



Tennessee Gas Pipeline
Company, L.L.C.
a Kinder Morgan company

AIR PERMIT RENEWAL APPLICATION

Tennessee Gas Pipeline Company, LLC
Compressor Station 871
Campbellsville, KY

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TABLE OF CONTENTS

1. APPLICATION SUMMARY	1-1
1.1 Purpose of Application	1-1
1.2 Summary of Application Contents	1-1
2. FACILITY AND OPERATIONS DESCRIPTION	2-1
2.1 Facility Location	2-1
2.2 Facility Summary of Operations.....	2-1
2.3 Air Permit History Summary	2-1
3. APPLICABLE REQUIREMENTS SUMMARY	3-1
3.1 Source Classification	3-1
3.1.1 Prevention of Significant Deterioration.....	3-1
3.1.2 Title V Permitting Program	3-1
3.1.3 Hazardous Air Pollutants.....	3-2
3.2 Regulatory Analysis	3-2
3.2.1 40 CFR Part 60 – New Source Performance Standards.....	3-2
3.2.2 40 CFR Part 63 – National Emissions Standards for Hazardous Air Pollutants.....	3-5
3.2.3 Kentucky State Implementation Plan Regulations.....	3-7
APPENDIX A. FACILITY AERIAL MAP AND PFD	A-1
APPENDIX B. DEP7007 APPLICATION FORMS	B-1
APPENDIX C. REQUESTED CHANGES TO EXISTING PERMIT	C-1

1. APPLICATION SUMMARY

1.1 Purpose of Application

Tennessee Gas Pipeline Company, LLC (TGP) owns and operates a natural gas transmission station in Campbellsville, Taylor County, Kentucky (identified herein as Station 871). This natural gas transmission facility is classified as a Title V major source under the Title V operating permit program and currently operates in accordance with permit V-20-034, issued by the Kentucky Division for Air Quality (KDAQ) on September 26, 2021. As the permit expires on September 26, 2026, a renewal application for the permit must be submitted at least six months prior to the permit expiration date, or by March 26, 2026. This document and its appendices constitute the renewal application for Station 871, as required under Condition G.2.a. of the existing permit and 401 KAR 52:020, Section 12.

1.2 Summary of Application Contents

Following this introduction, Section 2 presents summary information about Station 871 including its location and a brief description of operations. Section 3 provides an analysis of applicable regulatory requirements under state and federal air quality programs with a focus on the regulatory implications of any updates made to applicable regulations since the initial Title V permit V-20-034 was issued.

Appendix A presents an aerial map that shows the location of Station 871 relative to nearby geographic features, as well as a simplified process flow diagram (PFD) representing the facility's primary gas transmission operation. Appendix B provides the required DEP7007AI form. Appendix C includes red-line strike-out (RLSO) mark-ups of select pages of the current permit, which identify TGP's requested permit changes. TGP has not installed, shutdown, or modified any emissions-generating equipment since the issuance of the current permit, and no underlying emissions calculation methodologies have been revised during the permit term. As such, the current facility-wide potential-to-emit (PTE) is equal to the PTE provided in the most recent source-wide permit application, and detailed emission unit-specific PTE calculations are not included with this application.

Pursuant to 401 KAR 52:020, Section 4(2)(c), applications for permit renewals shall provide only information that is new or different from the most recent source-wide permit application. As such, the application forms included in Appendix B are limited to the 7007AI form required to be submitted with all permit renewal applications. Other application forms addressing specific emission unit categories (e.g., 7007EE form for internal combustion engines), insignificant activities (IA) information on the 7007DD form, and the emissions, stacks, and controls information on the 7007N form have previously been provided to KDAQ and would not provide any new or different information from the most recent source-wide application.

2. FACILITY AND OPERATIONS DESCRIPTION

2.1 Facility Location

Station 871 is located in Taylor County approximately 8 miles south of Campbellsville, KY. The property encompasses an area of approximately 11.6 acres and is bordered by a rural community. The approximate Universal Transverse Mercator (UTM) coordinates for the center of the facility are 646.9 km East and 4,121.1 km North in Zone 16. Figure A-1 provides an aerial view of the main site operations.

2.2 Facility Summary of Operations

Station 871 is a natural gas transmission facility that increases natural gas transmission pressures by compressing low-pressure transmission gas and directing it into a high-pressure transmission line. This primary operation at Station 871 is conducted by two 4,000-hp natural gas-fired 4 stroke lean burn (4SLB) reciprocating internal combustion engines (RICE) that each power one compressor (EP001 and EP002) and one 5,500-hp natural gas-fired 2 stroke lean burn (2SLB) RICE (EP003). EP001 was constructed in 1963 and EP002 and EP003 were both constructed in 1964. Additionally, the facility's operations are supported by an emergency-use generator powered by a 690-hp natural gas-fired 4SLB RICE (EP04), which was installed in 2001. Station 871 also has one jacket water heater (E05) rated at 3.0 million British thermal units per hour (MMBtu/hr) and constructed in 1964.

Various storage tanks containing lube oils, used oils, compressor jacket water, and compressor jacket water rundown are located on-site and permitted as insignificant activities (IAs). Small natural gas-fired heaters less than 1 MMBtu/hr each and fugitive emissions from pipeline components are also permitted as IAs in Section C.

2.3 Air Permit History Summary

The current air permit for Station 871 was originally issued on September 26, 2021. No permit actions have been submitted since the issuance of V-20-034.

3. APPLICABLE REQUIREMENTS SUMMARY

Section 3.1 provides general air quality regulatory information for Station 871, including the facility's status with respect to the Prevention of Significant Deterioration (PSD) and Title V permitting programs. This section also discusses the facility's status as a major source of hazardous air pollutants (HAP). In accordance with the regulatory requirements for a permit renewal application established by 401 KAR 52:020, Section 4(2)(c), Sections 3.2 and 3.3 of this application focus on describing potential newly applicable or modified requirements that could impact Station 871 since the issuance of the current permit on September 26, 2021.

3.1 Source Classification

3.1.1 Prevention of Significant Deterioration

Station 871 is in Taylor County, which has been designated by EPA as unclassified/attainment for all criteria pollutants. Therefore, with respect to the federal New Source Review (NSR) permitting program, only PSD requirements could potentially apply to the source.

Kentucky has incorporated the requirements of the PSD permitting program into its State Implementation Plan (SIP) at 401 KAR 51:017. These PSD regulations specifically define 28 industrial source categories for which the major stationary source threshold of any regulated NSR pollutant is 100 tons per year (tpy). For all unlisted sources, the major stationary source threshold of any regulated NSR pollutant is 250 tpy. As a natural gas transmission facility, Station 871 is not included under one of these 28 industrial source categories. Thus, the major stationary source threshold under the PSD program for a regulated NSR pollutant emitted from Station 871 is 250 tpy. Since the potential emissions of carbon monoxide (CO) and nitrogen oxides (NO_x) are greater than 250 tpy, Station 871 is classified as a major stationary source.

This renewal application submittal is not associated with a construction project or a facility modification that involves PSD applicability considerations. Accordingly, Station 871 will continue to be a major source for CO and NO_x and a true minor source for all other regulated NSR pollutants under the PSD program.

3.1.2 Title V Permitting Program

40 CFR Part 70 contains the regulations implementing the federal Title V operating permit program. Kentucky has incorporated the provisions of this federal program in its Title V operating permit program at 401 KAR 52:020. As specified in 401 KAR 52:001, Section 1(46), a major source with respect to the Title V regulations encompasses facilities with potential emissions of 100 tpy of any regulated pollutant, 10 tpy of any single HAP, and/or 25 tpy of any combination of HAP. The potential emissions of CO, NO_x, single HAP (formaldehyde), and combined HAP from Station 871 exceed the corresponding major source thresholds; as such, Station 871 is classified as a major source under Kentucky's Title V operating permit program and is subject to 401 KAR 52:020.

As noted in the PSD applicability discussion above, this renewal application submittal is not associated with a construction project or facility modification which could change the facility-wide PTE. Station 871 will continue to operate as a major source subject to 401 KAR 52:020 upon permit renewal.

3.1.3 Hazardous Air Pollutants

A major source of HAP is a source with potential emissions in excess of 25 tpy for total combined HAP and/or potential emissions in excess of 10 tpy for any individual HAP. The potential emissions of an individual HAP (i.e., formaldehyde) and those of all combined HAP from Station 871 exceed the corresponding major source thresholds; therefore, Station 871 is classified as a major source of HAP. Station 871 is not requesting a revision to any HAP emission calculation methodologies with this permit renewal and will continue to operate as a major source of HAP upon permit renewal.

3.2 Regulatory Analysis

There were no permit actions submitted since the last renewal of Station 871's permit. The following subsections provide high-level analyses of various applicable or potentially applicable federal and state regulations.

3.2.1 40 CFR Part 60 – New Source Performance Standards

New Source Performance Standards (NSPS) regulations require new, modified, or reconstructed sources to control emissions to the level achievable by the best demonstrated technology as specified in the applicable provisions. The following subsections assess the applicability of various NSPS.

3.2.1.1 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

40 CFR 60, Subpart JJJJ (NSPS JJJJ) applies to owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) that commence construction, modification, or reconstruction after June 12, 2006. All stationary SI ICE at Station 871 commenced construction prior to June 12, 2006 and have not been modified or reconstructed during the permit term. As such, NSPS JJJJ is not applicable to Station 871.

3.2.1.2 40 CFR 60, Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015

40 CFR 60, Subpart OOOO (NSPS OOOO) regulates volatile organic compound (VOC) emissions from specific sources within the oil and natural gas industry that commenced construction, modification, or reconstruction after August 23, 2011, and on or before September 18, 2015, and which include the following affected facilities listed in 40 CFR 60.5365(a) through (g):

- a) Each natural gas well affected facility;
- b) Each centrifugal compressor affected facility;
- c) Each reciprocating compressor affected facility;
- d) Each continuous bleed natural gas-driven pneumatic controller affected facility;
- e) Each storage vessel affected facility with a VOC PTE greater than or equal to six tpy;
- f) Each group of equipment (pump, pressure relief device, open-ended valve or line, valve, and flange or other connector in VOC service or wet gas service) within a process unit except compressors; and
- g) Sweetening units located at onshore natural gas processing plants.

Station 871 does not operate a natural gas well, process unit, or sweetening unit as these terms are defined in 40 CFR 60.5430. Therefore, 40 CFR 60.5365(a), (f), and (g) do not apply to the operations at Station 871.

As defined in 40 CFR 60.5365(b) and (c), each centrifugal/reciprocating compressor affected facility includes only those compressors located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment. 40 CFR 60.5430 defines a "wellhead" as *"the piping, casing, tubing and connected valves protruding above the earth's surface for an oil and/or natural gas well. The wellhead ends where the flow line connects to a wellhead valve. The wellhead does not include other equipment at the well site except for any conveyance through which gas is vented to the atmosphere."* The compressors driven by the natural gas-fired RICE (EP001-EP003) are not located between a wellhead and point of custody transfer to the natural gas transmission and storage segment. Therefore, 40 CFR 60.5365(b) and (c) do not apply to the operations at Station 871.

As defined in 40 CFR 60.5365(d)(1) through (3), only those pneumatic controllers located within the oil production segment, natural gas production segment, and natural gas processing plants are affected facilities. As a natural gas transmission facility, Station 871 is not a part of an oil production segment, natural gas production segment, or natural gas processing plant. Therefore, 40 CFR 60.5365(d)(1) through (3) do not apply to the operations at Station 871.

As defined in 40 CFR 60.5365(e), storage vessels located in the oil and natural gas production segment, natural gas processing segment, or natural gas transmission and storage segment, and which have the potential for VOC emissions equal to or greater than six tpy are affected facilities. 40 CFR 60.5430 defines a "storage vessel" as *"a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water."* None of the storage tanks at Station 871 meet this definition. As such, 40 CFR 60.5365(e) does not apply to Station 871.

Based on the regulatory analysis provided above – and considering no affected facilities were constructed, reconstructed, or modified between August 23, 2011, and September 18, 2015 – NSPS OOOO is not applicable and will continue to be inapplicable to Station 871 upon permit renewal.

3.2.1.3 40 CFR 60, Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After September 18, 2015, and on or Before December 6, 2022

40 CFR 60, Subpart OOOOa (NSPS OOOOa) applies to affected facilities that commenced construction, reconstruction, or modification after September 18, 2015, and before December 6, 2022. The specific sources covered by NSPS OOOOa include the following:

- a) Each well affected facility, which is a single well that conducts a well completion operation following hydraulic fracturing or refracturing;
- b) Each centrifugal compressor affected facility;
- c) Each reciprocating compressor affected facility;
- d) Each pneumatic controller affected facility;
- e) Each storage vessel affected facility with VOC PTE greater than or equal to 6 tpy;
- f) Each group of equipment within a process unit at an onshore natural gas processing plant;
- g) Sweetening units located at an onshore natural gas processing plants;
- h) Each pneumatic pump affected facility;
- i) All fugitive emissions components at a well site; and
- j) All fugitive emissions at a compressor station.

Station 871 does not operate a natural gas well, centrifugal compressor, process unit, or sweetening unit as these terms are defined in 40 CFR 60.5430a. Therefore, 40 CFR 60.5365a(a), (b), (f), (g), and (i) do not

apply to the operations at Station 871. Additionally, only pneumatic pumps located at natural gas processing plants or well sites are affected facilities under NSPS OOOOa. As such, 40 CFR 60.5365a(h) does not apply to the operations at Station 871.

Pursuant to 40 CFR 60.5365a(d)(1), a pneumatic controller not located at a natural gas processing plant is an affected facility if it is designed as a continuous bleed natural gas-driven device operating at a natural gas bleed rate greater than 6 standard cubic feet per hour (scfh). Station 871 does not operate any continuous bleed natural gas-driven pneumatic controllers; therefore, 40 CFR 60.5365a(d) does not apply to Station 871.

Pursuant to 40 CFR 60.5365a(c), a reciprocating compressor at a compressor station is an affected facility under NSPS OOOOa. Additionally, pursuant to 40 CFR 60.5365a(j), the collection of fugitive emissions components at a compressor station is an affected facility. TGP does operate reciprocating compressors and a collection of fugitive emissions components at Station 871 which are potentially subject to NSPS OOOOa. For the purposes of determining applicability of the fugitive emissions standards under 40 CFR 60.5397a, a "modification" to a compressor station occurs only when either 1) an additional compressor is installed, or 2) one or more compressors are replaced by one or more compressors of greater total horsepower. TGP did not apply for any reciprocating compressor replacements or new reciprocating compressor installations during the permit term. As such, there have been no modifications to the fugitive emissions at the compressor station and the fugitive emissions at Station 871 permitted under IA11 are not an affected facility under NSPS OOOOa. There were no projects at Station 871 which involved the construction, reconstruction, or modification of potentially subject equipment during the permit term. Therefore, 40 CFR 60.5365a(c) and (j) do not apply to Station 871 and will remain inapplicable upon permit renewal.

Pursuant to 40 CFR 60.5430a, and similarly to the definition under NSPS OOOO, a "storage vessel" under NSPS OOOOa is defined as "*a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water.*" As discussed under the regulatory applicability analysis for NSPS OOOO, Station 871 does not operate a storage vessel affected facility and 40 CFR 60.5365a(e) does not apply.

Based on the regulatory analysis provided above – and considering no affected facilities were constructed, reconstructed, or modified between September 18, 2015, and December 6, 2022 – NSPS OOOOa is not applicable and will continue to be inapplicable to Station 871 upon permit renewal.

3.2.1.4 40 CFR 60, Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After December 6, 2022

40 CFR 60, Subpart OOOOb (NSPS OOOOb) applies to affected facilities that commenced construction, reconstruction, or modification after December 6, 2022. The specific sources covered by NSPS OOOOb include the following:

- a) Each well affected facility, which is a single well drilled for the purpose of producing oil or natural gas;
- b) Each centrifugal compressor affected facility;
- c) Each reciprocating compressor affected facility;
- d) Each process controller affected facility;
- e) Each storage vessel affected facility with VOC PTE greater than or equal to 6 tpy or methane PTE greater than or equal to 20 tpy;
- f) Each group of equipment within a process unit at an onshore natural gas processing plant;
- g) Each sweetening unit affected facility;

- h) Each pump affected facility; and
- i) All fugitive emissions components at a well site, centralized production facility, or a compressor station.

Station 871 meets the definition of a “compressor station” under NSPS OOOOb and is potentially subject to this regulation. However, as described in detail for all similar affected facilities under the NSPS OOOOa discussion above, no potentially subject equipment at Station 871 has been constructed, modified, or reconstructed since at least December 6, 2022. As such, NSPS OOOOb is not applicable to Station 871 and will remain inapplicable upon permit renewal.

3.2.1.5 40 CFR 60, Subpart OOOOc – Emissions Guidelines for Greenhouse Gas Emissions from Existing Crude Oil and Natural Gas Facilities

40 CFR 60, Subpart OOOOc (NSPS OOOOc) establishes emissions guidelines and compliance schedules to be included in a state plan developed by all air pollution control agencies in the United States with one or more designated facilities that commenced construction, modification, or reconstruction on or before December 6, 2022. Presumptive standards that could be applicable to Station 871 are included in 40 CFR 60.5385c through 60.5430c as part of the “model rule” of NSPS OOOOc. Under the “model rule,” the specific sources covered by NSPS OOOOc as “designated facilities” include the following:

- a) Each well designated facility, which is a single well drilled for the purpose of producing oil or natural gas;
- b) Each centrifugal compressor designated facility;
- c) Each reciprocating compressor designated facility;
- d) Each process controller designated facility;
- e) Each storage vessel designated facility, which is a tank battery that has the potential for methane emissions equal to or greater than 20 tpy;
- f) Each group of equipment within a process unit at an onshore natural gas processing plant;
- g) Each pump designated facility; and
- h) All fugitive emissions components at a well site, centralized production facility, or a compressor station.

All potentially subject designated facilities at Station 871 commenced construction, modification, or reconstruction prior to December 6, 2022. Pursuant to the presumptive standard under the model rule at 40 CFR 60.5387c and Table 1 to NSPS OOOOc, any owner or operator of a designated facility must comply with the presumptive standards of the model rule within 36 months after the state plan submittal deadline of January 22, 2027.

Station 871 will comply with the provisions of the NSPS OOOOc state plan within 36 months of its submittal deadline as required by 40 CFR 60.5387c and Table 1 to NSPS OOOOc. Once NSPS OOOOc has been incorporated into a final SIP, TGP will provide an updated 7007V form outlining the applicable requirements from NSPS OOOOc.

3.2.2 40 CFR Part 63 – National Emissions Standards for Hazardous Air Pollutants

The National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations established in 40 CFR Part 61 and Part 63 regulate the emissions of HAP. The NESHAP regulations under 40 CFR Part 61 establish emissions standards on a pollutant basis, whereas those under 40 CFR Part 63 establish standards on a source category basis. The following subsections assess the applicability of various NESHAP.

3.2.2.1 40 CFR 63, Subpart HH – National Emissions Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities

40 CFR 63, Subpart HH – National Emissions Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities (NESHAP HH) applies to owners and operators of emission points located at oil and natural gas production facilities. Only such facilities that meet the following criteria are subject to this regulation:

1. Facilities that are major or area sources of HAP; and
2. Facilities that process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer; or
3. Facilities that process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user.

Station 871 does not process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer, nor does the compressor station process, upgrade, or store natural gas. Therefore, NESHAP HH does not apply to Station 871 and will remain inapplicable upon permit renewal.

3.2.2.2 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

40 CFR 63, Subpart ZZZZ (RICE NESHAP) applies to any existing, new, or reconstructed stationary RICE at major or area sources of HAP emissions, excluding stationary RICE tested at a stationary RICE test cell/stand. Pursuant to 40 CFR 63.6590(a)(2)(i), for stationary RICE located at a major source, a stationary RICE with a site rating of more than 500 brake hp is “new” if construction of the stationary RICE commenced on or after December 19, 2002. As stated previously, Station 871 commenced construction on all stationary RICE prior to 2002; therefore, none of these engines meet the definition of a new stationary RICE under RICE NESHAP. Pursuant to 40 CFR 63.6590(a)(3)(i), a stationary RICE with a site rating of more than 500 brake hp at a major source is “reconstructed” if it meets the definition of a reconstructed source under 40 CFR 63.2 and reconstruction commenced on or after December 19, 2002. None of the compressor engines at Station 871 have been reconstructed as defined by 40 CFR 63.2 since at least December 19, 2002; therefore, none of these engines meet the definition of a reconstructed stationary RICE under RICE NESHAP. All compressor engines at Station 871 therefore are considered existing stationary RICE under RICE NESHAP.

Pursuant to 40 CFR 63.6590(b)(3)(i) and (ii), an existing SI 2SLB or 4SLB stationary RICE with a site rating of more than 500 brake hp located at a major source of HAP emissions is not required to meet the requirements of RICE NESHAP or of 40 CFR 60, Subpart A, including initial notification. EP001-EP003 all meet this category of subject RICE; therefore, as reflected in V-20-034, EP001-EP003 are not required to meet the requirements of RICE NESHAP.

EP04 was also constructed prior to December 19, 2002, and has not been reconstructed since this date; therefore, it is considered existing under RICE NESHAP. Pursuant to 40 CFR 63.6590(b)(3)(iii), an existing emergency stationary RICE with a site rating of more than 500 brake hp located at a major source of HAP emissions is not required to meet the requirements of RICE NESHAP or 40 CFR 60, Subpart A, including initial notification. However, the emergency engine must meet the operational requirements for emergency engines at 40 CFR 63.6640(f).

3.2.2.3 40 CFR 63, Subpart DDDDD – NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

40 CFR 63, Subpart DDDDD (Boiler MACT) applies to industrial, commercial, or institutional boilers or process heaters, as defined in 40 CFR 63.7575, that are located at, or are part of, a major source of HAP, except as specified in 40 CFR 63.7491. Boiler MACT applies to each new, reconstructed, or existing affected source, where the affected source includes the collection of all existing industrial, commercial, and institutional boilers and process heaters within an applicable subcategory defined in 40 CFR 63.7575 and each new or reconstructed industrial, commercial, or institutional boiler or process heater.

Station 871 is a major source of HAP emissions and includes one (1) Jacket Water Heater (E05) that meets the definition of a “process heater” under this rule. E05 is subject to a tune up every 5 years and the recordkeeping and reporting requirements of Boiler MACT.

3.2.3 Kentucky State Implementation Plan Regulations

The following subsections discuss the applicability of relevant Kentucky SIP regulations.

3.2.3.1 401 KAR 51:150 – NO_x Requirements for Stationary Internal Combustion Engines

401 KAR 51:150 provides for the regional control of NO_x emissions by establishing requirements for large stationary internal combustion engines pursuant to the federal NO_x SIP Call. TGP operates “Large NO_x SIP Call Engines” as defined by 401 KAR 51:150 Section 1(3). EP003 is designated as a Large NO_x SIP Call Engine. TGP designed a plan to comply with this regulation based on NO_x emission reductions from the replacement of 13 natural gas-driven units by two electric drivers at TGP Station 96, and the replacement of five natural gas-driven units with four electric drivers at Station 110 through TGP’s Horsepower Replacement projects in 2001. The compliance plan detailed the methodologies used to conclude that no additional NO_x emission reductions under this rule would be required. The compliance plan was submitted on February 14, 2006, and approved by KYDEP on April 7, 2006. Station 871 complies with all recordkeeping requirements outlined in the compliance plan.

3.2.3.2 401 KAR 61:015 – Existing Indirect Heat Exchangers.

This regulation applies to equipment, apparatus, or contrivances used for the combustion of fuel in which the energy produced is transferred to its point of usage through a medium that does not come into contact with or add to the products of combustion. Affected sources must have a heat input capacity greater than 1 MMBtu/hr.

The Jacket Water Heater (E05) meets the definition of an affected facility under 401 KAR 61:015. Section 4 of 401 KAR 61:015 establishes opacity standards and heat input-based particulate matter (PM) emission limits. Pursuant to 401 KAR 61:015, Section 4(1)(c), for a source in regions classified as Priority II or III with respect to PM, opacity of continuous emissions from E05 is limited to 40%, except when building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer’s recommendations.

The applicable PM emission limit for E05 is determined based on the total heat input capacity for all the affected facilities at the source that commenced constructed before the applicable classification date of the source. A different heat input-based PM allowable emission rate applies depending on the total heat input capacity for the facility and the Priority classification of the region in which the source is located. Pursuant to 401 KAR 61:015, Section 4(1)(a), referencing Appendix A to this rule, the PM limit for E05 is 0.80 lb PM/MMBtu.

Section 5 of this rule establishes sulfur dioxide (SO₂) emissions standards. The SO₂ emissions standard is also determined based on the total heat input capacity for all affected facilities at the source and the classification of the county in which the source is located with respect to SO₂. Additionally, a different heat input capacity-based allowable emission rate applies based on the type of fuel to be burned (i.e., solid or liquid/gaseous). Pursuant to 401 KAR 61:015, Section 5(1), the SO₂ limit for E05 is 6.0 lb SO₂/MMBtu.

The Jacket Water Heater is fired exclusively with pipeline quality natural gas and, therefore, meets the standards of this rule.

3.2.3.3 401 KAR 59:050 – New Storage Vessels for Petroleum Liquids

An affected facility under 401 KAR 59:050 includes any storage vessel for petroleum liquids which commenced operation on or after April 9, 1972 and prior to July 24, 1984, has a storage capacity greater than 580 gallons and less than 40,000 gallons, and is located in either an urban county designated non-attainment for ozone under 401 KAR 51:010 or in any other county and is part of a major source of VOC; or any such storage vessel located in the same areas which commenced construction after July 24, 1984, and has a storage capacity greater than 580 gallons and less than 10,567 gallons.

Station 871 is not located in an urban county designated non-attainment for ozone, nor is it a major source of VOC. Therefore, 401 KAR 59:050 is not applicable and will remain inapplicable upon permit renewal.

3.2.3.4 401 KAR 63:020 – Potentially Hazardous Matter or Toxic Substances

Kentucky regulates the emissions of toxic air pollutants through 401 KAR 63:020. KDAQ can require that dispersion modeling or other analyses be completed by facilities at permit renewal or when constructing equipment when there is an increase in toxic pollutant emissions, as defined under 401 KAR 63:020, Section 2(2), deemed to be "significant." This is done so that there is a documented basis for affirming that a facility does not cause an adverse impact on the health and welfare of humans, animals, and plants.

Station 871 is compliant with 401 KAR 63:020 through compliance with the conditions of V-20-034 as determined by KDAQ based upon the emission rates of toxics and hazardous air pollutants and the primary source of toxic and hazardous air pollutant emissions being natural gas combustion. Since there have been no projects which modified existing equipment in any way that would increase the potential emissions of air toxics or installed any new equipment that are sources of air toxics since the most recent source-wide permit application, TGP does not anticipate that any air dispersion modeling will need to be performed in conjunction with this permit renewal application.

APPENDIX A. FACILITY AERIAL MAP AND PFD

- ▶ Figure A-1: Aerial Map of Station 871
- ▶ Figure A-2: Station 871 PFD

Figure A-1: Aerial Map of Station 871 and Surrounding Area

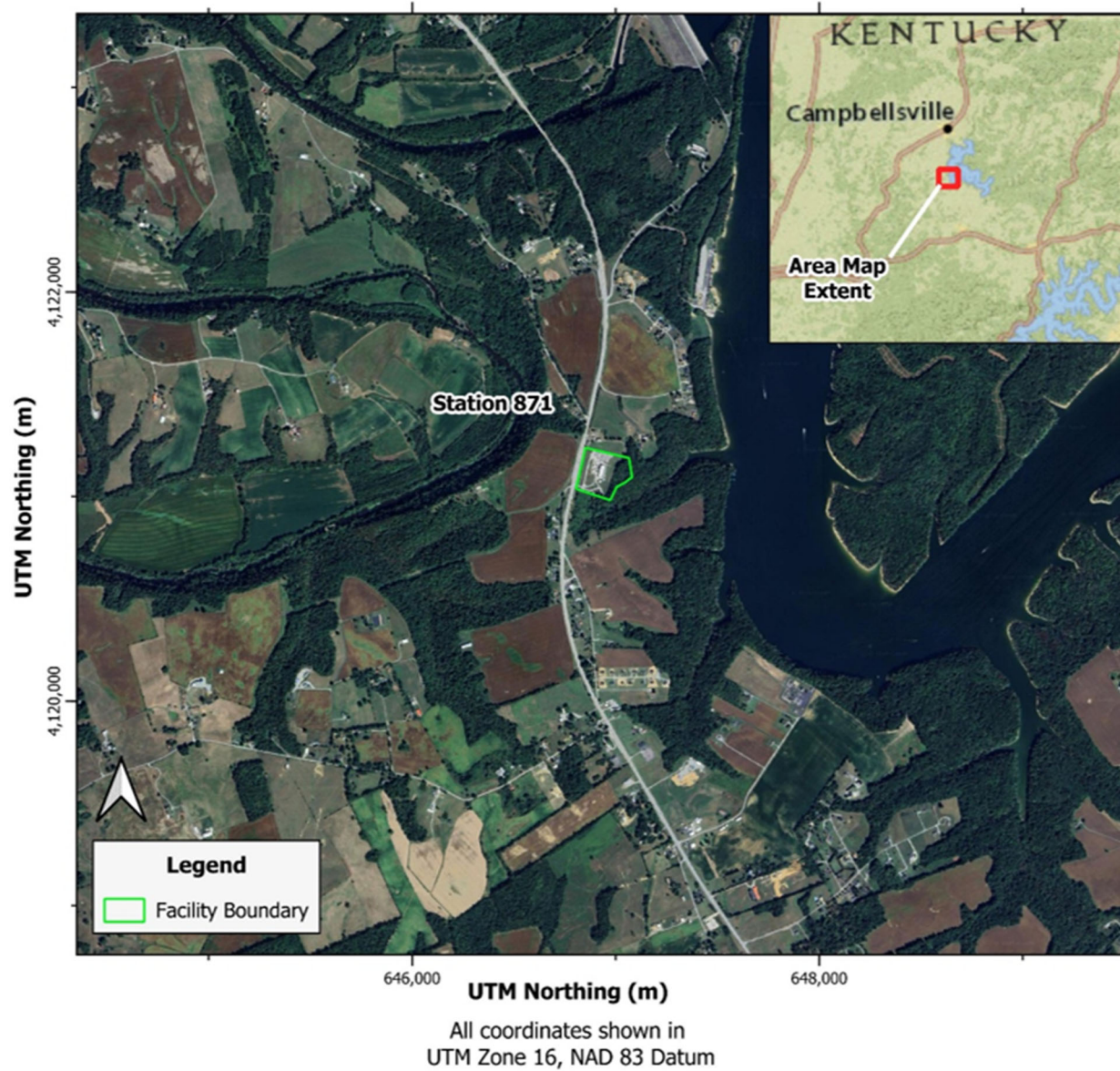
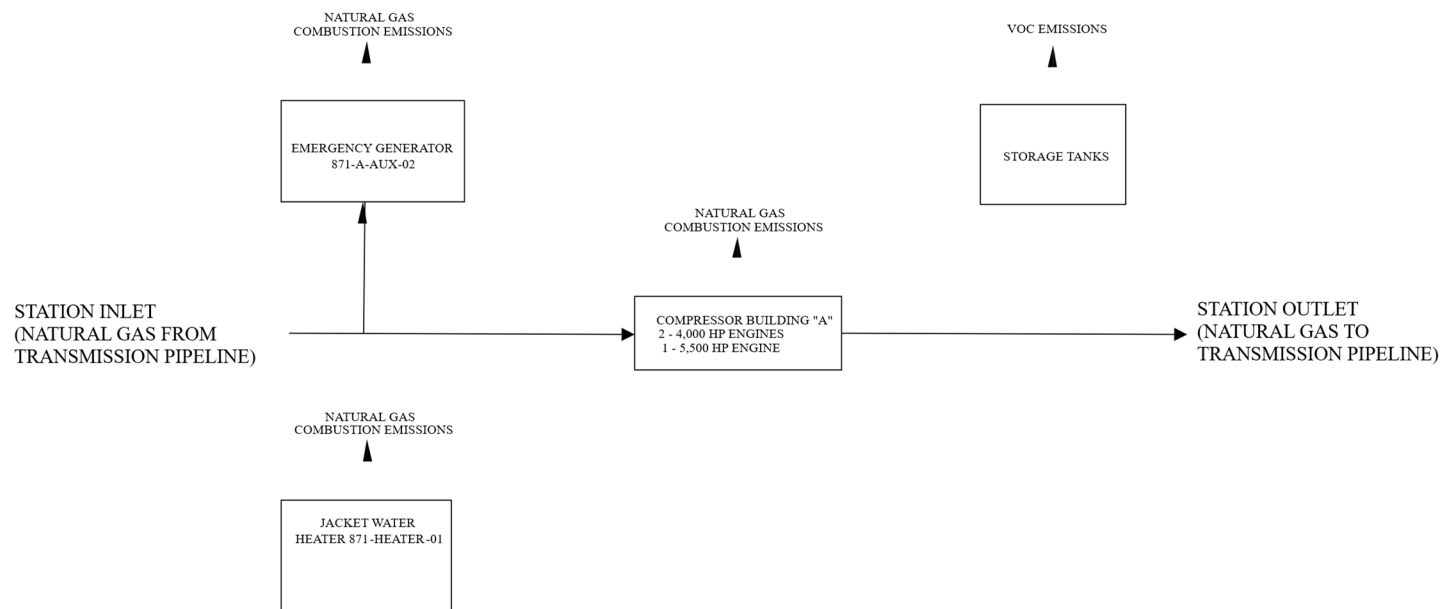


Figure A-2: Station 871 Process Flow Diagram

TGP Station 871 Simplified Process Flow Diagram



APPENDIX B. DEP7007 APPLICATION FORMS

► **7007AI** – Administrative Information

Division for Air Quality 300 Sower Boulevard Frankfort, KY 40601 (502) 564-3999	DEP7007AI Administrative Information ___ Section AI.1: Source Information ___ Section AI.2: Applicant Information ___ Section AI.3: Owner Information ___ Section AI.4: Type of Application ___ Section AI.5: Other Required Information ___ Section AI.6: Signature Block ___ Section AI.7: Notes, Comments, and Explanations	Additional Documentation None ___ Additional Documentation attached
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Source Name: Tennessee Gas Pipeline Company, L.L.C. - Station 871

KY EIS (AFS) #: 21- 217-00034

Permit #: V-20-034

Agency Interest (AI) ID: 44057

Date: 3/26/2026

Section AI.1: Source Information			
Physical Location	Street:	<u>8690 New Columbia Road</u>	
Address:	City:	County:	Zip Code:
	<u>Campbellsville</u>	<u>Taylor</u>	<u>42718</u>
Mailing Address:	Street or P.O. Box:	<u>8690 New Columbia Road</u>	
	City:	State:	Zip Code:
	<u>Campbellsville</u>	<u>Taylor</u>	<u>42718</u>

Standard Coordinates for Source Physical Location	
Longitude: <u>-85.343889</u> (decimal degrees)	Latitude: <u>37.224722</u> (decimal degrees)

Primary (NAICS) Category: <u>Pipeline Transportation of Natural Gas</u>	Primary NAICS #: <u>486210</u>
--	---------------------------------------

Classification (SIC) Category:				<u>Natural Gas Transmission</u>		Primary SIC #: <u>4922</u>	
Briefly discuss the type of business conducted at this site:				<u>Station 871 boosts natural gas transmission pressures by compressing low-pressure transmission gas and directing it into a high-pressure transmission line.</u>			
Description of Area Surrounding Source:	☒ Rural Area	☐ Industrial Park	☐ Residential Area	Is any part of the source located on federal land?	☒ Yes	Number of Employees:	<u>2</u>
	☐ Urban Area	☐ Industrial Area	☐ Commercial Area		☐ No		
Approximate distance to nearest residence or commercial property:		<u>~75 feet</u>		Property Area:	<u>~11.6 acres</u>		Is this source portable? ☐ Yes ☒ No
What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?							
NPDES/KPDES:		☐ Currently Hold	☐ Need	☒ N/A			
Solid Waste:		☐ Currently Hold	☐ Need	☒ N/A			
RCRA:		☐ Currently Hold	☐ Need	☒ N/A			
UST:		☐ Currently Hold	☐ Need	☒ N/A			
Type of Regulated Waste Activity:		☐ Mixed Waste Generator	☐ Generator	☐ Recycler	☐ Other: _____		
		☐ U.S. Importer of Hazardous Waste	☐ Transporter	☐ Treatment/Storage/Disposal Facility	☒ N/A		

Section AI.2: Applicant Information

	<i>Initial</i>	<i>Significa</i>
Applicant Name:	Tennessee Gas Pipeline Company, L.L.C.	
Title: (if individual)		
Mailing Address:	Street or P.O. Box: 1001 Louisiana St., Suite 1000	
	City: Houston	State: TX Zip Code: 77002
Email: (if individual)		
Phone:		

Technical Contact

Name:	Paul Witkowski	
Title:	Environmental Engineer	
Mailing Address:	Street or P.O. Box: 1001 Louisiana St., Suite 1000	
	City: Houston	State: TX Zip Code: 77002
Email:	Paul_Witkowski@kindermorgan.com	
Phone:	(713) 420-2045	

Air Permit Contact for Source

Name:	Same as Technical Contact	
Title:		
Mailing Address:	Street or P.O. Box:	
	City:	State: Zip Code:
Email:		
Phone:		

Section AI.3: Owner Information**Owner same as applicant****Name:** _____**Title:** _____**Mailing Address:** **Street or P.O. Box:** _____
City: _____ **State:** _____ **Zip Code:** _____**Email:** _____**Phone:** _____**List names of owners and officers of the company who have an interest in the company of 5% or more.****Name****Position**

Kinder Morgan Operating LLC "A"

Owner

Section AI.4: Type of Application

Current Status: ☒ Title V ☐ Conditional Major ☐ State-Origin ☐ General Permit ☐ Registration ☐ None

Requested Action:
(check all that apply)

☐ Name Change ☐ Initial Registration ☐ Significant Revision ☐ Administrative Permit Amendment

☒ Renewal Permit ☐ Revised Registration ☐ Minor Revision ☐ Initial Source-wide Operating Permit

☐ 502(b)(10)Change ☐ Extension Request ☐ Addition of New Facility ☐ Portable Plant Relocation Notice

☐ Revision ☐ Off Permit Change ☐ Landfill Alternate Compliance Submittal ☐ Modification of Existing Facilities

☐ Ownership Change ☐ Closure

Requested Status: ☒ Title V ☐ Conditional Major ☐ State-Origin ☐ PSD ☐ NSR ☐ Other: _____

Is the source requesting a limitation of potential emissions?

☐ Yes ☒ No	
Pollutant:	Requested Limit:
☐ Particulate Matter	_____
☐ Volatile Organic Compounds (VOC)	_____
☐ Carbon Monoxide	_____
☐ Nitrogen Oxides	_____
☐ Sulfur Dioxide	_____
☐ Lead	_____

☐ Yes ☒ No	
Pollutant:	Requested Limit:
☐ Single HAP	_____
☐ Combined HAPs	_____
☐ Air Toxics (40 CFR 68, Subpart F)	_____
☐ Carbon Dioxide	_____
☐ Greenhouse Gases (GHG)	_____
☐ Other	_____

For New Construction:

Proposed Start Date of Construction:
(MM/YYYY)

N/A

Proposed Operation Start-Up Date: (MM/YYYY)

N/A

For Modifications:

Proposed Start Date of Modification:
(MM/YYYY)

N/A

Proposed Operation Start-Up Date: (MM/YYYY)

N/A

Applicant is seeking coverage under a permit shield.

☐ Yes

☒ No

Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

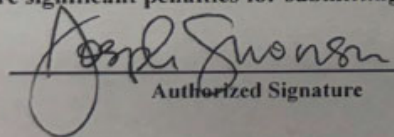
Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- | | |
|--|--|
| ☐ DEP7007A Indirect Heat Exchangers and Turbines | ☐ DEP7007CC Compliance Certification |
| ☐ DEP7007B Manufacturing or Processing Operations | ☐ DEP7007DD Insignificant Activities |
| ☐ DEP7007C Incinerators and Waste Burners | ☐ DEP7007EE Internal Combustion Engines |
| ☐ DEP7007F Episode Standby Plan | ☐ DEP7007FF Secondary Aluminum Processing |
| ☐ DEP7007J Volatile Liquid Storage | ☐ DEP7007GG Control Equipment |
| ☐ DEP7007K Surface Coating or Printing Operations | ☐ DEP7007HH Haul Roads |
| ☐ DEP7007L Mineral Processes | ☐ Confidentiality Claim |
| ☐ DEP7007M Metal Cleaning Degreasers | ☐ Ownership Change Form |
| ☐ DEP7007N Source Emissions Profile | ☐ Secretary of State Certificate |
| ☐ DEP7007P Perchloroethylene Dry Cleaning Systems | ☐ Flowcharts or diagrams depicting process |
| ☐ DEP7007R Emission Offset Credit | ☐ Digital Line Graphs (DLG) files of buildings, roads, etc. |
| ☐ DEP7007S Service Stations | ☐ Site Map |
| ☐ DEP7007T Metal Plating and Surface Treatment Operations | ☒ Map or drawing depicting location of facility |
| ☐ DEP7007V Applicable Requirements and Compliance Activities | ☐ Safety Data Sheet (SDS) |
| ☐ DEP7007Y Good Engineering Practice and Stack Height Determination | ☐ Emergency Response Plan |
| ☐ DEP7007AA Compliance Schedule for Non-complying Emission Units | ☒ Other: <u> </u> Process Flow Diagram |
| ☐ DEP7007BB Certified Progress Report | |

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.



 Authorized Signature

Joseph Simonsen

 Type or Printed Name of Signatory

03/24/2025

 Date

Director - Operations

 Title of Signatory

*Responsible official as defined by 401 KAR 52:001.

Section AI.7: Notes, Comments, and Explanations
Kinder Morgan Operating LLC "A" owns 100% of Tennessee Gas Pipeline Company, L.L.C.

APPENDIX C. REQUESTED CHANGES TO EXISTING PERMIT

This appendix contains RLSO mark-ups of select pages of Permit V-20-034 which represent TGP's requested changes to the existing permit language.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit EP04 (E04) 4SLB Reciprocating Emergency Engine (871-Aux-A-02)

Description:

Model: Caterpillar G3412TA
Primary Fuel: Natural Gas
Power Output: 690 hp
Max Operating Rate: 5.88 mmBtu/hr
Construction Date: 2001
Controls: None

APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Note: D.C. Circuit Court [*Delaware v. EPA*, 785 F. 3d 1 (D.C. Cir. 2015)] has vacated the provisions in 40 CFR 63, Subpart ZZZZ that contain the 100-hour exemption for operation of emergency engines for purposes of emergency demand response under 40 CFR 63.6640(f)(2)(ii)-(iii). The D.C. Circuit Court issued the mandate for the vacatur on May 4, 2016.

1. Operating Limitations:

Pursuant to 40 CFR 63.6640(f), the permittee must operate the emergency stationary RICE according to the requirements in 40 CFR 63.6640(f)(1) through (4). In order for the engine to be considered an emergency stationary RICE under 40 CFR 63, Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, ~~emergency demand response~~, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 63.6640(f)(1) through (4), is prohibited. If the permittee does not operate the engine according to the requirements in 40 CFR 63.6640(f)(1) through (4), the engine will not be considered an emergency engine under 40 CFR 63, Subpart ZZZZ and must meet all requirements for non-emergency engines.

- (1) There is no time limit on the use of emergency stationary RICE in emergency situations.
- (2) The permittee may operate the emergency stationary RICE for ~~any combination of the purposes~~ specified in 40 CFR 63.6640(f)(2)(i) ~~through (iii)~~ for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 63.6640(f)(3) and (4) counts as part of the 100 hours per calendar year allowed by 40 CFR 63.6640(f)(2).
 - (i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
- (3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing ~~and emergency demand response~~ provided in 40 CFR 63.6640(f)(2). The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Compliance Demonstration Method:

See 4. Specific Monitoring Requirements.

2. Emission Limitations:

None

3. Testing Requirements:

Pursuant to 401 KAR 50:045, Section 1, testing shall be conducted at such times as may be requested by the Cabinet.

4. Specific Monitoring Requirements:

Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the hours of operation for the emergency engine on a monthly basis.

5. Specific Recordkeeping Requirements:

Pursuant to 401 KAR 52:020, Section 10, the permittee shall keep records of the hours of operation and amount of fuel usage on a monthly basis for a twelve (12) month rolling total.

6. Specific Reporting Requirements:

See Section F, Monitoring, Recordkeeping, and Reporting Requirements.

2025 Emission Inventory
TGP Compressor Station 871, ID #21-217-00034, AI #44057

GAS ANALYSIS PROGRAM
Average Gas Quality 2025

Constituent	lb/lbmol gas	MW	Weight %
Nitrogen	0.4073	28.01	0.6673
CO ₂	0.1658	44.01	0.4269
Methane	92.9860	16.043	87.2634
Ethane	6.1194	30.069	10.7635
Propane	0.2639	44.096	0.6807
Butane	0.0446	58.12	0.1516
Pentane	0.0084	72.15	0.0353
Hexane	0.0022	86.18	0.0113
Heptane	0.0017		0.0000
Octane	0.0008		0.0000

100.0000

MW of Gas = 17.0951

Weight % NMNE VOC = 0.88%

Weight % NMNE VOC / TC = 0.89%

Universal Gas Content = 379.4 scf/lb-mol @ 60 F and 14.696 psia

Calculation:

Constituent lb/scf = Constituent Weight % * MW of Gas * 1 lbmol/379.4 scf

NMNE VOC 0.0004 lb/scf 396 lb/mmscf

CH₄ 0.0393 lb/scf 39,319 lb/mmscf

Gas 0.0451 lb/scf 45,058 lb/mmscf



**Tennessee Gas Pipeline
Company, L.L.C.**
a Kinder Morgan company

February 14, 2022

Kentucky Division for Air Quality
Attn: Permit Support Section
200 Fair Oaks Lane, 1st Floor
Frankfort, Kentucky 40601

Submitted electronically via KYDEP eForms

**Re: Tennessee Gas Pipeline Company, L.L.C.
Responsible Official Change**

To Whom It May Concern,

I, on behalf of Tennessee Gas Pipeline Company L.L.C. (TGP), am notifying the Kentucky Department of Environment (KYDEP) Division for Air Quality of a change in the Responsible Official (RO) for the following facilities:

Facility	County	AFS Plant ID Number	AI#
Compressor Station 96	Taylor	21-217-00033	44056
Compressor Station 106	Powell	21-197-00013	44054
Compressor Station 107A	Montgomery	21-173-00021	44053
Compressor Station 110	Rowan	21-205-00056	48927
Compressor Station 114	Boyd	21-019-00106	44585
Compressor Station 200	Greenup	21-089-00033	44052
Compressor Station 871	Taylor	21-217-00034	44057
Compressor Station 871A	Casey	21-045-00027	44051
Compressor Station 875	Madison	21-151-00091	125037

I hereby authorize and delegate Responsible Official authority for the above-referenced facilities to Joseph Simonsen, Director of Operations. I certify that I meet the definition of an RO as defined in 401 KAR 52.001(62). Specifically, Mr. Simonsen is responsible for the overall operation of the regulated facilities with gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars). His contact information is as follows:

Joseph Simonsen
615-221-1513
Joseph_Simonsen@KinderMorgan.com
750 Old Hickory Blvd
Bldg 2, Ste 190
Brentwood, TN 37027

Please contact Walter Collier, Air Permitting and Compliance Specialist, at (713) 420-6360 or by email at Walter_Collier@KinderMorgan.com, if you have any questions regarding this matter.

Sincerely,

Ronald S. Bessette
Vice President of Operations



**Tennessee Gas Pipeline
Company, L.L.C.**
a Kinder Morgan company

January 26, 2022

Kentucky Division for Air Quality
Attn: Permit Support Section
200 Fair Oaks Lane, 1st Floor
Frankfort, Kentucky 40601

Submitted electronically via KYDEP eForms

**Re: Tennessee Gas Pipeline Company, L.L.C.
Responsible Official Change**

To Whom It May Concern,

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Compressor Station 871	Taylor	21-217-00034	44057
Compressor Station 871A	Casey	21-045-00027	44051
Compressor Station 875	Madison	21-151-00091	125037

I am replacing John R. Pannell as Director of Operations responsible for the above-referenced facilities. I certify that I meet the definition of an RO as defined in 401 KAR 52.001(62).

Please contact Walter Collier, Air Permitting and Compliance Specialist, at (713) 420-6360 or by email at Walter_Collier@KinderMorgan.com, if you have any questions regarding this matter.

Sincerely,

Joseph Simonsen
Director of Operations
615-221-1513
Joseph_Simonsen@KinderMorgan.com
750 Old Hickory Blvd
Bldg 2, Ste 190
Brentwood, TN 37027