements
AIRS	Aerometric Information Retrieval System
APC	Air Pollution Control Division
AQS	Air Quality System
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CBP	County Business Patterns
CFR	Code of Federal Regulations
CHP	Combined Heat and Power
CSAPR	Cross-State Air Pollution Rule
DAQM	Knox County Department of Air Quality Management
DV	Design Value
DVMT	Daily Vehicle Miles Traveled
EIA	Energy Information Administration
EIS	Emission Inventory System
EPA	U.S. Environmental Protection Agency
FIP	Federal Implementation Plan
FR	Federal Register
GA DNR	Georgia Department of Natural Resources
HC	Hydrocarbons
HPMS	Highway Performance Monitoring System
IAC	Interagency Consultation
KOMP	Knoxville Ozone Maintenance Plan
MAR	Commercial Marine, Aircraft, and Rail
MSA	Metropolitan Statistical Area
MOVES	Motor Vehicle Emission Simulator
MVEB	Motor Vehicle Emissions Budget
NAAQS	National Ambient Air Quality Standard
NEI	National Emission Inventory
NLEV	National Low Emission Vehicles
NOx	Nitrogen Oxides
ppb	Parts per billion
ppm	Parts per million
QA/QC	Quality Assured/Quality Controlled
RACT	Reasonably Available Control Technology
SAF	Seasonal adjustment factors
SCC	Source Classification Code
SCR	Selective Catalytic Reduction
SEMAP	Southeastern Modeling, Analysis, and Planning organization
SESARM	Southeastern States Air Resource Managers

SIP	State Implementation Plan
SNCR	Selective Non-Catalytic reduction
SUV	Sport Utility Vehicles
TDEC	Tennessee Department of Environment and Conservation
TDEC-APC	Tennessee Department of Environment and Conservation, Air Pollution Control Division
TDM	Travel Demand Model
TDOT	Tennessee Department of Transportation
TPD	tons per day
TPY	tons per day
TPO	Knoxville Transportation Planning Organization
TVA	Tennessee Valley Authority
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

Executive Summary

This document contains the second ozone maintenance plan for the Knoxville, Tennessee area for the 2008 ozone National Ambient Air Quality Standards (NAAQS). On March 12, 2008, the U.S. Environmental Protection Agency (EPA) promulgated a revised 8-hour ozone NAAQS of 0.075 ppm. EPA subsequently designated the Knoxville area as nonattainment for the 8-hour ozone NAAQS on May 21, 2012, with an effective date of July 20, 2012. The Knoxville ozone nonattainment area includes part of Anderson County and all of Blount and Knox Counties. Air quality monitoring data for 2011 through 2013 indicated declining ozone concentrations in the Knoxville area, and the design value at the controlling monitor was 0.074 ppm. On November 14, 2014, the Tennessee Department of Environment and Conservation's Air Pollution Control Division (TDEC-APC) requested that EPA redesignate the Knoxville Area to attainment. On July 13, 2015, the EPA approved the redesignation request and maintenance plan with an effective date of August 12, 2015.

The ozone design values for all of the Knoxville area monitors for 2013 to 2022 are all equal to or below 0.075 ppm, which is the level of the 2008 ozone NAAQS. The design values for 2015 to 2022 are all equal to or below 0.070 ppm, which is the level of the 2015 ozone NAAQS.

For this second maintenance plan, an emission inventory was prepared to estimate base year (2017) nitrogen oxides (NO_x) and volatile organic compounds (VOC) emissions in the Knoxville maintenance area, with emissions projections for the years 2020, 2023, 2026, 2029, 2032 and 2035. The year 2035 was chosen as the final year since it is twenty years after the effective date that the Knoxville area was redesignated from a nonattainment area to a maintenance area. For NO_x, the total emissions in 2017 (39.17 ton/day) are greater than the total emissions in 2035 (25.76 ton/day). For VOC, the total emissions in 2017 (36.60 ton/day) are less than the total emissions in 2035 (44.62 ton/day). Previous modeling studies have demonstrated that anthropogenic NO_x emission reductions are much more effective at reducing 8-hour maximum ozone concentrations in the Knoxville area compared to anthropogenic VOC emission reductions. Maintenance is demonstrated since there is a decrease in NO_x emissions from 2017 to 2035, the Knoxville area is NO_x-limited, and monitoring design values are well below the 2008 NAAQS of 75 ppb.

This maintenance plan identifies the contingency measures to be considered for possible adoption, a schedule for adoption and implementation of the selected contingency measures, and a time limit for action by the State.

1 Introduction

This document contains the second ozone maintenance plan for the Knoxville, Tennessee area for the 2008 ozone NAAQS. The TDEC-APC is requesting that the EPA approve this second ozone maintenance plan. On March 12, 2008, EPA promulgated a revised 8-hour ozone NAAQS of 0.075 ppm (73 FR 16436, March 27, 2008). Between 2009 and 2011, air quality monitoring at one high-elevation site near Knoxville (Look Rock in Blount County) indicated that the highest 8-hour average ozone concentration exceeded the 0.075 parts per million NAAQS.¹ EPA subsequently designated the Knoxville area as nonattainment for the 8-hour ozone NAAQS on May 21, 2012 with an effective date of July 20, 2012 (77 FR 30088, May 21, 2012). The Knoxville ozone nonattainment area includes part of Anderson County (the area included in 2000 Census tracts 202 and 213.02) and all of Blount and Knox Counties. The area was designated as a marginal nonattainment area, pursuant to the requirements of the Clean Air Act (CAA). Air quality monitoring data for 2011 through 2013 indicated declining ozone concentrations in the Knoxville area, and the design value at the controlling monitor was 0.074 ppm. On November 14, 2014, the TDEC-APC requested that EPA redesignate the Knoxville Area to attainment. This request also included the first ozone maintenance plan. On July 13, 2015, the EPA approved the redesignation request and maintenance plan with an effective date of August 12, 2015 (80 FR 39970, July 13, 2015).

2 Air Quality

Tropospheric ozone is a secondary pollutant that is formed in the ambient air by the photochemical reaction of NO_x and reactive VOC. This pollutant is associated with a number of health and environmental impacts, including respiratory impairment and damage to crops and forests. High ozone concentrations tend to occur in the eastern United States during the hot summer months under hot, stagnant conditions. EPA mandates seasonal monitoring of ambient ozone concentrations in Tennessee and other States from March 1 through October 31 (40 CFR 58 Appendix. D).

Because ozone is formed in the ambient air, control of ozone focuses upon reduction of precursor emissions. NO_x are formed from the high-temperature reaction of nitrogen and oxygen during combustion processes, such as electric utility boilers, industrial fuel-burning sources, and motor vehicles. VOC includes many industrial solvents and coatings, as well as the hydrocarbons (HC) that are emitted by motor vehicles as evaporative losses from gasoline, and tailpipe emissions of unburned hydrocarbon. Past efforts at control of ground-level ozone have focused primarily upon reduction of VOC emissions at a local level, through control of automotive emissions and industrial solvent/coating

¹ Under EPA's regulations at 40 CFR part 50, the 2008 8-hour ozone NAAQS is attained when the 3-year average of the annual fourth highest daily maximum 8-hour average ambient air quality ozone concentrations is less than or equal to 0.075 ppm. The 3-year average is referred to as the design value. See 40 CFR 50.15. Ambient air quality monitoring data for the 3-year period must meet a data completeness requirement. The ambient air quality monitoring data completeness requirement is met when the average percent of days with valid ambient monitoring data is greater than 90 percent, and no single year has less than 75 percent data completeness as determined in Appendix I of part 50.

reasonably available control technology (RACT). In recent years, control of NO_x emissions has increased in importance, both at the local and regional levels.

As part of the **SouthEastern Modeling, Analysis, and Planning (SEMAP)** project, Georgia Tech performed an analysis of the sensitivity of ozone concentrations in the Eastern U.S. to reductions in emissions of both NO_x and VOC's. This analysis was based off of the 2007 and 2018 SEMAP modeling which used CMAQ version 5.01 with updates to the vertical mixing coefficients and land-water interface. The entire "ozone season" was modeled (May 1 – September 30) using a 12-km modeling grid that covered the Eastern U.S.

Sensitivities were modeled relative to 2018 emissions to evaluate the impact of NO_x and VOC reductions on daily 8-hour maximum ozone concentrations. Each emission sensitivity run reduced the 2018 anthropogenic NO_x or VOC emissions (point, area, mobile, nonroad, marine/aircraft/rail) within a specific geographic region by 30%. The NO_x and VOC sensitivities were evaluated at every ozone monitor in the domain.

In the Southeast United States, the SEMAP project determined that NO_x emissions are the primary emissions source for the production of ground-level ozone. Thus, lowering NO_x emissions is more effective in controlling ozone formation than lowering VOC emissions. Stated another way, ozone formation in the Southeast United States is NO_x limited, meaning that changes in the VOC concentration result in little to no change in ozone concentration. This is due to high biogenic (naturally occurring from vegetation) VOC emissions compared to anthropogenic (human caused) VOC emissions in the Southeast United States. The modeling demonstrated that anthropogenic NO_x emission reductions are much more effective at reducing 8-hour maximum ozone concentrations in the Knoxville area compared to anthropogenic VOC emission reductions.

Figure 2-1 shows all ozone monitors located in the Knoxville area.² Figure 2-2 shows the current Knoxville maintenance area.

² The following air quality monitors are operated in the Knoxville area: a) monitors located in Knox county are operated by the Knoxville Department of Air Quality Management; b) monitors in Blount and Sevier counties are operated by the National Park Service; and c) monitors located in Anderson, Jefferson, and Loudon counties are operated by TDEC.

Figure 2-1: Knoxville, Tennessee Area Monitor Locations

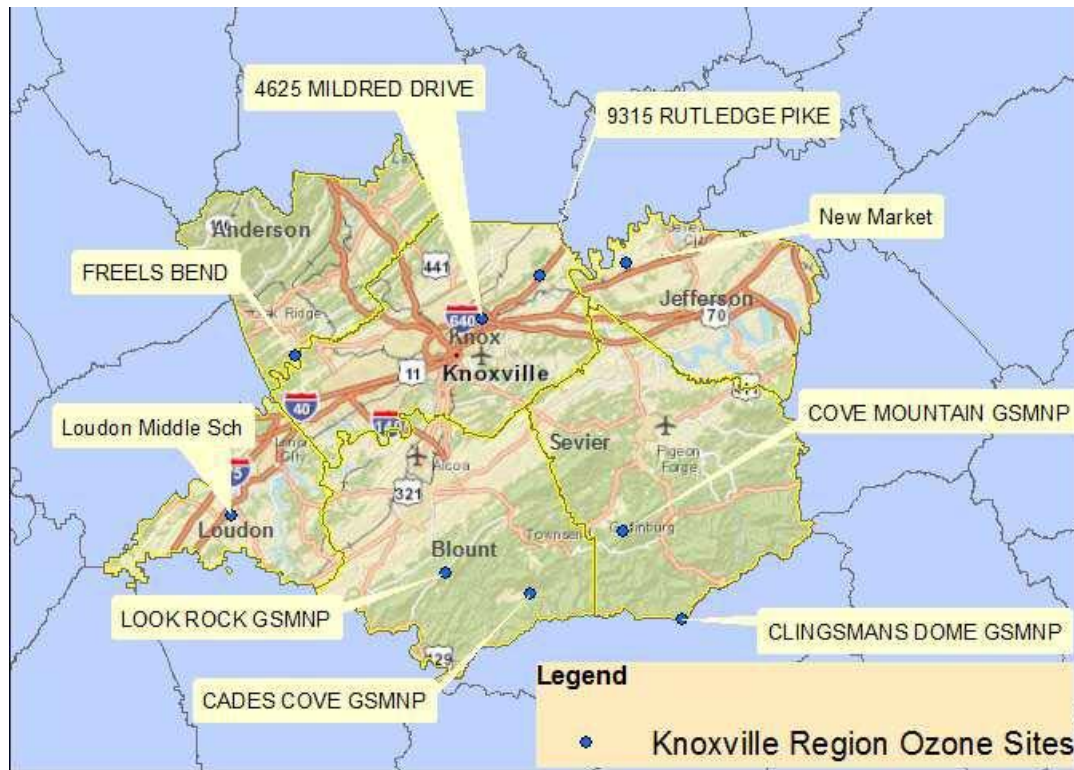
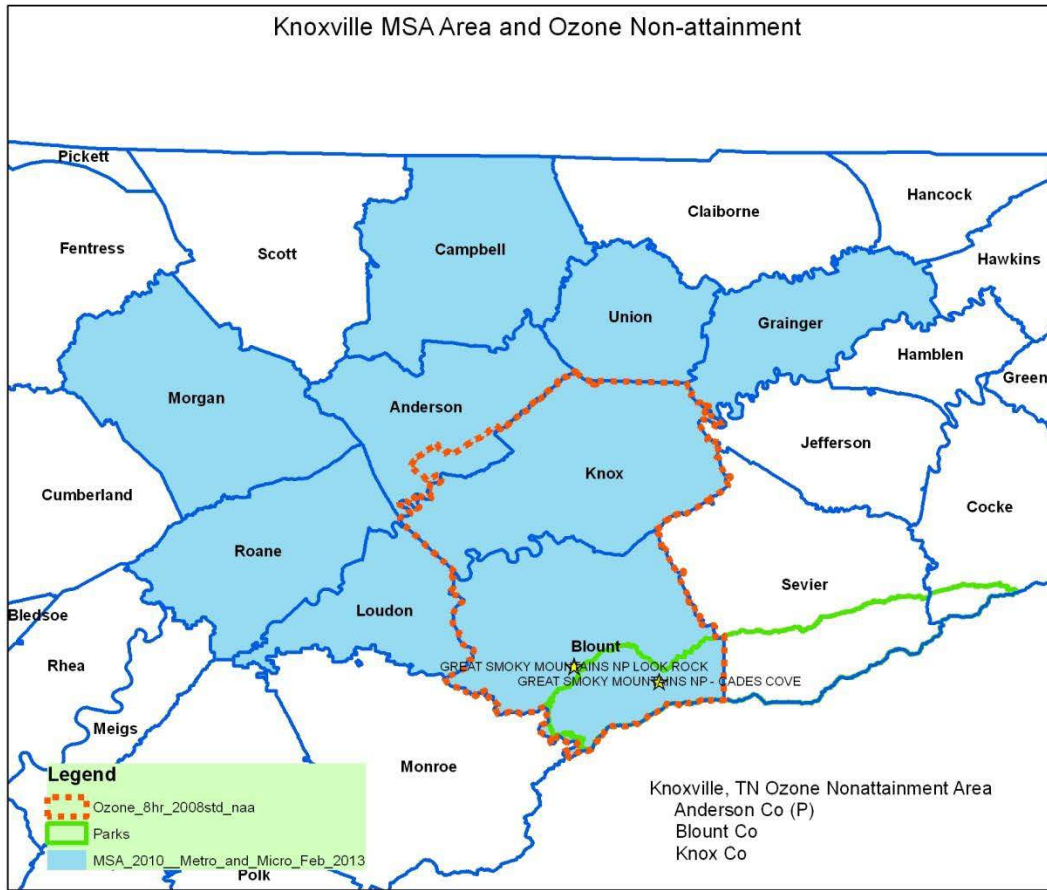


Figure 2-2: Knoxville, Tennessee Ozone Maintenance Area

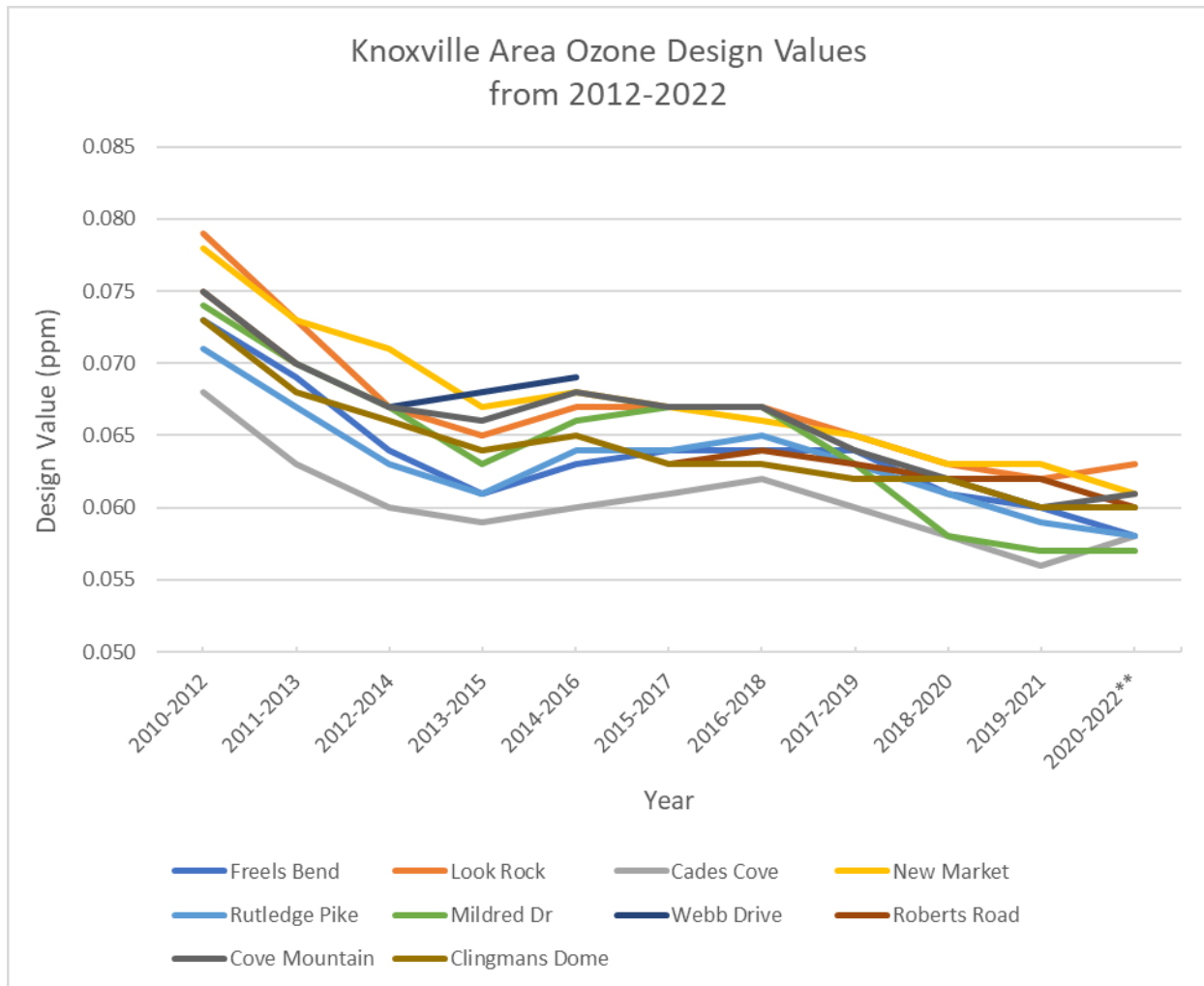


Monitoring data was obtained from the EPA Aerometric Information Retrieval System-Air Quality System (AIRS-AQS) database. Table 2-1 contains the Knoxville area ozone design values (in parts per million (ppm)) from 2012 to 2022. Design values are reported as the average of the annual fourth max ozone concentration averaged over three years. The design value for the three years 2010, 2011, and 2012 is referred to as the 2012 design value. The design values for all of the Knoxville area monitors for 2013 to 2022 are all equal to or below 0.075 ppm, which is the level of the 2008 ozone NAAQS. The design values for 2015 to 2022 are all equal to or below 0.070 ppm, which is the level of the 2015 ozone NAAQS. Figure 2-3 graphically shows that ozone design values in the Knoxville area have been decreasing from 2012 through 2022.

Table 2-1: Knoxville Area Ozone Design Values (in ppm)

Site ID	County	Site Name	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021	2020-2022
47-001-0101	Anderson	Freels Bend	0.073	0.069	0.064	0.061	0.063	0.064	0.064	0.064	0.061	0.060	0.058
47-009-0101	Blount	Look Rock	0.079	0.073	0.067	0.065	0.067	0.067	0.067	0.065	0.063	0.062	0.063
47-009-0102	Blount	Cades Cove	0.068	0.063	0.060	0.059	0.060	0.061	0.062	0.060	0.058	0.056	0.058
47-089-0002	Jefferson	New Market	0.078	0.073	0.071	0.067	0.068	0.067	0.066	0.065	0.063	0.063	0.061
47-093-0021	Knox	Rutledge Pike	0.071	0.067	0.063	0.061	0.064	0.064	0.065	0.063	0.061	0.059	0.058
47-093-1020	Knox	Mildred Dr	0.074	0.070	0.067	0.063	0.066	0.067	0.067	0.063	0.058	0.057	0.057
47-105-0108	Loudon	Webb Drive			0.067	0.068	0.069						
47-105-0109	Loudon	Roberts Road	0.075	0.070				0.063	0.064	0.063	0.062	0.062	0.060
47-155-0101	Sevier	Cove Mountain	0.075	0.070	0.067	0.066	0.068	0.067	0.067	0.064	0.062	0.060	0.061
47-155-0102	Sevier	Clingmans Dome	0.073	0.068	0.066	0.064	0.065	0.063	0.063	0.062	0.062	0.060	0.060

Figure 2-3: Knoxville Area Ozone Design Values



3 Permanent and Enforceable Reductions

Measured reductions in ozone design values in the Knoxville Metropolitan Statistical Area (MSA) are largely attributable to permanent and enforceable reductions from mobile emission sources. Mobile source reductions, reflected in part by the emissions inventories, are attributable primarily to federal measures. Across the country, federal trading programs have decreased NO_x emissions. Also, NO_x emissions from electric generating units (EGUs) in Tennessee have decreased due to a court settlement. The significant permanent and enforceable measures implemented around the region will continue to lower emissions levels in the region. Additionally, new emissions control programs for fuels and motor vehicles will help to ensure a continued decrease in emissions throughout the region.

3.1 Federal EGU and Industrial Unit Trading Programs

The CAA requires each upwind state to ensure that it does not interfere with either the attainment of a NAAQS or continued compliance with a NAAQS at any downwind monitor. This section of the CAA, §110(a)(2)(D)(i)(I), is called the "Good Neighbor" provision. The EPA has implemented a number of rules enforcing the Good Neighbor provision for a variety of NAAQS.

The EPA finalized Cross-State Air Pollution Rule (CSAPR) on August 8, 2011 (76 FR 48208). This rule required 28 states to reduce sulfur dioxide (SO₂), annual NO_x, and ozone season NO_x from fossil fuel-fired EGUs in support of the 1997 and 2006 fine particulate matter (PM_{2.5}) NAAQS and the 1997 ozone NAAQS. CSAPR relied on a trading program to achieve these reductions, which became effective January 1, 2015, as set forth in an October 23, 2014, decision by the U.S. Court of Appeals for the D.C. Circuit. Phase 1 of the program began January 2015 for annual programs and May 2015 for the ozone season program. Phase 2 began January 2017 for the annual programs and May 2017 for the ozone season program. Total emissions allowed in each compliance period under CSAPR equals the sum of the affected state emission budgets in the program. The 2017 budgets for these programs, exclusive of new unit set asides and tribal budgets, are:

- Annual NO_x – 1.21 million tons, and
- Ozone Season NO_x – 586,000 tons

EPA published revised CSAPR ozone season NO_x budgets to address the 2008 ozone NAAQS on October 26, 2016 (81 FR 74504). This rule, called the CSAPR Update, reduced state budgets for NO_x during the ozone season to 325,645 tons in 2017 and 330,526 tons in 2018 and later years, exclusive of new unit set asides and tribal budgets. This rule requires NO_x emissions reductions from fossil fuel-fired EGUs. The U.S. Court of Appeals for the D.C. Circuit remanded, but did not vacate, the CSAPR Update to EPA to address the court's holding that the rule unlawfully allows significant contributions to continue beyond downwind attainment deadlines. The amended CSAPR Update Rule was published in the Federal Register on April 30, 2021. EPA issued new or amended Federal Implementation Plans (FIPs) for 12 states to replace their existing CSAPR NO_x Ozone Season Group 2 emissions budgets for EGUs with revised budgets under a new CSAPR NO_x Ozone Season Group 3 Trading Program. Implementation of

the revised emission budgets began with the 2021 ozone season. The final rule includes state-by-state adjusted ozone season emission budgets for 2021 through 2024. Emission reductions are required at power plants in the 12 states based on optimization of existing, already-installed selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) controls beginning in the 2021 ozone season, and installation or upgrade of state-of-the-art NO_x combustion controls beginning in the 2022 ozone season. EPA estimates the Revised CSAPR Update will reduce summertime NO_x emissions from power plants in the 12 linked upwind states by 17,000 tons in 2021 compared to projections without the rule.

On March 15, 2023, the EPA issued its final Good Neighbor Plan to address the 2015 ozone NAAQS. As of the 2023 ozone season, EPA included power plants in 22 states in a revised and strengthened Group 3 Cross-State Air Pollution Rule (CSAPR) ozone season trading program. To achieve emissions reductions as soon as possible, EPA set the initial control stringency based on the level of reductions achievable through immediately available measures, including consistently operating emissions controls already installed at power plants.

3.2 Tennessee Valley Authority

The largest source of SO₂ and NO_x emissions in Tennessee is EGU's, which are all owned by the Tennessee Valley Authority (TVA). The TVA entered into a court settlement in 2011 for previous violations of the Clean Air Act. This settlement required shutdowns, new controls, and a switch from coal to natural gas at certain facilities. Specifically, the following changes have been implemented:

- Shutdown of the TVA Allen coal plant in Shelby County, which was replaced by a natural gas combined cycle plant (equipped with SCR controls) on the same site. The coal-fired units were retired on March 31, 2018.
- Shutdown of the TVA John Sevier coal plant in Hawkins County, which was replaced by a natural gas combined cycle plant. Units 1 and 2 were retired on December 31, 2012 and Units 3 and 4 were retired on June 25, 2014.
- Shutdown of the TVA Johnsonville coal plant in Humphreys County. Units 5-10 were retired on December 31, 2015, and Units 1-4 were retired on December 31, 2017. This plant currently consists of twenty natural gas or oil-fired combustion turbines, four natural gas preheaters, a combined heat and power (CHP) unit that provides steam to an off-site customer, and two natural gas auxiliary boilers that are backup steam generators for the CHP unit. In August 2022, the TDEC-APC issued a permit to construct ten new simple-cycle natural gas combustion turbines and shut down sixteen of the existing simple-cycle units.
- Addition of selective catalytic reduction (SCR) controls at the TVA Gallatin coal plant in Sumner County. All SCRs were installed and operational by December 2017.
- The terms of the Consent Decree required continuous operation of all SO₂ and NO_x control devices at all of the coal plants.

In addition to the settlement agreement, the TVA has started producing electricity from Watts Bar 2 nuclear plant in Rhea County in October 2016, which could decrease power production from the TVA fossil fuel-fired facilities. The TVA Bull Run coal plant in Anderson County permanently retired on December 1, 2023. In two Federal Register notices, the TVA has announced plans to retire all of the coal-fired units at TVA Cumberland and TVA Kingston. On May 11, 2021 (86 FR 25933), the TVA proposed the retirement of one unit at TVA Cumberland as early as 2026 but no later than 2030, and the remaining unit as early as 2028 but no later than 2033. On June 15, 2021 (86 FR 31780), the TVA proposed the retirement of three units at TVA Kingston as early as 2026, but no later than 2031, and the remaining six units as early as 2027, but no later than 2033.

After the Federal Register notice, TVA Cumberland submitted a permit application to construct two natural gas-fired combined-cycle electric generating units and permanently shut down the two coal-fired electric generating units. A construction permit was issued for this modification on June 20, 2023. As part of the permit, TVA Cumberland agreed to permanently shut down the two coal-fired EGU by December 31, 2028. Table 3-1 provides a summary of the coal plant retirements and NO_x controls in Tennessee.

Table 3-1: Summary of TVA Coal-fired Power Plants

Facility	County	Emission Unit	Current NO _x Emission Control	Status
TVA Allen	Shelby	1	N/A	Retired March 31, 2018
		2	N/A	Retired March 31, 2018
		3	N/A	Retired March 31, 2018
TVA Bull Run	Anderson	1	SCR	Retired on December 1, 2023
TVA Cumberland	Stewart	1	SCR	SCR started in 2003
		2	SCR	SCR started in 2004
TVA Gallatin	Sumner	1	SCR	SCR started in 2017
		2	SCR	SCR started in 2017
		3	SCR	SCR started in 2017
		4	SCR	SCR started in 2017
TVA John Sevier	Hawkins	1	N/A	Retired December 31, 2012
		2	N/A	Retired December 31, 2012
		3	N/A	Retired June 25, 2014
		4	N/A	Retired June 25, 2014
TVA Johnsonville	Humphreys	1	N/A	Retired December 31, 2017
		2	N/A	Retired December 31, 2017
		3	N/A	Retired December 31, 2017
		4	N/A	Retired December 31, 2017
		5	N/A	Retired December 31, 2015
		6	N/A	Retired December 31, 2015
		7	N/A	Retired December 31, 2015
		8	N/A	Retired December 31, 2015
		9	N/A	Retired December 31, 2015

		10	N/A	Retired December 31, 2015
TVA Kingston	Roane	1	SCR	SCR started in 2004
		2	SCR	SCR started in 2004
		3	SCR	SCR started in 2004
		4	SCR	SCR started in 2004
		5	SCR	SCR started in 2005
		6	SCR	SCR started in 2005
		7	SCR	SCR started in 2004
		8	SCR	SCR started in 2004
		9	SCR	SCR started in 2006

Figure 3-1 shows the total NO_x emissions for all of TVA's coal and natural gas plants in Tennessee from 2010 to 2022. The figure shows a decrease in NO_x emissions from 31,343 tons/yr in 2010 to 8,369 tons/yr in 2022 (a 73.3% reduction). All of the emission data comes from the EPA's Clean Air Markets Division.

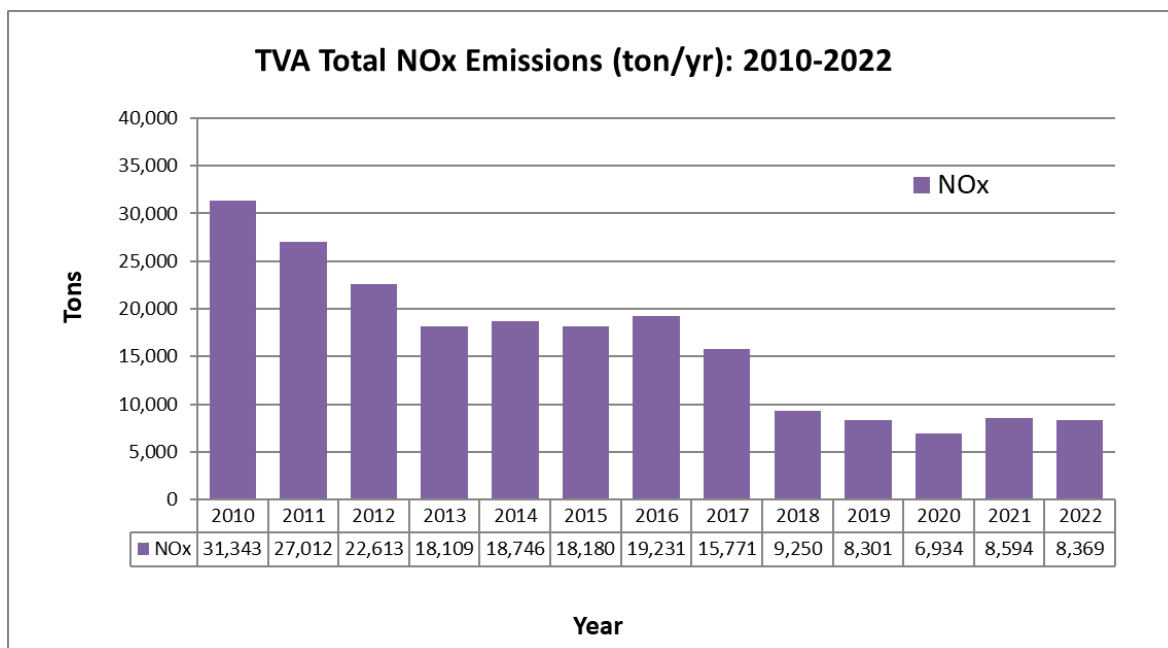


Figure 3-1 TVA NO_x Emissions from coal and natural gas plants in Tennessee

3.3 Onroad Mobile Sources

Federal standards for National Low Emission Vehicles (NLEV) began in 1999 and implemented through 2001 for new light duty cars and trucks. EPA has since implemented further reductions from onroad mobile sources; the Federal Tier 2 vehicle emission standards. Federal Tier 2 vehicle emission standards require all passenger vehicles in a manufacturer's fleet, including light-duty trucks and Sport Utility

Vehicles (SUVs), to meet an average standard of 0.07 grams of oxides of nitrogen (NO_x) per mile in 2007³. The Tier 2 standards also cover passenger vehicles over 8,500 pounds gross vehicle weight rating (the larger pickup trucks and SUVs), which are not covered by the Tier 1 regulations. For these vehicles, the standards were phased in beginning in 2008, with full compliance in 2009. The new standards require vehicles to be 77% to 95% cleaner than those manufactured to meet Tier 1 standards. The Tier 2 rule also reduced the sulfur content of gasoline to 30 parts-per-million (ppm) starting in January of 2006. Most gasoline sold in Tennessee prior to January 2006 had a sulfur content of up to 300 ppm. Sulfur occurs naturally in gasoline, but interferes with the operation of catalytic converters on vehicles resulting in higher NO_x emissions. The combination of lower-sulfur gasoline and the Tier 2 engine emissions standards are necessary to achieve the Tier 2 vehicle emission standards.

The EPA promulgated a Tier 3 rule designed to reduce air pollution from new passenger cars and trucks. Beginning in 2017, Tier 3 emissions standards lowered the sulfur content of gasoline further and lowered the emissions standards for light duty passenger cars and trucks⁴. Benefits from Tier 3 vehicles will help the area to continue to assure maintenance of the national ambient air quality standards.

New EPA standards designed to reduce NO_x and VOC emissions from heavy-duty gasoline and diesel highway vehicles began to take effect in 2004. A second phase of standards and testing procedures, beginning in 2007, reduced particulate matter (PM) from heavy-duty highway engines, and also reduced highway diesel fuel sulfur content to 15 ppm, allowing for additional emission control devices. The total program, when fully implemented, is expected to achieve a 90% reduction in PM emissions and a 95% reduction in NO_x emissions for these new engines using ultra-low sulfur diesel, compared to existing engines using higher sulfur content diesel⁵. The multiple phases of these rules were expected to be fully implemented by 2010.

On January 24, 2023, EPA finalized⁶ new standards that will reduce NO_x emissions from the heavy-duty truck fleet by approximately 48 percent in 2045 and result in widespread air quality improvements across the U.S. The final program includes new, more stringent emissions standards that cover a wider range of heavy-duty engine operating conditions compared to today's standards, and it requires these more stringent emissions standards to be met for a longer period. The potential emissions reductions from this rulemaking are not included in this analysis as these emissions reductions are not yet included in EPA's Motor Vehicle Emission Simulator (MOVES) model. However, these expected emissions reductions will help to ensure continued maintenance of the ozone NAAQS.

Effective in 2005, the Tennessee Air Pollution Control Board promulgated a statewide motor vehicle anti-tampering rule. This rule, defined in Chapter 1200-3-36, Motor Vehicle Tampering, was

³Environmental Protection Agency, *Federal Register*, Vol. 65, No. 28, February 10, 2000.

⁴Environmental Protection Agency, *Control of Air Pollution From Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards; Final Rule*. *Federal Register*, Vol. 79, No. 81, April 28, 2014.

⁵Environmental Protection Agency, *Federal Register*, Vol. 66, No. 12, January 18, 2001.

⁶Environmental Protection Agency, *Control of Air Pollution From New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards; Final Rule*. *Federal Register*, Vol 88, No. 15, January 24, 2023.

promulgated to reduce the air pollution caused by tampering with a motor vehicle's emissions control system. The area of applicability for this rule is statewide. Chapter 1200-3-36 defines tampering as modifying, removing, or rendering inoperative any air pollution emission control device, which results in an increase in emissions beyond established federal motor vehicle standards. Additionally, the rule identifies what is specifically prohibited, for example, removing a catalytic converter.

Tennessee has also promulgated rules for Stage I Gasoline Vapor Recovery for several counties throughout Tennessee, including Anderson, Blount, Jefferson, Knox, Loudon, and Sevier Counties in the greater Knoxville area. Gasoline dispensing stations in these counties that were existing sources on December 29, 2004, were required to comply with this rule by May 1, 2006.

With respect to ozone, air quality alerts are typically called on hot, sunny, muggy days with little wind, when ground-level ozone concentrations are predicted to approach unhealthy levels and the ozone NAAQS could be exceeded⁷. Once the air quality forecast is issued, the media is able to release these alerts in a timely fashion, and air quality alert days are announced to the public through television, radio, and other electronic media. Many businesses subscribe to the alerts and conduct their own activities to help reduce emissions that are precursors to ozone on air quality alert days.

Smart Boards located on Knoxville interstates have been used to notify drivers of program recommendations on air quality alert days. Efforts are underway to continue the use of this medium in conjunction with Tennessee Department of Transportation's (TDOT) 511 information program.

3.4 Nonroad Mobile Sources

EPA has promulgated a series of control programs in 40 CFR Part 89, Part 90, Part 91, Part 92, and Part 94 that implement limitations on compression ignition engines, spark-ignition nonroad engines, marine engines, and locomotive engines. Environmental benefits continue into the future as older engines are replaced with newer engines that have improved fuel economy and more stringent emissions standards. These regulations also require the use of cleaner fuels.

4 Maintenance Demonstration and Emission Inventory

An emission inventory was prepared to estimate base year (2017) NO_x and VOC emissions in the Knoxville maintenance area, with emissions projections for the years 2020, 2023, 2026, 2029, 2032, and 2035. The year 2035 was chosen as the final year since it is twenty years after the effective date that the Knoxville area was redesignated from a nonattainment area to a maintenance area. This emission inventory includes all anthropogenic NO_x and VOC sources for all of Blount and Knox Counties, as well as the partial Anderson County area included in the maintenance area.

⁷<https://www.airnow.gov> (Last accessed 4/10/23).

4.1 Point Sources

Point source emissions are emissions from individual sources having a fixed location. Generally, these sources must have permits to operate, and their emissions are inventoried on a regular schedule. Large sources emitting at least 100 tons per year (tpy) of a criteria pollutant are inventoried every three years. The largest sources are inventoried annually. The base year emission data for point sources was taken from the EPA Emission Inventory System (EIS) Gateway 2017 National Emission Inventory (NEI) data. The growth factors were developed using the methodology in the Metro4/ Southeastern States Air Resource Managers (SESARM) document prepared by AMEC Environment & Infrastructure, Inc., “Development of the 2018 Projection Point Source Emission Inventory in the SESARM Region,” dated February 11, 2014, which is included in Appendix A. Seasonal adjustment factors (SAF) were developed from EPA’s 2017 emissions modeling platform. A further explanation of the SAF is included in Appendix B. The point source emissions and growth factors are included in Appendix C. Future year emissions were calculated using the following formula:

$$(2020 \text{ Emissions}) = (2017 \text{ Emissions}) \times (\text{Growth Factor})$$

A few adjustments were made to the emission inventory based on known retirements, control equipment additions, and NEI errors. The TVA Bull Run coal plant in Anderson County permanently retired on December 1, 2023. Thus, emissions for TVA Bull Run were set to zero after 2023. In 2018, Cemex in Knox County added a selective noncatalytic reduction (SNCR) control, which lowered NO_x emissions. The 2020 NO_x emission value in the inventory was set equal to the actual 2020 NO_x value of 633.9 TPY and the growth factor was applied to years 2023 and after. The 2017 NEI had a NO_x value of 805 TPY and VOC value of 44.3 TPY for Skier’s Choice in Blount County (Source Classification Code (SCC)=1020063). The 2020 NEI had a NO_x value of 1.27 TPY and VOC value of 0.07 TPY for Skier’s Choice in Blount County (SCC=1020063). This facility has a small combustion source for building heating so the 2017 NEI values are clearly in error. Thus, the 2017 and 2020 NO_x and VOC emission values in the inventory were set equal to 1.27 TPY and 0.07 TPY, respectively, and the growth factor was applied to years 2023 and after.

Appendix C contains all emission data from point sources. Table 4-1 shows a summary of the NO_x emissions (in ton/day) from point sources for 2017 to 2035 for a typical July day. Table 4-2 shows a summary of the VOC emissions (in ton/day) from point sources for 2017 to 2035 for a typical July day.

Table 4-1: NO_x Emissions from Point Sources for 2017-2035

County	NO _x , Typical Summer Day, July (tons/day)						
	2017	2020	2023	2026	2029	2032	2035
Anderson (partial)	4.56	5.88	7.59	0.00	0.00	0.00	0.00
Blount	0.44	0.53	0.68	0.94	1.45	2.58	5.18
Knox	4.32	2.06	2.60	3.28	4.14	5.24	6.64
Total Emissions	9.32	8.47	10.87	4.22	5.59	7.82	11.82

Table 4-2: VOC Emissions from Point Sources for 2017-2035

County	VOC, Typical Summer Day, July (tons/day)						
	2017	2020	2023	2026	2029	2032	2035
Anderson (partial)	0.12	0.15	0.19	0.00	0.00	0.00	0.00
Blount	1.10	1.30	1.54	1.84	2.22	2.71	3.37
Knox	1.71	2.33	3.16	4.30	5.86	7.99	10.90
Total Emissions	2.93	3.78	4.89	6.14	8.08	10.70	14.27

4.2 Nonpoint Sources

Nonpoint sources are those sources whose individual emissions are relatively small, but due to the large number of these sources, the collective emissions from the source category could be significant (e.g., dry cleaners, service stations, combustion of fuels for heating, and agricultural sources). Emissions are estimated by multiplying an emission factor by some known indicator of collective activity, such as fuel usage, number of households, or population. Biogenic sources are natural sources of emissions like trees, crops, grasses, and natural decay of plants. Biogenic sources were included in the emission inventory as part of the area sources in the first maintenance plan. Area sources are now referred to as nonpoint sources. Biogenic sources are not included in the emission inventory for this second maintenance plan. Biogenic VOC emissions make up more than half of the total VOC emission inventory.

To begin the nonpoint source inventory, the 2014 Knoxville Ozone Maintenance Plan (KOMP) document was examined to evaluate the nonpoint source inventory development prepared for that document. EPA updates SCC generally annually, so the SCCs cited in the 2014 KOMP were compared to the EPA's current list of SCCs to find those that remain valid and those that have been retired by EPA, and to identify replacement SCCs for those that have been retired. Then, the EPA list of SCC expected pollutants was examined to find all nonpoint SCCs that have NO_x and VOC as an expected pollutant. Then, the 2017 nonpoint inventory for the three counties of concern, Anderson, Blount, and Knox, was downloaded with all reported NO_x and VOC data by SCC from the EPA Emissions Inventory System (EIS). By comparison of these four lists of SCCs, a group of 53 SCCs was selected for this nonpoint emissions inventory. All of the 53 selected SCCs trace back to the 2014 KOMP, have NO_x and/or VOC as expected pollutants, and are present in the EPA 2017 nonpoint emissions inventory for the three counties of concern.

The nonpoint emissions inventory was developed using the NO_x and VOC data downloaded from EPA's 2017 nonpoint emissions inventory for the three counties of concern as the base year (2017) emissions data. The data was projected for the out year and the interim years specified for this inventory (2020, 2023, 2026, 2029, 2032, 2035). Metro 4/SESARM was contacted asking about an updated version of the file, "SEMAP Region Area and Nonroad Projection Year Inventories Final Report," October 2012, cited in the 2014 KOMP. Metro 4/SESARM stated there was not an updated version of that document. Metro 4/SESARM directed TDEC-APC to the Georgia Department of Natural Resources (DNR) to obtain any updates to the SEMAP work. From there, the GA DNR provided a link to an EPA emissions modeling data file titled "county_sector_2016v2_summary_fj.xlsx" from which growth factors were developed in conjunction with data from the U.S. Energy Information Administration (EIA) State Energy Data System (SEDS), the US Census Bureau County Business Patterns (CBP) data, and US Census Bureau population data for the three counties of concern. Anderson County emissions were reduced to 23% of the total emissions since only part of the county is included the maintenance area. The percentage (23%) is the same used for the onroad sector.

Appendix D contains all of the nonpoint data, which includes the following:

- Sectors and SCCs included in the nonpoint emission inventory. The sectors included are listed. The SCCs included and which sector each belong to is listed along with a month of July Weighting Fraction carried forward from the 2014 KOMP. A uniform 12-month distribution of emissions and then a daily uniform distribution of emissions was examined and found to give very slightly lower daily emissions from that provided by use of the month of July Weighting Fractions. The higher emissions estimates were chosen for this nonpoint emission inventory assuming a worst-case scenario.
- The nonpoint emission inventory data (tons/year) for each pollutant, each SCC, and each county of concern based on the 2017 nonpoint emission inventory data used as a Base Year.
- Summary data with a table for each pollutant, NO_x and VOC, for each year specified for this maintenance plan with ton/day totals for each county of concern including the sum of all with yearly percentage increases from the Base Year 2017.

Table 4-3 shows a summary of the NO_x emissions (in ton/day) from nonpoint sources for 2017 to 2035 for a typical July day. Table 4-4 shows a summary of the VOC emissions (in ton/day) from nonpoint sources for 2017 to 2035 for a typical July day.

Table 4-3: NO_x Emission from Nonpoint Sources for 2017-2035

County	NO _x , Typical Summer Day , July, (ton/day)						
	2017	2020	2023	2026	2029	2032	2035
Anderson (partial)	0.09	0.10	0.09	0.09	0.09	0.09	0.10
Blount	0.46	0.48	0.52	0.55	0.59	0.64	0.68
Knox	1.15	1.34	1.51	1.69	1.88	2.07	2.25
Total Emissions	1.70	1.92	2.12	2.33	2.56	2.80	3.03

Table 4-4: VOC Emission from Nonpoint Sources for 2017-2035

	VOC, Typical Summer Day , July, (ton/day)						
County	2017	2020	2023	2026	2029	2032	2035
Anderson (partial)	0.58	0.62	0.64	0.67	0.69	0.72	0.75
Blount	3.79	3.96	4.13	4.29	4.46	4.64	4.86
Knox	11.64	12.55	13.53	14.52	15.51	16.61	17.80
Total Emissions	16.01	17.13	18.30	19.48	20.66	21.97	23.41

4.3 Nonroad Mobile Sources

Non-road mobile sources are equipment that can move but do not use the roadways, such as construction equipment, railroad locomotives, commercial marine vessels, and lawn equipment. The emissions from these sources, like nonpoint sources, are estimated at the county level. The nonroad mobile sources are split into two sections. The nonroad mobile sources from ten SCC categories are detailed in Section 4.3.1. The nonroad mobile sources from commercial marine, aircraft, and rail (MAR) are detailed in Section 4.3.2. Anderson County emissions were reduced to 23% of the total emissions since only part of the county is included the maintenance area. The percentage (23%) is the same used for the onroad sector.

4.3.1 Nonroad Mobile Sources (excluding Commercial Marine, Aircraft, and Rail)

The nonroad mobile source data was developed using the MOVES3.0 model. The nonroad mobile sector includes the following ten SCC categories:

- Agricultural Equipment
- Airport Support Equipment
- Commercial Equipment
- Construction and Mining Equipment
- Industrial Equipment
- Lawn and Garden Equipment
- Logging Equipment
- Pleasure Craft
- Railroad Equipment
- Recreational Equipment

Appendix E contains all of the emission data for the nonroad mobile sources. Table 4-5 shows a summary of the NO_x emissions (in ton/day) from nonroad mobile sources (excluding MAR) for 2017 to 2035 for a typical July day. Table 4-6 shows a summary of the VOC emissions (in ton/day) from nonroad mobile sources (excluding MAR) for 2011 to 2035 for a typical July day.

Table 4-5: NO_x Emissions from Nonroad Mobile Sources (excluding MAR) for 2017-2035

	NO _x , Typical Summer Day, July, (ton/day)						
County	2017	2020	2023	2026	2029	2032	2035
Anderson (partial)	0.37	0.31	0.26	0.21	0.18	0.15	0.12
Blount	1.60	1.33	1.10	0.92	0.76	0.64	0.53
Knox	2.10	1.75	1.46	1.21	1.01	0.84	0.70
Total Emissions	4.07	3.39	2.82	2.34	1.95	1.63	1.35

Table 4-6: VOC Emissions from Nonroad Mobile Sources (excluding MAR) for 2017-2035

	VOC, Typical Summer Day, July, (ton/day)						
County	2017	2020	2023	2026	2029	2032	2035
Anderson (partial)	0.37	0.32	0.28	0.24	0.20	0.18	0.15
Blount	2.00	1.72	1.47	1.27	1.09	0.93	0.80
Knox	2.21	1.90	1.63	1.40	1.21	1.04	0.89
Total Emissions	4.58	3.94	3.38	2.91	2.50	2.15	1.84

4.3.2 Commercial Marine, Aircraft, and Rail Sources

The base year emission data for commercial marine, aircraft, and rail sources was taken from the EPA Emission Inventory System (EIS) Gateway 2017 NEI data. The growth factors were developed using the methodology in the Metro4/SESARM document prepared by AMEC Environment and Infrastructure, Inc., “Development of the 2018 Projection Point Source Emission Inventory in the SESARM Region,” dated February 11, 2014. Seasonal adjustment factors (SAF) were developed from EPA’s 2017 emissions modeling platform. A further explanation of the SAF is included in Appendix B.

Appendix F contains all of the emission data from commercial marine, aircraft, and rail sources. Table 4-7 shows a summary of the NO_x emissions (in ton/day) from aircraft, commercial marine, and locomotive sources for 2017 to 2035 for a typical July day. Table 4-8 shows a summary of the VOC emissions (in ton/day) from aircraft, commercial marine, and locomotive sources for 2017 to 2035 for a typical July day.

Table 4-7: NO_x Emissions from Commercial Marine, Aircraft, and Rail for 2017-2035

	NO _x , Typical Summer Day, July, (ton/day)						
County	2017	2020	2023	2026	2029	2032	2035
Anderson (partial)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blount	0.69	0.79	0.95	1.18	1.52	2.02	2.78
Knox	0.29	0.24	0.20	0.17	0.14	0.12	0.10
Total Emissions	0.98	1.03	1.15	1.35	1.66	2.14	2.88

Table 4-8: VOC Emissions from Commercial Marine, Aircraft, and Rail for 2017-2035

	VOC, Typical Summer Day, July, (ton/day)						
County	2017	2020	2023	2026	2029	2032	2035
Anderson (partial)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blount	0.32	0.35	0.39	0.45	0.54	0.66	0.85
Knox	0.04	0.04	0.03	0.03	0.03	0.03	0.03
Total Emissions	0.36	0.39	0.42	0.48	0.57	0.69	0.88

4.4 Onroad Mobile Sources

Onroad mobile sources as an emissions source category comprises a large number of individual sources. Onroad mobile sources are all vehicles certified for onroad use; including, for example, cars, motorcycles, pickup trucks, buses, delivery trucks and long-haul trucks (18 wheelers). As a group, onroad vehicles contribute significant amounts of certain air pollutants. Emissions from onroad sources are estimated through the use of locally gathered information on the vehicle population and the miles driven in each county, as well as a number of other inputs, combined with EPA's Motor Vehicle Emissions Simulator (MOVES) model. Details on the development of the onroad emissions are contained in Appendix G.

The emissions inventory for onroad sources was developed in conjunction with the Knoxville Regional Transportation Planning Organization (TPO), the Knox County Department of Air Quality Management and TDOT. Development of the onroad emission inventory followed EPA's Technical Guidance on the use of MOVES for State Implementation Plan (SIP) inventory development⁸. Onroad emissions are developed using locally gathered data applied to EPA's MOVES model. Some of the locally developed data includes vehicles miles travelled (VMT) and vehicle population. Table 4-9 and Table 4-10 summarize the VMT and vehicle population in the maintenance area. Note that these estimates include only the partial area of Anderson County that has been designated maintenance.

⁸Using MOVES to Prepare Emissions Inventories for State Implementation Plans and Transportation Conformity, US EPA, EPA-420-B-20-052, November 2020.

Table 4-9 Ozone Maintenance Area July Weekday Vehicle Miles Traveled (VMT) for 2017 and 2035.

	July Weekday Vehicle Miles Traveled	
County	2017	2035
Anderson (partial)	718,634	806,878
Blount	3,698,677	4,609,740
Knox	17,611,314	21,845,364
Total:	22,028,625	27,261,982

Table 4-10 Vehicle Population in the Maintenance Area in 2017 and 2035.

		Anderson (partial)	Blount	Knox	Anderson (partial)	Blount	Knox
Vehicle Type	MOVES sourceType ID	2017			2035		
Motorcycle	11	578	4,979	9,003	610	5,817	10,456
Passenger Car	21	7,427	58,825	179,418	7,832	68,723	208,380
Passenger Truck	31	9,258	69,482	190,664	9,763	81,173	221,441
Light Commercial Truck	32	427	9,055	16,731	479	11,518	20,556
Intercity Bus	41	3	9	95	-	1	8
Transit Bus	42	-	-	154	-	-	177
School Bus	43	20	164	449	19	172	536
Refuse Truck	51	8	33	213	9	38	245
Single Unit Short-haul Truck	52	229	1,731	8,408	260	2,043	10,004
Single Unit Long-haul Truck	53	13	68	381	12	63	360
Motor Home	54	30	148	825	68	408	2,207
Combination Short-haul Truck	61	83	338	2,986	124	365	4,017
Combination Long-haul Truck	62	155	388	4,737	144	409	4,599
Total:		18,231	145,220	414,064	19,320	170,730	482,986

EPA's MOVES model, version 3.1.0 with the 20221007 default database was used to estimate emissions from onroad mobile sources in the maintenance area. Onroad emissions of VOC and NO_x are contained in Table 4-11 and Table 4-12.

Table 4-11 Maintenance Area Onroad VOC Emissions^a.

	2017	2020	2023	2026	2029	2032	2035
County	----- VOC (tons/day) -----						
Anderson (partial)	0.48	0.42	0.37	0.31	0.25	0.20	0.14
Blount	2.66	2.38	2.09	1.81	1.53	1.24	0.96
Knox	8.58	7.67	6.76	5.85	4.94	4.03	3.12
Total	11.72	10.47	9.22	7.97	6.72	5.47	4.22

^aEmissions for 2020, 2023, 2026, 2029 and 2032 are interpolated between 2017 and 2035.

Table 4-12 Maintenance Area Onroad NO_x Emissions^a.

	2017	2020	2023	2026	2029	2032	2035
County	----- NO _x (tons/day) -----						
Anderson (partial)	0.69	0.59	0.49	0.39	0.28	0.18	0.08
Blount	3.75	3.26	2.77	2.29	1.80	1.31	0.82
Knox	18.66	16.51	14.37	12.22	10.07	7.93	5.78
Total	23.10	20.36	17.63	14.90	12.15	9.42	6.68

^aEmissions for 2020, 2023, 2026, 2029 and 2032 are interpolated between 2017 and 2035.

4.5 Total Emissions

Table 4-13 shows the total NO_x emissions for 2017 to 2035 for a typical July day (in tons/day). Table 4-14 shows total VOC emissions for 2017 to 2035 for a typical July day (in tons/day). For NO_x, the total emissions in 2017 (39.17 ton/day) are greater than the total emissions in 2035 (25.76 ton/day). This is a decrease of 13.41 ton/day from 2017 to 2035. For VOC, the total emissions in 2017 (35.60 ton/day) are less than the total emissions in 2035 (44.62 ton/day). This is an increase of 9.02 ton/day from 2017 to 2035.

Table 4-13: Total NO_x Emissions for 2017-2035

	NO _x , Typical Summer Day, July (ton/day)						
Sector	2017	2020	2023	2026	2029	2032	2035
Point	9.32	8.47	10.87	4.22	5.59	7.82	11.82
MAR	0.98	1.03	1.15	1.35	1.66	2.14	2.88
Nonroad, excluding MAR	4.07	3.39	2.82	2.34	1.95	1.63	1.35
Nonpoint	1.70	1.92	2.12	2.33	2.56	2.80	3.03
Onroad	23.10	20.36	17.63	14.90	12.15	9.42	6.68
Total	39.17	35.17	34.59	25.14	23.91	23.81	25.76

Table 4-14: Total VOC Emissions for 2017-2035

	VOC, Typical Summer Day, July (ton/day)						
Sector	2017	2020	2023	2026	2029	2032	2035
Point	2.93	3.78	4.89	6.14	8.08	10.70	14.27
MAR	0.36	0.39	0.42	0.48	0.57	0.69	0.88
Nonroad, excluding MAR	4.58	3.94	3.38	2.91	2.50	2.15	1.84
Nonpoint	16.01	17.13	18.30	19.48	20.66	21.97	23.41
Onroad	11.72	10.47	9.22	7.97	6.72	5.47	4.22
Total	35.60	35.71	36.21	36.98	38.53	40.98	44.62

While there is an increase in VOC emissions from 2017 to 2035, this increase is expected to have minimal impacts on ambient ozone concentrations. As stated in Section 2, the SEMAP project demonstrated that the Knoxville area is NO_x-limited, meaning that anthropogenic NO_x emission reductions are much more effective at reducing ozone concentrations compared to anthropogenic VOC emission reductions. Going from 2017 to 2035, the decrease in NO_x will result in a decrease in ozone, while the increase in VOC emissions is expected to result in little to no increase in ozone. The ozone benefit from NO_x emissions reductions is expected to be much greater than any small increase in ozone resulting from higher VOC emissions. As stated in Section 2, design values in 2022 at monitoring sites in the Knoxville area range between 57 ppb and 63 ppb. The highest monitoring design value is 63 ppb, which is well below the 2008 NAAQS of 75 ppb. Thus, maintenance is demonstrated since there is a decrease in NO_x emissions from 2017 to 2035, the Knoxville area is NO_x-limited, and monitoring design values are well below the 2008 NAAQS of 75 ppb.

4.6 Motor Vehicle Emissions Budget (MVEB):

Onroad mobile source emissions were projected using a combination of output from computer programs that predict mobile emission factors and traffic volumes. These traffic volume projections and emissions projections are discussed in more detail in Appendix G.

The daily vehicle miles traveled (DVMT) projections, based on data provided by TDOT and the Knoxville Regional TPO, are presented earlier in Table 4-9. The 2017 DVMT was developed from traffic counts conducted by TDOT; the DVMT for 2035 was forecast by the Knoxville Regional TPO's travel demand model.

Detailed information on other MOVES inputs is contained in Appendix G. Onroad emissions totals by county are summarized in Table 4-11 and Table 4-12. Table 4-11 and Table 4-12 illustrate significant reductions in NO_x and VOC emissions from onroad mobile sources projected to occur between 2017 and 2035.

Between 2017 and 2035 onroad emissions, in the maintenance area, of NO_x are projected to decrease over 70 percent. Onroad emissions of NO_x in 2017 are approximately 23 tons/day, which is expected to decrease over time to approximately 7 tons/day in 2035. Similarly, substantial reductions in VOCs are projected to occur between 2017 and 2035. VOCs are expected to decrease from onroad motor vehicles from approximately 12 tons/day in 2017 to approximately 4 tons/day in 2035; a reduction of over 60 percent. These substantial reduction in oxides of nitrogen and volatile organic compounds are largely attributable to the EPA Federal Motor Vehicle Control Programs.

Transportation Conformity, as established in the Clean Air Act, is intended to ensure that federally funded or approved transportation projects, plans or programs conform to the applicable State Implementation Plan (SIP). This requirement is achieved through the establishment of a motor vehicle emissions budget (MVEB) for the applicable pollutant or pollutant precursors.

Pursuant to the EPA's transportation conformity rule in 40 CFR Part 93, specific emission budgets are hereby defined for the onroad mobile sources portion of the emissions inventory. These budgets are to be used by the transportation authorities to assure that transportation plans, programs, and projects are consistent with, and conform to, the maintenance of acceptable air quality in the Knoxville area. The last year of this maintenance plan (2035) is a year which must have a defined MVEB. These MVEBs include the total onroad emissions for that year, plus an allocation from the available NO_x safety margin. This allocation from the safety margin accounts for uncertainty in the projections and is available due to reductions in NO_x that are projected to occur primarily from onroad mobile sources. The available NO_x safety margin is illustrated in Table 4-15.

Table 4-15: Total NO_x Emissions with Safety Margins.

	Nonpoint	Nonroad	Commercial Marine, Aircraft and Rail	Onroad	Point	Total	Safety Margin
	----- NO _x Emissions (tons/day) -----						
2017	1.70	4.07	0.98	23.10	9.32	39.17	
2020	1.92	3.39	1.03	20.36	8.47	35.17	4.00
2023	2.12	2.82	1.15	17.63	10.87	34.59	4.58
2026	2.33	2.34	1.35	14.90	4.22	25.14	14.03
2029	2.56	1.95	1.66	12.15	5.59	23.91	15.26
2032	2.80	1.63	2.14	9.42	7.82	23.81	15.36
2035	3.03	1.35	2.88	6.68	11.82	25.76	13.41

Under 40 CFR 93.101, the term safety margin is the difference between the attainment level (from all sources) and the projected level of emissions (from all sources) in the maintenance plan. The safety margin, or portion of the safety margin, can be allocated to the transportation sector. A 75% portion of the available 2035 safety margin is allocated to the NO_x MVEB. Specifically, 10.06 tons/day of the available NO_x safety margin is allocated to the 2035 MVEB; the remaining safety margin for NO_x for 2035 is 3.35 tons/day. Combining the total NO_x safety margin with the 2035 onroad emissions results in a NO_x MVEB of 16.74 tons/day. An additional 3.00 tons/day is added to the onroad VOC emissions to result in a 2035 MVEB for VOCs of 7.22 tons/day since VOCs are expected to have minimal impacts on ozone in this area. The Motor Vehicle Emissions Budgets are contained in Table 4-16.

Table 4-16: Knoxville Area Motor Vehicle Emissions Budgets (MVEB).

	2035
Pollutant	-- tons/day --
VOC	7.22
NO _x	16.74

The MVEBs are consistent with the plan for maintaining the 2008 8-hour ozone NAAQS through the year 2035. By submission of this maintenance plan, TDEC is requesting EPA remove the previously established⁹ MVEBs for the 2008 8-hour ozone NAAQS for calendar year 2026 and leave in place the MVEBs established for calendar year 2011. For future conformity determinations, transportation authorities should rely on the above MVEBs unless this maintenance plan is revised.

5 Ambient Air Quality Monitoring

Tennessee will continue air quality monitoring in accordance with 40 CFR 58. If Tennessee chooses to discontinue a SLAMS monitor, a network modification plan and schedule will be developed in accordance with 40 CFR 58.14.

6 Contingency Measures

The contingency plan provisions of the CAA are designed to result in prompt correction or prevention of NAAQS violations that might occur after re-designation of an area to attainment of the NAAQS. Section 175A of the CAA requires that a maintenance plan include such contingency measures as EPA deems necessary to assure that the State will promptly correct a NAAQS violation that might occur after re-designation. The maintenance plan must identify the contingency measures to be considered for possible adoption, a schedule for adoption and implementation of the selected contingency measures, and a time limit for action by the State. In accordance with §175A(d) of the Clean Air Act, Tennessee will implement any measures which exist in the current SIP for ozone. No measures in the SIP have been discontinued or moved to the maintenance plan.

The two main elements of the contingency plan are triggering mechanisms to determine when contingency measures are needed and a process of developing and adopting appropriate control measures. The primary trigger of the contingency plan will be a quality assured/quality controlled violating design value (DV) of the 8-hour 2008 ozone NAAQS at any monitor in the maintenance area. Upon activation of the trigger, the TDEC-APC, in conjunction with the Knox County Department of Air Quality Management (DAQM), will commence an analysis to determine what additional measures will be necessary to attain or maintain the 8-hour ozone standard. In addition to the primary trigger indicated above, the TDEC-APC and Knox County DAQM will monitor regional emissions through the Air Emissions Reporting Requirements (AERR). If the AERR results indicate that the projected emissions in this maintenance plan are significantly less than the AERR reveals (more than 10 percent), the TDEC-APC and Knox County DAQM will investigate the differences and develop an appropriate strategy for addressing these differences. In addition, if ambient monitoring data indicates that a violation of the three-year design value may be imminent, the TDEC-APC and Knox County DAQM will evaluate existing control measures to determine whether further emission reduction measures should be implemented.

⁹ Environmental Protection Agency, Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes; Tennessee; Redesignation of the Knoxville 2008 8-Hour Ozone Nonattainment Area to Attainment; Final Rule. Federal Register, Vol. 80, No. 133, July 13, 2015.

A trigger level response will consist of a study to determine whether the ozone value indicates a trend toward higher ozone concentrations or whether emissions appear to be increasing. The study will evaluate whether the trend, if any, is likely to continue and, if so, the control measures necessary to reverse the trend, taking into consideration ease and timing for implementation, as well as economic and social considerations. If new emission control measures are already promulgated and scheduled to be implemented at the Federal or State level, and if those measures are determined to be sufficient to address the increase in peak ozone concentrations, additional local measures may be unnecessary. The State will submit to the EPA an analysis to assess whether the proposed emission control measures are adequate to reverse the increase in peak ozone concentrations and to maintain the 8- hour ozone standard in the area.

The TDEC-APC and the Knox County DAQM will implement the appropriate contingency measures needed to assure future attainment of the ozone NAAQS within eighteen to twenty-four months of the monitored violation. TDEC and the Knox County DAQM will complete sufficient analyses and provide those to the EPA. If determined necessary (recent or soon to be effective new enforceable requirements will not be adequate), the adoption of rules for ensuring attainment and maintenance of the 8-hour ozone NAAQS will begin. Contingency measures would be adopted and implemented as expeditiously as possible, but no later than eighteen to twenty-four months after the triggering event.¹⁰ If the area returns to attainment prior to implementation of the contingency measure(s), the contingency measure(s) may not be implemented. The proposed schedule for these actions would be as follows:

- Six months to identify appropriate contingency measures, including identification of emission sources and appropriate control technologies;
- Between three and six months to initiate a stakeholder process; and
- Between nine and twelve months to implement the contingency measures. This step would include the time required to draft rules or SIP amendments, complete the rulemaking process, and submit the final plans to EPA.

The selection of emission control measures will be based on cost-effectiveness, emission reduction potential, economic and social considerations, or other factors that the State deems to be appropriate. Selected emission control measures will be subject to public review, and the State will seek public input prior to selecting new emission control measures.

The measures that will be considered for adoption upon a trigger of the contingency plan include the following:

- Implementation of diesel retrofit programs, including incentives for performing retrofits

¹⁰ If quality assured/quality controlled (QA/QC) data indicates a violating design value for the 8-hour 2008 ozone NAAQS, then the triggering event will be the date of the design value violation, and not the final QA/QC date. However, if initial monitoring data indicates a possible design value violation but later QA/QC indicates that a NAAQS violation did not occur, then a triggering event will not have occurred, and contingency measures will not need to be implemented.

- Reasonable Available Control Technology (RACT) for NO_x sources in nonattainment counties
- Programs or incentives to decrease motor vehicle use, including employer-based programs, additional park and ride services, enhanced transit service and encouragement of flexible work hours/compressed work week/telecommuting
- Trip reduction ordinances
- Additional emissions reductions on stationary sources
- Enhanced stationary source inspection to ensure that emissions control equipment is functioning properly
- Voluntary fuel programs, including incentives for alternative fuels
- Construction of high-occupancy vehicle (HOV) lanes, or restriction of certain roads or lanes for high-occupancy vehicles
- Programs for new construction and major reconstruction of bicycle and pedestrian facilities, including shared use paths, sidewalks, and bicycle lanes.
- Expand Air Quality Action Day activities/Clean Air Partners public education outreach
- Expansion of E-government services at State and local level
- Additional enforcement or outreach on driver observance of reduced speed limits
- Additional transportation policies
- Promotion of non-motorized transportation
- Promotion of tree-planting standards that favor trees with low VOC biogenic emissions
- Promotion of energy saving plans for local government
- Gas can and lawnmower replacement programs
- Seasonal open burning ban in nonattainment counties
- Evaluation of anti-idling rules and/or policy
- Additional controls in upwind areas, if necessary

Other control measures, not included in the above list, will be considered if new control programs are deemed more advantageous for this area.

TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION
BUREAU OF ENVIRONMENT
DIVISION OF AIR POLLUTION CONTROL

IN THE MATTER OF

KNOXVILLE AREA SECOND OZONE
MAINTENANCE PLAN

)
)
)

ORDER NO. 24-002

BOARD ORDER

The following matter came before the Tennessee Air Pollution Control Board on March 13, 2024.

The Tennessee Department of Environment and Conservation (TDEC) has prepared the Knoxville Area Second Ozone Maintenance Plan. The United States Environmental Protection Agency (EPA) promulgated a revised Ozone NAAQS of 75 parts per billion on March 12, 2008. EPA designated the Knoxville area, which includes part of Anderson County and all of Blount and Knox Counties, as nonattainment on May 21, 2012. On November 14, 2014, TDEC requested that EPA redesignate the Knoxville Area to attainment. On July 13, 2015, the EPA approved the redesignation request and maintenance plan with an effective date of August 12, 2015. The Knoxville Area Second Ozone Maintenance Plan was prepared in accordance with Section 175A of the Clean Air Act and the EPA guidance documents. The Knoxville Area Second Ozone Maintenance Plan includes an attainment emissions inventory, maintenance demonstration, monitoring data, verification of continued attainment, motor vehicle emission budgets (MVEB's), and a contingency plan. The Knoxville Area Second Ozone Maintenance Plan will last until 2035.

A public hearing notice was posted on the TDEC website on January 12, 2024. A Public Hearing was held on February 20, 2024. The end of the public comment period was February 20, 2024.

Following the Board's approval, the Knoxville Area Second Ozone Maintenance Plan shall be adopted.

Approved by the following members of the Air Pollution Control Board of the State of Tennessee, and entered on the 13th day of March 2024.

Board Member	Aye	No	Abstain	Absent	Signature (if required)
Dr. Ronné Adkins Commissioner's Designee, Dept. of Environment and Conservation					
Dr. John Benitez Licensed Physician with experience in health effects of air pollutants					
Dr. Joshua Fu Involved with Institution of Higher Learning on air pollution evaluation and control					
Mike Haverstick Working in management in Private Manufacturing					
Dr. Shawn A. Hawkins Working in field related to Agriculture or Conservation					
Kyle Etheridge Working for Industry with technical experience					
Caitlin Roberts Jennings Small Generator of Air Pollution representing Automotive Interests					
Dr. Chunrong Jia Environmental Interests					
Ken Moore Working in Municipal Government					
Stephen Moore Working for Industry with technical experience					
Nicholas Ramos Conservation Interest					
Amy Spann, PE Registered Professional Engineer					
Larry Waters County Mayor					
Jimmy West Commissioner's Designee, Dept. of Economic and Community Development					



Title V Form Changes

March 13, 2024

TAPCR 1200-03-09-.02(11)(d)(ii)(I)

- The owner or operator of a source that is subject to the provisions of paragraph 1200-03-09-.02(11) shall file a complete application for a major source operating permit. Applications shall be made on forms approved by the Board and available from the Technical Secretary.
- 34 Forms Revised

Change of Address

- Division of Air Pollution Control Scheduled to Move to New Offices April 22, 2024.
 - Current Address:
Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243
 - New Address
State of Tennessee
Department of Environment and Conservation
Division of Air Pollution Control
Davy Crockett Tower, 7th Floor
500 James Robertson Parkway Nashville, TN 37243

Email Address added to forms

- Not on current form
- Air.Pollution.Control@TN.gov

QUESTIONS





TITLE V PERMIT APPLICATION INDEX OF AIR POLLUTION PERMIT APPLICATION FORMS

Section 1: Identification and Diagrams		
This application contains the following forms:	APC Form 1, Facility Identification	
	APC Form 2, Operations and Flow Diagrams	

Section 2: Emission Source Description Forms		
		Total number of this form
This application contains the following forms (one form for each incinerator, printing operation, fuel burning installation, etc.):	APC Form 3, Stack Identification	
	APC Form 4, Fuel Burning Non-Process Equipment	
	APC Form 5, Stationary Gas Turbines or Internal Combustion Engines	
	APC Form 6, Storage Tanks	
	APC Form 7, Incinerators	
	APC Form 8, Printing Operations	
	APC Form 9, Painting and Coating Operations	
	APC Form 10, Miscellaneous Processes	
	APC Form 33, Stage I and Stage II Vapor Recovery Equipment	
	APC Form 34, Open Burning	

Section 3: Air Pollution Control System Forms		
		Total number of this form
This application contains the following forms (one form for each control system in use at the facility):	APC Form 11, Control Equipment - Miscellaneous	
	APC Form 13, Adsorbers	
	APC Form 14, Catalytic or Thermal Oxidation Equipment	
	APC Form 15, Cyclones/Settling Chambers	
	APC Form 17, Wet Collection Systems	
	APC Form 18, Baghouse/Fabric Filters	

(OVER)

Section 4: Compliance Demonstration Forms

		Total number of this form
This application contains the following forms (one form for each incinerator, printing operation, fuel burning installation, etc.):	APC Form 19, Compliance Certification - Monitoring and Reporting - Description of Methods for Determining Compliance	
	APC Form 20, Continuous Emissions Monitoring	
	APC Form 21, Portable Monitors	
	APC Form 22, Control System Parameters or Operating Parameters of a Process	
	APC Form 23, Monitoring Maintenance Procedures	
	APC Form 24, Stack Testing	
	APC Form 25, Fuel Sampling and Analysis	
	APC Form 26, Record Keeping	
	APC Form 27, Other Methods	
	APC Form 28, Emissions from Process Emissions Sources / Fuel Burning Installations / Incinerators	
	APC Form 29, Emissions Summary for the Facility or for the Source Contained in This Application	
	APC Form 30, Current Emissions Requirements and Status	
	APC Form 31, Compliance Plan and Compliance Certification	
	APC Form 32, Air Monitoring Network	

Section 5: Statement of Completeness and Certification of Compliance

I have reviewed this application in its entirety and to the best of my knowledge, and based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate, and complete. I have provided all the information that is necessary for compliance purposes and this application consists of _____ pages and they are numbered from page ____ to _____. The status of this facility's compliance with all applicable air pollution control requirements, including the enhanced monitoring and compliance certification requirements of the Federal Clean Air Act, is reported in this application along with the methods to be used for compliance demonstration.

Name and Title of Responsible Official

Telephone Number with Area Code

Signature of Responsible Official

Date of Application

(For definition of responsible official, see instructions for APC Form 1)



TITLE V PERMIT APPLICATION FACILITY IDENTIFICATION

SITE INFORMATION				
1. Organization's legal name		For APC Use Only	APC company point no.	
2. Site name (if different from legal name)			APC Log/Permit no.	
3. Site address (St./Rd./Hwy.)			NAICS or SIC Code	
City or distance to nearest town		Zip code	County name	
4. Site location (in Lat./Long)	Latitude	Longitude		
CONTACT INFORMATION (RESPONSIBLE OFFICIAL)				
5. Responsible official contact			Phone number with area code	
6. Mailing address (St./Rd./Hwy.)			Fax number with area code	
City	State	Zip code	Email address	
CONTACT INFORMATION (TECHNICAL)				
7. Principal technical contact			Phone number with area code	
8. Mailing address (St./Rd./Hwy.)			Fax number with area code	
City	State	Zip code	Email address	
CONTACT INFORMATION (BILLING)				
11. Billing contact			Phone number with area code	
12. Mailing address (St./Rd./Hwy.)			Fax number with area code	
City	State	Zip code	Email address	
TYPE OF PERMIT REQUESTED				
13. Permit requested for: Initial application to operate : _____ Permit renewal to operate : _____ Administrative permit amendment : _____ Minor permit modification : _____ Significant modification : _____ Construction permit : _____				

(OVER)

HAZARDOUS AIR POLLUTANTS, DESIGNATIONS, AND OTHER PERMITS ASSOCIATED WITH FACILITY

14. Is this facility subject to the provisions governing prevention of accidental releases of hazardous air contaminants contained in Chapter 1200-03-32 of the Tennessee Air Pollution Control regulations?

_____ Yes _____ No

If the answer is Yes, are you in compliance with the provisions of Chapter 1200-03-32 of the Tennessee Air Pollution Control regulations?

_____ Yes _____ No

15. If facility is located in an area designated as "Non-Attainment" or "Additional Control", indicate the pollutant(s) for the designation.

16. List all valid Air Pollution permits issued to the sources contained in this application [identify all permits with most recent permit numbers and emission source reference numbers listed on the permit(s)].

17. Page number :

Revision number:

Date of revision:

State of Tennessee
Department of Environment and Conservation
Division of Air Pollution Control
Davy Crockett Tower, 7th Floor
500 James Robertson Parkway
Nashville, TN 37243
Telephone: (615) 532-0554
Air.Pollution.Control@TN.gov



APC 2

TITLE V PERMIT APPLICATION OPERATIONS AND FLOW DIAGRAMS

1. Please list, identify, and describe briefly process emission sources, fuel burning installations, and incinerators that are contained in this application. Please attach a flow diagram for this application.

2. List all insignificant activities which are exempted because of size or production rate and cite the applicable regulations.

3. Are there any storage piles?

YES _____ NO _____

4. List the states that are within 50 miles of your facility.

5. Page number: _____ Revision Number: _____ Date of Revision: _____

CN - 1400 Rev. (4-24)
apc board packet-march-13-2024



TITLE V PERMIT APPLICATION FUEL BURNING NON-PROCESS EQUIPMENT

GENERAL IDENTIFICATION AND DESCRIPTION				
1. Facility name:				
2. Stack ID or flow diagram point identification (s):				
FUEL BURNING EQUIPMENT DESCRIPTION				
3. List all fuel burning equipment that is at this fuel burning installation (please complete an APC 4 form for each piece of fuel burning equipment).				
4. Fuel burning equipment identification number:				
5. Fuel burning equipment description:				
6. Year of installation or last modification of fuel burning equipment.				
7. Furnace type:		8. Manufacturer model number (if available):		
9. Location of this fuel burning installation in UTM coordinates: UTM Vertical: _____ UTM Horizontal: _____				
10. Normal operating schedule: _____ Hrs./Day _____ Days/Wk. _____ Days/Yr.				
FUELS, CONTROLS, AND MONITORING DESCRIPTION				
11. Maximum rated heat input capacity (in million BTU/Hour)		12. If wood is used as a fuel, specify the amount of wood used as a fraction of total heat input.		
13. Fuels:	Primary fuel	Backup fuel #1	Backup fuel #2	Backup fuel #3
Fuel name				
Actual yearly consumption				
14. If emissions from this fuel burning equipment are controlled for compliance, please specify the type of control:				
15. If emissions from this fuel burning equipment are monitored for compliance, please specify the type of monitoring:				
16. Describe any fugitive emissions associated with this process, such as outdoor storage piles, open conveyors, material handling operations, etc. (please attach a separate sheet if necessary).				
17. Page number:		Revision Number:		Date of Revision:



TITLE V PERMIT APPLICATION STATIONARY GAS TURBINE OR INTERNAL COMBUSTION ENGINE

GENERAL IDENTIFICATION AND DESCRIPTION				
1. Facility name:				
2. Stack ID or flow diagram point identification (s):				
GAS TURBINE OR INTERNAL COMBUSTION ENGINE DESCRIPTION				
3. List all gas turbines and internal combustion engines at this facility on a separate sheet, and please complete an APC 5 form for each piece of equipment.				
4. Manufacturer and model number:				
5. Equipment description:				
6. Date of installation or last modification of equipment:				
7. Rated heat input capacity (in million BTU/Hour) and rated horsepower: _____ State which heating value was utilized: _____ Higher heating value _____ Lower heating value		8. If equipment is a gas turbine, list type: _____ Simple cycle _____ Regenerative cycle _____ Combined cycle		
9. Location of this fuel burning installation in UTM coordinates: UTM Vertical: _____ UTM Horizontal: _____				
10. Normal operating schedule: _____ Hrs./Day _____ Days/Wk. _____ Days/Yr.				
FUEL DESCRIPTION				
11. Fuels:	Primary fuel	Backup fuel #1	Backup fuel #2	Backup fuel #3
Fuel name				
Actual yearly consumption				
12. (For NSPS turbines only) Manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the unit:				
13. Page number: _____ Revision Number: _____ Date of Revision: _____				

CN- 1403 Rev. (4-24)
apc board packet-march-13-2024

15. For Internal Floating Roof tanks:

A. Rim Seal system description:

_____ Liquid Mounted Primary
 _____ Vapor Mounted Primary

_____ Liquid Mounted Primary plus Secondary Seal
 _____ Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____

D. Deck Type (check one):

_____ Welded

_____ Bolted

C. Effective Column diameter: _____

(Feet)

E. Total Deck Seam length: _____

(Feet)

F. Deck Area: _____

(Square Feet)

G. Deck Fitting types (indicate the number of each type):

Access Hatch (24" Dia.)

_____ Bolted cover, gasketed

_____ Unbolted cover, gasketed

_____ Unbolted cover, ungasketed

Automatic Gauge Float Well

_____ Bolted cover, gasketed

_____ Unbolted cover, gasketed

_____ Unbolted cover, ungasketed

Column Well

_____ Built-up Column-Sliding cover, gasketed

_____ Built-up Column-Sliding cover, ungasketed

_____ Pipe Column-Flexible fabric sleeve seal

_____ Pipe Column-Sliding cover, gasketed

_____ Pipe Column-Sliding cover, ungasketed

Ladder well

_____ Sliding cover, gasketed

_____ Sliding cover, ungasketed

Sample Pipe and Well

_____ Slotted Pipe-Sliding cover, gasketed

_____ Slotted Pipe-Sliding cover, ungasketed

_____ Sample Well-Slit fabric seal, 10% open area

_____ Stub Drain, 1 inch diameter

Roof Leg or Hanger Well

_____ Adjustable

_____ Fixed

Vacuum Breaker

_____ Weighted Mechanical Actuation, gasketed

_____ Weighted Mechanical Actuation, ungasketed

16. For variable vapor space tanks:

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the following table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)

Multipurpose tank with variable composition:

_____ Yes

_____ No

18. Describe the operation this tank will serve:

19. Page number:

Revision Number:

Date of Revision:



TITLE V PERMIT APPLICATION INCINERATION

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name:			
2. Incinerator identification:			
INCINERATOR DESCRIPTION			
3. Incinerator description:			
4. Stack ID or flow diagram point identification (s):			
If this incinerator is controlled for compliance utilizing add-on control equipment, attach an appropriate Air Pollution Control system form.			
5. Location of this incinerator in UTM coordinates: UTM Vertical: _____ UTM Horizontal: _____			
6. Normal operating schedule: _____ Hrs./Day _____ Days/Wk. _____ Days/Yr.			
If this incinerator's emissions and/or operations are monitored for compliance, please attach the appropriate compliance demonstration form.			
7. Type of incinerator (check one):			
_____ Single chamber	_____ Controlled air	_____ Multiple chamber	_____ Fixed hearth
_____ Stepped hearth	_____ Rotary kiln	_____ Other - specify: _____	
8. Year of construction or last modification:			
MATERIALS AND COMBUSTION INFORMATION			
9. Describe all types of materials to be burned in this unit. (Declare materials stated in 1200-3-31-.02(6) of the TN Air Pollution Control regulations and identify)			
Types of materials to be burned	Weight percentage of total charge	Heating value	
10. Type of incinerator charging:			
A. _____ Batch feed _____ Continuous feed		B. Maximum charging rate: _____ Lbs./Hr.	
C. Waste charging method: _____			
11. Type of Chamber: Combustion information	Design temperature (°F)	Size (Million BTU/Hr.)	Burner Fuels
Primary chamber			
Secondary chamber			
12. Residence time of gas in the secondary chamber:			
13. If this incinerator is equipped with a heat recovery system, what is the projected energy production rate? (i.e. pounds of steam per hour)			
14. If this incinerator is regulated under RCRA, please provide the permit number (the waste materials burned in RCRA permitted incinerator (s) are not required to be included in Item 9 above)			
15. Page number:		Revision Number:	Date of Revision:

TITLE V PERMIT APPLICATION PRINTING OPERATIONS

GENERAL IDENTIFICATION AND DESCRIPTION

GENERAL IDENTIFICATION AND DESCRIPTION								
1. Facility name:								
2. Process description:								
3. Year of construction or last modification:				4. Stack ID or flow diagram point identification (s):				
If the emissions are controlled for compliance, attach an appropriate Air Pollution Control system form. If this printing operation is monitored for compliance, please attach the appropriate compliance demonstration form.								
5. Normal operating schedule: _____ Hrs./Day _____ Days/Wk. _____ Days/Yr.								
6. Location of this operation in UTM coordinates: UTM Vertical: _____ UTM Horizontal: _____								
7. Operation type: _____ Flexographic _____ Web – offset _____ Web – offset (non – heatset) _____ Packaging Rotogravure _____ Publication Rotogravue _____ Screen Printing _____ Other (Specify): _____								
INKS AND SOLVENTS								
8. Complete the following table – Attach additional tables as needed – Fill in only the items necessary for determination of compliance with emission standard(s).								
Identify inks and solvents: (name or type of ink)	Daily usage: Gallons or pounds		Monthly Usage	Coating composition: Weight percent as applied				Ink density
	Average	Maximum		Maximum	Solids Wt. %	Solvents (VOCs) Wt. %	Water Wt. %	
Total inks								
List the Thinning Solvents used with the inks identified above:								
(1):								
(2):								
Clean-up solvents:								
Other (specify):								
9. Page number: _____ Revision Number: _____ Date of Revision: _____								



**TITLE V PERMIT APPLICATION
 PAINTING AND COATING OPERATIONS
 GENERAL IDENTIFICATION AND DESCRIPTION**

GENERAL IDENTIFICATION AND DESCRIPTION													
1. Facility name:													
2. Process description:													
3. Year of construction or last modification:								4. Stack ID or flow diagram point identification (s):					
If the emissions are controlled for compliance, attach an appropriate Air Pollution Control system form. If this printing operation is monitored for compliance, please attach the appropriate compliance demonstration form.													
5. Normal operating schedule _____ Hrs./Day _____ Days/Wk. _____ Days/Yr.													
6. Location of this operation in UTM coordinates: UTM Vertical: _____ UTM Horizontal: _____													
7. Oven curing (complete if applicable): Number of ovens: _____ Temperature of air contacting coated material as it leaves the oven (°F): _____ Specify oven fuels: _____ Total maximum heat input to each oven: _____													
8. Application technique and transfer efficiency (%):													
COATINGS AND SOLVENTS													
9. Complete the following table – Attach additional tables as needed – Fill in only the items necessary for determination of compliance with emission standard(s).													
Identify coatings	Maximum Usage		Normal Usage	Coating Composition: Volume and weight percent as applied								Density of Solvent Fraction	Coating Density
	Gal./Hr.	Gal./Mo.		Solids		Solvents (VOCs)	Water		Exempt Solvent				
			Gal./Mo.	Vol. %	Wt. %		Wt. %	Vol.	Wt.	Vol.	Wt.	Lbs./Gal.	Lbs./Gal.
Total coatings													
List the Thinning Solvents used with the coatings identified above:													
(1):													
(2):													
Clean-up solvents:													
Other (specify):													
10. Page number: _____ Revision Number: _____ Date of Revision: _____													



TITLE V PERMIT APPLICATION MISCELLANEOUS PROCESSES

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name:			
2. Process emission source (identify):			
3. Stack ID or flow diagram point identification(s):		4. Year of construction or last modification:	
If the emissions are controlled for compliance, attach an appropriate Air Pollution Control system form.			
5. Normal operating schedule: _____ Hrs./Day _____ Days/Wk. _____ Days/Yr.			
6. Location of this process emission source in UTM coordinates: UTM Vertical : _____ UTM Horizontal: _____			
7. Describe this process (Please attach a flow diagram of this process) and check one of the following: _____ Batch _____ Continuous			
PROCESS MATERIAL INPUT AND OUTPUT			
8. List the types and amounts of raw materials input to this process:			
Material	Storage/Material handling process	Average usage (units)	Maximum usage (units)
9. List the types and amounts of primary products produced by this process:			
Material	Storage/Material handling process	Average usage (units)	Maximum usage (units)
10. Process fuel usage:			
Type of fuel	Max heat input (10 ⁶ BTU/Hr.)	Average usage (units)	Maximum usage (units)
11. List any solvents, cleaners, etc., associated with this process:			
If the emissions and/or operations of this process are monitored for compliance, please attach the appropriate Compliance Demonstration form.			
12. Describe any fugitive emissions associated with this process, such as outdoor storage piles, open conveyors, open air sand blasting, material handling operations, etc. (please attach a separate sheet if necessary).			
13. Page number: _____ Revision Number: _____ Date of Revision: _____			



TITLE V PERMIT APPLICATION CONTROL EQUIPMENT - MISCELLANEOUS

GENERAL IDENTIFICATION AND DESCRIPTION		
1. Facility name:	2. Emission source (identify):	
3. Stack ID or flow diagram point identification (s):		
CONTROL EQUIPMENT DESCRIPTION		
4. Describe the device in use. List the key operating parameters of this device and their normal operating range (e.g., pressure drop, gas flow rate, temperature):		
5. Manufacturer and model number (if available):		
6. Year of installation:		
7. List of pollutant (s) to be controlled by this equipment and the expected control efficiency for each pollutant.		
Pollutant	Efficiency (%)	Source of data
8. Discuss how collected material is handled for reuse or disposal.		
9. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.		
10. Page number:	Revision Number:	Date of Revision:



TITLE V PERMIT APPLICATION CONTROL EQUIPMENT - ADSORBERS

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name:	2. Emission source (identify):
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3. Stack ID or flow diagram point identification (s):

ADSORBER DESCRIPTION

4. Describe the device in use. List the key operating parameters of this device and their normal operating range.

5. Manufacturer and model number (if available):	6. Year of installation:
--	--------------------------

7. Are you recovering solvent? If the answer is "Yes", please describe.

8. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant:						
Pollutant	Inlet Concentration		Outlet Concentration		Pollutant Capture Efficiency (%)	Adsorber Efficiency (%)
	Gr./ACF	PPMV	Gr./ACF	PPMV		

9. If you were required to answer Item #8, please describe how the bed break through is monitored or controlled.
--

10. Discuss how collected material is handled for reuse or disposal. Indicate if the bed material is disposable. Discuss method of disposal or regeneration method.

11. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.

12. Page number:	Revision Number:	Date of Revision:
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TITLE V PERMIT APPLICATION CONTROL EQUIPMENT - CATALYTIC OR THERMAL OXIDATION

GENERAL IDENTIFICATION AND DESCRIPTION		
1. Facility name:	2. Emission source (identify):	
3. Stack ID or flow diagram point identification(s):		
OXIDIZER DESCRIPTION		
4. Describe the oxidation system in use. List the key operating parameters of this device and their normal operating range.		
5. Manufacturer and model number (if available):	6. Year of installation:	7. Type (check one): Catalytic oxidizer _____ Thermal oxidizer _____
8. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant.		
Pollutant	Efficiency (%)	Source of data
9. If applicable, discuss how spent catalyst is handled for reuse or disposal.		
10. Equipment specifications:		
Catalytic oxidation	Thermal oxidation	
10A. Minimum operating temperature (°F):	10B. Minimum operating temperature (°F):	
11A. Type of fuel used:	11B. Type of fuel used:	
12. Type of catalyst used and volume of catalyst used (Ft. ³):	12. Not applicable.	
13A. Maximum fuel use:	13B. Maximum fuel use:	
14A. Residence time (sec.):	14B. Residence time (sec.):	
15. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.		
16. Page number:	Revision Number:	Date of Revision:



TITLE V PERMIT APPLICATION CONTROL EQUIPMENT - CYCLONES/SETTLING CHAMBERS

GENERAL IDENTIFICATION AND DESCRIPTION		
1. Facility name:	2. Emission source (identify):	
3. Stack ID or flow diagram point identification (s):		
CYCLONE/SETTLING CHAMBER DESCRIPTION		
4. Describe the device in use. List the key operating parameters of this device and their normal operating range.		
5. List of pollutants (s) to be controlled and the expected control efficiency for each pollutant.		
Pollutant	Efficiency (%)	Source of data
6. Discuss how collected material is handled for reuse or disposal.		
7. Gas flow rate (ACFM):		
8. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.		
9. Page number:	Revision Number:	Date of Revision:



TITLE V PERMIT APPLICATION CONTROL EQUIPMENT - WET COLLECTION SYSTEMS

GENERAL IDENTIFICATION AND DESCRIPTION		
1. Facility name:	2. Emission source (identify):	
3. Stack ID or flow diagram point identification(s):		
WET COLLECTION SYSTEM DESCRIPTION		
4. Describe the device in use. List the key operation parameters of this device and their normal operating range.		
5. Manufacturer and model number (if available):	6. Year of installation:	
7. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant.		
Pollutant	Efficiency (%)	Source of data
8. Discuss how collected material and effluent is handled for reuse or disposal..		
9. Scrubbing medium (water, sodium hydroxide slurry, etc.):		
10. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.		
11. Page number:	Revision Number:	Date of Revision:



TITLE V PERMIT APPLICATION CONTROL EQUIPMENT - BAGHOUSES/FABRIC FILTERS

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name:	2. Emission source (identify):
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3. Stack ID or flow diagram point identification (s):

BAGHOUSE/FABRIC FILTER DESCRIPTION

4. Describe the device in use. List the key operating parameters of this device and their normal operating range.

5. Manufacturer and model number (if available):	6. Year of installation:
--	--------------------------

7. List of pollutant(s) to be controlled and the expected control efficiency for each pollutant (see instructions).		
Pollutant	Efficiency (%)	Source of data

8. Discuss how collected material is handled for reuse or disposal.

9. If the bags are coated, specify the material used for coating and frequency of coating

10. Does the baghouse collect asbestos containing material?
Yes _____ No _____ If "Yes", provide data as outlined in Item 10, Instructions for this form.

11. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.

12. Page number:	Revision Number:	Date of Revision:
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TITLE V PERMIT APPLICATION
COMPLIANCE CERTIFICATION - MONITORING AND REPORTING
DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE

All sources that are subject to 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations are required to certify compliance with all applicable requirements by including a statement within the permit application of the methods used for determining compliance. This statement must include a description of the monitoring, recordkeeping, and reporting requirements and test methods. In addition, the application must include a schedule for compliance certification submittals during the permit term. These submittals must be no less frequent than annually and may need to be more frequent if specified by the underlying applicable requirement or the Technical Secretary.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: _____
2. Process emission source, fuel burning installation, or incinerator (identify): _____
3. Stack ID or flow diagram point identification(s): _____

METHODS OF DETERMINING COMPLIANCE

4. This source as described under Item #2 of this application will use the following method(s) for determining compliance with applicable requirements (and special operating conditions from an existing permit). Check all that apply and attach the appropriate form(s)
 - _____ Continuous Emission Monitoring (CEM) - APC 20
 Pollutant(s): _____
 - _____ Emission Monitoring Using Portable Monitors - APC 21
 Pollutant(s): _____
 - _____ Monitoring Control System Parameters or Operating Parameters of a Process - APC 22
 Pollutant(s): _____
 - _____ Monitoring Maintenance Procedures - APC 23
 Pollutant(s): _____
 - _____ Stack Testing - APC 24
 Pollutant(s): _____
 - _____ Fuel Sampling & Analysis (FSA) - APC 25
 Pollutant(s): _____
 - _____ Recordkeeping - APC 26
 Pollutant(s): _____
 - _____ Other (please describe) - APC 27
 Pollutant(s): _____

5. Compliance certification reports will be submitted to the Division according to the following schedule:
 Start date: _____
 And every _____ days thereafter.
6. Compliance monitoring reports will be submitted to the Division according to the following schedule:
 Start date: _____
 And every _____ days thereafter.

7. Page number: _____ Revision number: _____ Date of revision: _____



TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY CONTINUOUS EMISSIONS MONITORING

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name:			
2. Stack ID or flow diagram point identification(s):		3. Process emission source or fuel burning installation or incinerator:	
MONITOR DESCRIPTION			
4. Description of equipment monitoring pollutant: Pollutant being monitored: _____			
4A. Name of Manufacturer:		4B. Model number:	
4C. Installation year	4D. Type: _____ In situ _____ Extractive _____ Dilution _____ Other (Specify): _____		
4E. Describe how the monitor works:			
5. Description of equipment monitoring diluent: Diluent being monitored: _____			
5A. Name of manufacturer:		5B. Model number:	
5C. Installation year	5D. Type: _____ In situ _____ Extractive _____ O₂ _____ CO₂ _____ Other (Specify): _____		
5E. Describe how the monitor works:			
6. Description of equipment monitoring flow: Amount of flow (DSCFM): _____			
6A. Name of manufacturer:		6B. Model number:	
6C. Installation year	6D. Type: _____ Differential pressure _____ Thermal _____ Other (Specify): _____		
7. Opacity (or use of visible emission evaluations in lieu of opacity monitoring)			
7A. Indicate which is used. _____ Monitor _____ Visible emission evaluations*		* For "Visible emission evaluation" choice, procedures will be specified as a condition in the source's operating permit.	
7B. Opacity monitor (state the name of manufacturer, model number, and year of installation):			
8. Page number:		Revision Number: Date of Revision:	



TITLE V PERMIT APPLICATION COMPLIANCE DEMONSTRATION BY PORTABLE MONITORS

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name:		
2. Stack ID or flow diagram point identification(s):	3. Process emission source (identify):	4. Pollutant(s) being monitored:

MONITOR DESCRIPTION

5. Name of manufacturer (if available):	6. Model number (if available):	
7. Type: _____ In situ _____ Extractive _____ Dilution _____ Other (specify): _____		
8. Describe how monitor works.		
9. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):		
12. Page number:	Revision number:	Date of revision:



**TITLE V PERMIT APPLICATION - COMPLIANCE DEMONSTRATION BY
MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS**

The monitoring of a control system parameter or a process parameter shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value and the emission rate of a particular pollutant is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name:	2. Stack ID or flow diagram point identification(s)
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3. Emission source:

MONITORING DESCRIPTION

4. Pollutant(s) being monitored:

5. Description of the method of monitoring and establishment of correlation between the parameter value and the emission rate of a particular pollutant:
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6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):

7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY MONITORING MAINTENANCE PROCEDURES

The monitoring of a maintenance procedure shall be acceptable as a compliance demonstration method provided that a correlation between the procedure and the emission rate of a particular pollutant is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name:

2. Stack ID or flow diagram point identification(s):

3. Emission source (identify):

MONITORING DESCRIPTION

4. Pollutant(s) being monitored:

5. Procedure being monitored:

6. Description of the method of monitoring and establishment of correlation between the procedure and the emission rate of a particular pollutant:

7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):

8. Page number:

Revision number:

Date of revision:



TITLE V PERMIT APPLICATION
COMPLIANCE DEMONSTRATION BY STACK TESTING

The performance of an appropriate EPA stack test method for demonstrating compliance with an emission limitation has always been acceptable. EPA test methods contain quality assurance procedures that shall be strictly adhered to by the source.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name:

2. Stack ID or flow diagram point identification(s):

3. Emission source (identify):

STACK TESTING DESCRIPTION

4. Pollutant(s) being monitored:

5. Test method:

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):

7. Page number:

Revision number:

Date of revision:



**TITLE V PERMIT APPLICATION
 COMPLIANCE DEMONSTRATION BY FUEL SAMPLING AND ANALYSIS**

GENERAL IDENTIFICATION AND DESCRIPTION	
1. Facility name:	2. Stack ID or flow diagram point identification(s):
3. Emission source (identify):	
MONITORING THROUGH FUEL SAMPLING AND ANALYSIS	
4. Pollutant(s) being monitored:	
5. Fuel being sampled:	
6. List the fuel sample collecting and analyzing method used (if an ASTM method is not applicable, propose a method acceptable to the Technical Secretary).	
7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):	
8. Page number:	Revision number:
Date of revision:	



TITLE V PERMIT APPLICATION
COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name:	2. Stack ID or flow diagram point identification(s):
-------------------	--

3. Emission source (identify):

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored:

5. Material or parameter being monitored and recorded:
--

6. Method of monitoring and recording:
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7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):

8. Page number:	Revision number:	Date of revision:
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State of Tennessee
Department of Environment and Conservation
Division of Air Pollution Control
Davy Crockett Tower, 7th Floor
500 James Robertson Parkway
Nashville, TN 37243
Telephone: (615) 532-0554
Air.Pollution.Control@TN.gov



APC 27

**TITLE V PERMIT APPLICATION
COMPLIANCE DEMONSTRATION BY OTHER METHOD(S)**

GENERAL IDENTIFICATION AND DESCRIPTION		
1. Facility name:	2. Stack ID or flow diagram point identification(s):	
3. Emission source (identify):		
MONITORING DESCRIPTION		
4. Pollutant(s) or parameter being monitored:		
5. Description of the method of monitoring:		
6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):		
7. Page number:	Revision number:	Date of revision:



TITLE V PERMIT APPLICATION

EMISSIONS FROM PROCESS EMISSION SOURCE / FUEL BURNING INSTALLATION / INCINERATOR

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name:	2. Stack ID or flow diagram point identification(s):
3. Process emission source / Fuel burning installation / Incinerator (identify):	

EMISSIONS SUMMARY TABLE – CRITERIA AND FUGITIVE EMISSIONS

4. Complete the following emissions summary for regulated air pollutants. Fugitive emissions shall be included. Attach calculations and emission factor references.

Air Pollutant	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour - Item 8, APC 30)
Particulate Matter (TSP)				
(Fugitive Emissions)				
Sulfur Dioxide				
(Fugitive Emissions)				
Volatile Organic Compounds				
(Fugitive Emissions)				
Carbon Monoxide				
(Fugitive Emissions)				
Lead				
(Fugitive Emissions)				
Nitrogen Oxides				
(Fugitive Emissions)				
Total Reduced Sulfur				
(Fugitive Emissions)				
Mercury				
(Fugitive Emissions)				

(Continued on next page)

(Continued from last page)

AIR POLLUTANT	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour - Item 8, APC 30)
Asbestos				
(Fugitive Emissions)				
Beryllium				
(Fugitive Emissions)				
Vinyl Chloride				
(Fugitive Emissions)				
Fluorides				
(Fugitive Emissions)				
Gaseous Fluorides				
(Fugitive Emissions)				
Greenhouse Gases in CO ₂ Equivalents				

EMISSIONS SUMMARY TABLE – FUGITIVE HAZARDOUS AIR POLLUTANTS

5. Complete the following emissions summary for regulated air pollutants that are hazardous air pollutant(s). Fugitive emissions shall be included. Attach calculations and emission factor references.

Air Pollutant & CAS	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour - Item 8, APC 30)

6. Page number: Revision number: Date of revision



TITLE V PERMIT APPLICATION EMISSION SUMMARY FOR THE FACILITY OR FOR THE SOURCES CONTAINED IN THIS APPLICATION

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name:

EMISSIONS SUMMARY TABLE – CRITERIA AND SELECTED POLLUTANTS

2. Complete the following emissions summary for regulated air pollutants at this facility or for the sources contained in this application.

Air Pollutant	Summary of Maximum Allowable Emissions		Summary of Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour- Item 4, APC 28)	Tons per Year	Reserved for State use (Pounds per Hour- Item 4, APC 28)
Particulate Matter (TSP)				
Sulfur Dioxide				
Volatile Organic Compounds				
Carbon Monoxide				
Lead				
Nitrogen Oxides				
Total Reduced Sulfur				
Mercury				
Asbestos				
Beryllium				
Vinyl Chlorides				
Fluorides				
Gaseous Fluorides				
Greenhouse Gases in CO ₂ Equivalents				

(Continued on next page)

3. Complete the following emissions summary for regulated air pollutants that are hazardous air pollutant(s) at this facility or for the sources contained in this application.

4. Page number: Revision number: Date of revision:

State of Tennessee
 Department of Environment and Conservation
 Division of Air Pollution Control
 Davy Crockett Tower, 7th Floor
 500 James Robertson Parkway
 Nashville, TN 37243
 Telephone: (615) 532-0554
 Air.Pollution.Control@TN.gov



APC 30

TITLE V PERMIT APPLICATION CURRENT EMISSIONS REQUIREMENTS AND STATUS

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name:	2. Emission source number
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3. Describe the process emission source / fuel burning installation / incinerator.
--

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

11. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION

GENERAL IDENTIFICATION AND DESCRIPTION

1.	Facility name:
2.	List all the process emission source(s) or fuel burning installation(s) or incinerator(s) that are part of this application.

COMPLIANCE PLAN AND CERTIFICATION

3.	Indicate that source(s) which are contained in this application are presently in compliance with all applicable requirements, by checking the following: ☐ A. Attached is a statement of identification of the source(s) currently in compliance. We will continue to operate and maintain the source(s) to assure compliance with all the applicable requirements for the duration of the permit. ☐ B. APC 30 form(s) includes new requirements that apply or will apply to the source(s) during the term of the permit. We will meet such requirements on a timely basis.
4.	Indicate that there are source(s) that are contained in this application which are not presently in full compliance, by checking both of the following: ☐ A. Attached is a statement of identification of the source(s) not in compliance, non-complying requirement(s), brief description of the problem, and the proposed solution. ☐ B. We will achieve compliance according to the following schedule:

Action	Deadline

Progress reports will be submitted:

Start date: _____ and every 180 days thereafter until compliance is achieved.

5.	State the compliance status with any applicable compliance assurance monitoring and compliance certification requirements that have been promulgated under section 114(a)(3) of the Clean Air Act as of the date of submittal of this APC 31.
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6. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION AIR MONITORING NETWORK

GENERAL IDENTIFICATION AND DESCRIPTION		
1.	Facility name:	
2.	Facility street address:	City: Zip Code:
3.	Air monitoring contact name:	Title: Telephone number with area code:
AIR MONITORING NETWORK DESCRIPTION		
4.	For existing networks, indicate the type of air monitoring network. (i.e. indicate all of the pollutants which are currently being monitored for)	
5.	For proposed new networks, indicate the type of air monitoring network. (i.e. indicate all of the pollutants which will be monitored)	
6.	If conducting PSD pre-construction monitoring, briefly describe the reason for monitoring. If conducting PSD post-construction monitoring, briefly describe the reason for monitoring.	
QUALITY ASSURANCE / QUALITY CONTROL PLAN		
7.	Will a quality assurance/quality control plan be submitted with the permit application? _____ YES _____ NO If no, provide the plan within 30 days of permit application date.	
8.	If a plan has already been submitted and previously approved (i.e. the network is an existing network), provide a copy of the most recently updated plan with any revisions or changes as an attachment to the permit application. Provide the date of the previous approval by the Technical Secretary. Previous approval date: _____	
9.	The quality assurance / quality control plan which is submitted must at least contain sections that specifically address each of the following areas identified below in order to be considered acceptable. A. Selection of analyzers, samplers or sampling methods including installation of equipment, preventive and remedial maintenance. B. Training of staff on equipment or methods. C. Calibration procedures, frequency of calibration, control of calibration standards, recertification of standards. D. Zero and span check frequency, adjustment of instrument response. E. Control check frequency, control limits for zero and span response, including corrective action procedures. F. Recording, validating, and reporting procedures for data, including assessment and reporting of precision and accuracy data. G. Procedures to document implementation of plan and any subsequent changes to the plan. H. Procedures to document and report causes of any missed data, violations of ambient air quality standards, including upset conditions or malfunctions that affect or impact analyzers or samplers. I. Siting of analyzers or samplers including topographic map coordinates, photographs of sites, maps with major terrain features, roads, buildings, rivers, and proposed or existing air contaminant sources.	
10.	Page number:	Revision number: Date of revision:



TITLE V PERMIT APPLICATION STAGE I AND STAGE II VAPOR RECOVERY

GENERAL IDENTIFICATION AND DESCRIPTION										
1. Facility name: _____										
TANK DESCRIPTION										
2. Number, gas type, capacity, type of tank [aboveground (AG), underground (UG)], installation date										
Tank #	Gas Type	Size	Tank Type circle one	Installation Date		Tank #	Gas Type	Size	Tank Type circle one	Installation Date
1		gal.	AG / UG			7		gal.	AG / UG	
2		gal.	AG / UG			8		gal.	AG / UG	
3		gal.	AG / UG			9		gal.	AG / UG	
4		gal.	AG / UG			10		gal.	AG / UG	
5		gal.	AG / UG			11		gal.	AG / UG	
6		gal.	AG / UG			12		gal.	AG / UG	
FACILITY DESCRIPTION										
3. Total number of gasoline nozzles: _____ Nozzle model number: _____										
4. Gasoline dispenser mfr. _____ Dispenser model number: _____										
5. Type of Stage I system: _____ Type of Stage II system: _____										
6. Maximum monthly throughput: _____ gallons Average yearly throughput: _____ gallons										
SUPPLIER INFORMATION										
7. Supplier of gasoline:										
Company name: _____					Contact name: _____					
Address: _____					Address: _____					
_____					_____					
Telephone number with area code: _____					Telephone number with area code: _____					
8. Page number: _____ Revision number: _____ Date of revision: _____										

CN- 1429 Rev. (4-24)
apc board packet-march-13-2024



TITLE V PERMIT APPLICATION APPLICATION COMPLETENESS CHECK LIST

Note to Applicants: The Application Completeness Check List is required by Division Rule 1200-03-09-.02(11)(d)1(ii)(I) and is used by Division staff to determine whether or not an application is complete. This checklist will be used to resolve any dispute between the applicant and the Division regarding the completeness of an application.

Section 1: Identification and Diagrams (APC 1 and APC 2)		
Requirement	Complete	Incomplete
Site Information	☐	☐
Contact Information (Responsible Official)	☐	☐
Contact Information (Technical)	☐	☐
Contact Information (Billing)	☐	☐
Type of Permit Requested	☐	☐
Accidental Release Information	☐	☐
Nonattainment/Additional Control Area Designation	☐	☐
List of Valid Permits	☐	☐
List and description of process emission sources, fuel burning installations, and incinerators	☐	☐
Flow diagram attached?	☐	☐
List of Insignificant Activities	☐	☐
List of Storage Piles	☐	☐
List of States within 50 Miles	☐	☐
Section 2: Emission Source Description Forms		
Forms are complete as received:		☐
Forms are incomplete (one or more application forms not submitted)		☐
Forms are incomplete (missing information on the following application forms):	APC Form 3, Stack Identification	☐
	APC Form 4, Fuel Burning Non-Process Equipment	☐
	APC Form 5, Stationary Gas Turbines or Internal Combustion Engines	☐
	APC Form 6, Storage Tanks	☐
	APC Form 7, Incinerators	☐
	APC Form 8, Printing Operations	☐
	APC Form 9, Painting and Coating Operations	☐
	APC Form 10, Miscellaneous Processes	☐
	APC Form 33, Stage I and Stage II Vapor Recovery Equipment	☐
	APC Form 34, Open Burning	☐

Section 3: Air Pollution Control System Forms			
Forms are complete as received:		☐	
Forms are incomplete (one or more application forms not submitted)		☐	
Forms are incomplete (missing information on the following application forms):	APC Form 11, Control Equipment - Miscellaneous	☐	
	APC Form 13, Adsorbers	☐	
	APC Form 14, Catalytic or Thermal Oxidation Equipment	☐	
	APC Form 15, Cyclones/Settling Chambers	☐	
	APC Form 17, Wet Collection Systems	☐	
	APC Form 18, Baghouse/Fabric Filters	☐	
Section 4: Compliance Demonstration Forms			
Forms are complete as received:		☐	
Forms are incomplete (one or more application forms not submitted)		☐	
Forms are incomplete (missing information on the following application forms):	APC Form 19, Compliance Certification - Monitoring and Reporting - Description of Methods for Determining Compliance	☐	
	APC Form 20, Continuous Emissions Monitoring	☐	
	APC Form 21, Portable Monitors	☐	
	APC Form 22, Control System Parameters or Operating Parameters of a Process	☐	
	APC Form 23, Monitoring Maintenance Procedures	☐	
	APC Form 24, Stack Testing	☐	
	APC Form 25, Fuel Sampling and Analysis	☐	
	APC Form 26, Recordkeeping	☐	
	APC Form 27, Other Methods	☐	
	APC Form 28, Emissions from Process Emissions Sources / Fuel Burning Installations / Incinerators	☐	
	APC Form 29, Emissions Summary for the Facility or for the Source Contained in This Application	☐	
	APC Form 30, Current Emissions Requirements and Status	☐	
	APC Form 32, Air Monitoring Network	☐	
Section 5: Statement of Completeness and Certification of Compliance			
Requirement	Complete	Incomplete	Not Applicable
Certification of Truth, Accuracy, and Completeness (Form APC 1, Section 5)	☐	☐	☐
General Identification and Description (Form APC 31, Items 1 and 2)	☐	☐	☐
Compliance Certification for Sources Currently in Compliance (Form APC 31, Item 3A)	☐	☐	☐
Compliance Certification for New Applicable Requirements (Form APC 31, Item 3B)	☐	☐	☐
Identification of Sources Currently Not in Compliance (Form APC 31, Item 4A)	☐	☐	☐
Compliance Schedule for Sources Currently Not in Compliance (Form APC 31, Item 4B)	☐	☐	☐
Compliance Certification for Enhanced Monitoring (Form APC 31, Item 5)	☐	☐	☐

Section 6: Miscellaneous Information		
Item	Included	Not Included
For Title V modifications, is a description of the modification included?	☐	☐
Request for Permit Shield	☐	☐
Calculations on which emissions-related information are based	☐	☐
Identification of alternative operating scenarios, as applicable	☐	☐
Explanation of any proposed exemptions from otherwise applicable requirements	☐	☐
Other information needed for completeness (explain in comments)	☐	☐
Section 7: Comments		
Describe any missing information below or in a separate attachment:		
Section 8: Application Completeness		
Application is Complete	☐	
Application is Incomplete	☐	

Instructions for Form APC 35

The following minimum requirements for Title V applications are established by 40 CFR §70.5(c), and the information described below must be included in the application. An application may not omit information needed to determine the applicability of, or to impose, any applicable requirement¹, or to evaluate the fee amount required under the approved fee schedule. **Sources subject to Title IV of the Clean Air Act (Acid Rain Program) must use nationally-standardized forms for Acid Rain portions of permit applications and compliance plans.**

General Information – applications must include the following information:

- (1) Identifying information, including company name and address (or plant name and address if different from the company name), owner's name and agent, and telephone number and names of plant site manager/contact.
- (2) A description of the source's processes and products by SIC Code, including those associated with any proposed alternative operating scenarios².
- (3) The following information to the extent it is needed to determine or regulate emissions: fuels, fuel use, raw materials, production rates, and operating schedules.
- (4) A list of insignificant activities. Tennessee Air Pollution Control Regulations (TAPCR) 1200-03-09-.04(5)(g) includes a list of insignificant activities that do not need to be included in permit applications. However, insignificant activities that are exempted because of size or production rate but are not listed in 1200-03-09-.04(5)(g) must be included in the application.

Emissions-Related Information – applications must include the following information:

- (1) All emissions of regulated air pollutants³ from any emissions unit, except where such units are exempted. Emission rates must be reported in tons per year and in units that are consistent with the applicable standard reference test method. For applicants subject to a facility-wide emissions cap, emissions can be reported as an aggregate value for the entire facility, except where more specific information is needed (e. g., where it is necessary to assure compliance with an applicable requirement for a specific emissions unit).
- (2) Identification and description of all stacks/emission points (information required on Form APC 3).
- (3) Any limits on the source that affect emissions (e. g., operating hours or work practice standards).
- (4) Any information needed to identify or implement proposed alternative operating scenarios. The application must demonstrate that the facility has obtained all required authorizations for any proposed alternative operating scenarios or a certification that the facility has submitted all relevant materials to the permitting authority for obtaining the required authorizations.
- (5) Calculations on which emissions and/or stack information is based.

Compliance Information – applications must include the following information:

- (1) Identification and description of air pollution control equipment and compliance monitoring devices or activities.
- (2) A citation and description of all applicable requirements.

¹ **Applicable requirements** include: approved State Implementation Plan (SIP) requirements, major New Source Review requirements, NSPS and MACT requirements, Acid Rain Program requirements, requirements established pursuant to §504(b) of the Clean Air Act (Title V compliance methods), and requirements for solid waste combustion (Clean Air Act Section 129). For a complete list, see the definition in TAPCR 1200-03-09-.02(11)(b).

² **Alternative operating scenarios** are authorized scenarios that subject an emissions unit to different applicable requirements, depending on the mode of operation.

³ **Regulated air pollutant** means NO_x, VOC, any pollutant subject to a National Ambient Air Quality Standard, any pollutant regulated by an NSPS or MACT standard, or any Class I or II substance regulated under Title VI of the Clean Air Act (ozone depleting substances).

- (3) A description of (or reference to) any test method used to determine compliance with applicable requirements.
- (4) An explanation of any proposed exemptions from otherwise applicable requirements.
- (5) Other specific information that may be necessary to implement and enforce other applicable requirements of the Clean Air Act (e. g., information related to stack height limitations developed pursuant to Clean Air Act section 123).

Compliance Certification and Compliance Plan – applications must include the following information:

- (1) A description of the compliance status of the source with respect to all applicable requirements, as follows:
 - (a) For applicable requirements with which the source is in compliance, a statement that the source will continue to comply with such requirements.
 - (b) For applicable requirements that will become effective during the permit term, a statement that the source will meet such requirements on a timely basis.
 - (c) For requirements for which the source is not in compliance at the time of permit issuance, submit the following information:
 - (i) A narrative description of how the source will achieve compliance with such requirements.
 - (ii) A schedule of compliance for sources that are not in compliance with all applicable requirements at the time of permit issuance. The schedule must include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the source will be in noncompliance at the time of permit issuance. This compliance schedule must be at least as stringent as the schedule contained in any enforcement order or consent decree to which the source is subject.
 - (iii) A schedule for submission of certified progress reports no less frequently than every six months.
- (2) A schedule for submission of compliance certifications during the permit term.
- (3) A statement indicating the source's compliance status with any applicable enhanced monitoring and compliance certification requirements of the Act.
- (4) A certification of the truth, accuracy, and completeness of the application.



TITLE V FEE SELECTION

Type or print and submit to the email address above.			
FACILITY INFORMATION			
1. Organization's legal name and SOS control number [as registered with the TN Secretary of State (SOS)]			
2. Site name (if different from legal name)			
3. Site address (St./Rd./Hwy.)			County name
City			Zip code
4. Emission source reference number		5. Title V permit number	
FEE SELECTION			
This fee selection is effective beginning January 1, _____. When approved, this selection will be effective until a new Fee Selection form is submitted. Fee Selection forms must be submitted on or before December 31 of the annual accounting period.			
6. Payment Schedule (choose one):			
Calendar Year Basis (January 1 – December 31) ☐		Fiscal Year Basis (July 1 – June 30) ☐	
7. Payment Basis (choose one):			
Actual Emissions Basis ☐ Allowable Emissions Basis ☐ Combination of Actual and Allowable Emissions Basis ☐			
8. If Payment Basis is "Actual Emissions" or "Combination of Actual and Allowable Emissions", complete the following table for each permitted source and each pollutant for which fees are due for that source. See instructions for further details.			
Source ID	Pollutant	Allowable or Actual Emissions	If allowable emissions: Specify condition number and limit. If actual emissions: Describe calculation method and provide example. Provide condition number that specifies method, if applicable.

[illegible]

TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION
BUREAU OF ENVIRONMENT
DIVISION OF AIR POLLUTION CONTROL

IN THE MATTER OF

REVISION OF THE
TENNESSEE AIR POLLUTION CONTROL
MAJOR SOURCE PERMIT APPLICATIONS

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ORDER NO. 24 - 003

BOARD ORDER

The following matter came before the Tennessee Air Pollution Control Board on March 13, 2024.

In April 1994, the Tennessee Air Pollution Control Board approved the Major Source Permit Applications as required by item 1200-03-09-.02(11)(d)1(ii)(I) of the Tennessee Air Pollution Control Regulations. The Division of Air Pollution Control has revised the Major Source Permit Applications to update the Division of Air Pollution Control's address because of the move to the Davy Crockett Tower, and these revisions require Board approval.

Approved as amended by the following members of the Air Pollution Control Board of the State of Tennessee, and entered on the 13th day of March 2024.

**Department of State
Division of Publications**

312 Rosa L. Parks Ave., 8th Floor, Snodgrass/TN Tower
Nashville, TN 37243
Phone: 615-741-2650
Email: publications.information@tn.gov

For Department of State Use Only

Sequence Number: _____
Rule ID(s): _____
File Date: _____
Effective Date: _____

Filing Form for Stay of Effective Date on Rules, Withdrawal of Stay, and Withdrawal of Rules

Agency/Board/Commission:	Air Pollution Control Board
Division:	Air Pollution Control
Contact Person:	Mark A. Reynolds
Address:	William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 15 th Floor Nashville, Tennessee
Zip:	37243
Phone:	(615) 532-0559
Email:	mark.a.reynolds@tn.gov

Type of Action on Rule:

☐ **Stay of Effective Date of Rules**

Rule Filing Date: (mm/dd/yyyy)
Rule Original Effective Date: (mm/dd/yyyy)
Length of Stay (not to exceed 75 days): _____
New Effective Date of Rule Filing: (mm/dd/yyyy)

☐ **Notice of Withdrawal of Stay**

Stay Filing Date: (mm/dd/yyyy)
Stay Effective Date: (mm/dd/yyyy)
New Effective Date of Rule Filing: (mm/dd/yyyy)

☒ **Notice of Withdrawal of Rules**

Rule Filing Date: 12/21/2023
Rule Effective Date: 03/20/2024

Rule(s) (ALL chapters and rules contained in filing must be listed here. If needed, copy and paste additional tables to accommodate multiple chapters. Please enter only **ONE** Rule Number/Rule Title per row.)

Chapter Number	Chapter Title
0400-30-39	Standards of Performance for New Stationary Sources
Rule Number	Rule Title
0400-30-39-.01	Stationary Compression Internal Combustion Engines
0400-30-39-.02	Stationary Spark Ignition Internal Combustion Engines

Chapter Number	Chapter Title
1200-03-02	Definitions
Rule Number	Rule Title
1200-03-02-.01	General Definitions

Chapter Number	Chapter Title
1200-03-05	Visible Emission Regulations
Rule Number	Rule Title
1200-03-05-.04	Exemption
1200-03-05-.05	Standard for Certain Existing Sources

Chapter Number	Chapter Title
1200-03-06	Non-Process Emission Standards
Rule Number	Rule Title
1200-03-06-.06	Commercial and Industrial Solid Waste Incineration Units that Commenced Construction on or before November 30, 1999

Chapter Number	Chapter Title
1200-03-09	Construction and Operating Permits
Rule Number	Rule Title
1200-03-09-.01	Construction Permits
1200-03-09-.02	Operating Permits
1200-03-09-.04	Exemptions
1200-03-09-.07	Permits-by-Rule

Chapter Number	Chapter Title
1200-03-16	New Source Performance Standards
Rule Number	Rule Title
1200-03-16-.01	General Provisions
1200-03-16-.02	Fuel Fired Steam Generators for which Construction Is Commenced After April 3, 1972
1200-03-16-.03	Electric Utility Steam Generating Units for which Construction Commenced After September 18, 1978
1200-03-16-.04	Incinerators
1200-03-16-.05	Portland Cement Plants
1200-03-16-.06	Sulfuric Acid Plants
1200-03-16-.07	Nitric Acid Plants
1200-03-16-.08	Hot Mix Asphalt Facilities
1200-03-16-.09	Petroleum Refineries
1200-03-16-.10	Reserved
1200-03-16-.11	Reserved
1200-03-16-.12	Secondary Lead Smelters
1200-03-16-.13	Secondary Brass and Bronze Ingot Production Plants
1200-03-16-.14	Iron and Steel Plants
1200-03-16-.15	Sewage Treatment Plant Incinerators
1200-03-16-.16	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants
1200-03-16-.17	Phosphate Fertilizer Industry: Super Phosphoric Acid Plants
1200-03-16-.18	Phosphate Fertilizer Industry: Diammonium Phosphate Plants
1200-03-16-.19	Phosphate Fertilizer Industry: Triple Superphosphate Plants
1200-03-16-.20	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities
1200-03-16-.21	Primary Aluminum Reduction Plants
1200-03-16-.22	Reserved
1200-03-16-.23	Primary Copper Smelters
1200-03-16-.24	Primary Zinc Smelters
1200-03-16-.25	Primary Lead Smelters
1200-03-16-.26	Steel Plants: Electric Arc Furnaces Constructed After February 9, 1977, and On or Before August 17, 1983

1200-03-16-.27	Ferroalloy Production Facilities
1200-03-16-.28	Lime Manufacturing Plants
1200-03-16-.29	Kraft Pulp Mills
1200-03-16-.30	Grain Elevators
1200-03-16-.31	Reserved
1200-03-16-.32	Ammonium Sulfate Manufacture
1200-03-16-.33	Reserved
1200-03-16-.34	Automobile and Light Duty Truck Surface Coating Operations
1200-03-16-.35	Asphalt Processing and Asphalt Roofing Manufacture
1200-03-16-.36	Industrial Surface Coating: Large Appliances
1200-03-16-.37	Surface Coating of Metal Furniture
1200-03-16-.38	Metal Coil Surface Coating
1200-03-16-.39	Graphic Arts Industry: Publication Rotogravure Printing
1200-03-16-.40	Beverage Can Surface Coating
1200-03-16-.41	Metallic Mineral Processing Plants
1200-03-16-.42	Pressure Sensitive Tape and Label Surface Coating Operations
1200-03-16-.43	Reserved
1200-03-16-.44	Bulk-Gasoline Terminals
1200-03-16-.45	Synthetic Fiber Production Facilities
1200-03-16-.46	Lead Acid Battery Manufacturing Plants
1200-03-16-.47	Equipment Leaks of VOC in Petroleum Refineries
1200-03-16-.48	Flexible Vinyl and Urethane Coating and Printing
1200-03-16-.49	Petroleum Dry Cleaners
1200-03-16-.50	Phosphate Rock Plants
1200-03-16-.51	Equipment Leaks of VOC from Onshore Natural Gas Processing Plants
1200-03-16-.52	Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels
1200-03-16-.53	Reserved
1200-03-16-.54	Onshore Natural Gas Processing: SO ₂ Emissions
1200-03-16-.55	Secondary Emissions from Basic Oxygen Process Steel Making Facilities
1200-03-16-.56	Wool Fiberglass Insulation Manufacturing Plants
1200-03-16-.57	Industrial Surface Coating: Plastic Parts for Business Machines
1200-03-16-.58	Reserved
1200-03-16-.59	Industrial-Commercial-Institutional Steam Generating Units
1200-03-16-.60 through 1200-03- 16-.73	Reserved
1200-03-16-.74	Standards of Performance for Calciners and Dryers in Mineral Industries
1200-03-16-.75	Reserved
1200-03-16-.76	Reserved
1200-03-16-.77 through 1200-03- 16-.99	Reserved

Chapter Number	Chapter Title
1200-03-18	Volatile Organic Compounds
Rule Number	Rule Title
1200-03-18-.48	Volatile Organic Liquid Storage Tanks

Chapter Number	Chapter Title
1200-03-20	Limits on Emissions Due to Malfunctions, Startups, and Shutdowns
Rule Number	Rule Title
1200-03-20-.06	Report Required Upon the Issuance of a Notice of Violation

Chapter Number	Chapter Title
1200-03-21	General Alternate Emission Standards

Rule Number	Rule Title
1200-03-21-.01	General Alternate Emission Standard

Chapter Number	Chapter Title
1200-03-22	Lead Emission Standards
Rule Number	Rule Title
1200-03-22-.04	Standards for New or Modified Sources of Lead

Chapter Number	Chapter Title
1200-03-25	Standards for Infectious Waste Incinerators
Rule Number	Rule Title
1200-03-25-.05	Emission Standards

Chapter Number	Chapter Title
1200-03-26	Administrative Fees Schedule
Rule Number	Rule Title
1200-03-26-.02	Construction and Annual Emission Fees

Date: March 13, 2024

Signature: _____

Name of Officer: Michelle W. Owenby

Title of Officer: Technical Secretary

Department of State Use Only

Filed with the Department of State on: _____

Tre Hargett
Secretary of State



STATE OF TENNESSEE

APC Board Briefing – Retrospective Rule Review

Proposed Action

- The Division of Air Pollution Control will propose the repeal of 12 rules in accordance with the retrospective review directed by the Governor's office.
- Public Chapter No. 328 became effective on July 1, 2021, creating a new obligation for departments of the State of Tennessee to submit a report reviewing existing rules to the Government Operations Committees of the Tennessee General Assembly. The first such report was due December 1, 2023, and addressed all rules in effect as of July 1, 2023. Of 264 rules adopted by the Air Pollution Control Board, the Department's report recommended:
 - 133 rules (50.4%) remain unchanged.
 - 66 rules (25%) be amended; and
 - 65 rules (24.6%) be repealed.
- The Governor's Office has directed all Departments to expedite the repeal of all rules as identified in the report to the General Assembly.
- The rulemaking adopted on October 11, 2023, contained 53 rules to be repealed. The remaining 12 rules are contained in this rulemaking.

TAPCR 1200-03-07-.06

- TAPCR 1200-03-07-.06 (Standards of Performance for New Stationary Sources) was adopted in 1974.
- “The Board shall from time to time, after public hearing, designate additional standard(s) of performance for new stationary sources as promulgated by the Environmental Protection Agency and published in the Federal Register.”
- This is an old requirement that is redundant with TAPCR 0400-30-39 (Standards of Performance for New Stationary Sources), which adopts federal NSPS standards by reference.

TAPCR 1200-03-25

- Chapter 1200-03-25 (Standards for Infectious Waste Incinerators) includes ten rules.
- This rule was adopted in 1988 to establish emission standards and performance specifications for new and existing incinerators that burn infectious waste.
- The state rule was superseded by 40 CFR 60 Subpart Ec (Standards of Performance for New Stationary Sources: Hospital/Medical/Infectious Waste Incinerators) and 40 CFR 60 Subpart Ce (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators).
- State or local agencies that contain existing affected units must submit a 111(d) plan that complies with the requirements of Subpart Ce. The requirements established by TAPCR 1200-03-25 do not meet the minimum requirements of Subpart Ce.
- Only one medical waste incinerator remains, and that unit is regulated by the Shelby County local program. The Shelby County Health Department has an approved 111(d) plan that does not rely on TAPCR 1200-03-25.

TAPCR 1200-03-27-.07

- TAPCR 1200-03-27-.07 (Voluntary NO_x Emissions Reduction Program) was adopted in 2003.
- The purpose of this rule was to provide a method for NO_x sources not subject to the NO_x Budget Trading Program (TAPCR 1200-03-27-.06) to earn NO_x allowances through voluntary emission reductions.
- Rule 1200-03-27-.07 was never adopted into the SIP, and the NO_x Budget Trading Program was repealed in 2013.



THANK YOU